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#27 1892 INV.

PACIFIC RURAL PRESS

Vol. XLIII.—No. 1. 88299 SAN FRANCISCO, SATURDAY, JANUARY 2, 1892. { DEWEY & CO., Publishers. Office, 220 Market St.



PIERCE GRAPE—(*syn. Isabella Regia*)—A CALIFORNIA VARIETY.

The Pierce Grape.

We give upon this page an engraving of a cluster of grapes of a variety which has been grown in this State for the last 12 years or more, but which is this year for the first time authoritatively introduced to public sale.

We first saw the grape in October, 1879, and in the RURAL on the 18th of that month, described its origin. Mr. J. P. Pierce of Santa Clara had been for several years a grower of Isabella grapes for this market, growing his vines upon high trellises in arbor form. Some time previous to 1879, Mrs. Pierce noticed that the children were bringing in a peculiar grape which attracted their attention by its large berries and heavy clusters. Upon their pointing out the cane from which these were obtained, it was found that one of the branches of an Isabella vine was bearing this new style of fruit, while other canes bore the usual Isabellas. The cane was marked, and buds taken therefrom were afterward inserted in other stock, where they grew freely and fruited heavily, producing the same grape which had attracted attention at first. It was the fruit of one of these grafted vines that Mr. Pierce brought for our inspection in October, 1879, and which we then described as follows:

The new grape, which must, we believe, be set down as a sport from the Isabella, retains the characteristic aroma, flavor and bloom of its parent, but instead of the medium-sized, oval berries of the Isabella, as it grows in this State, we have in the new grape, large, perfectly round berries, forming a much more compact and heavier cluster than the old Isabella. The variety having shown its fixedness by a number of propagations, Mr. Pierce deems it entitled to a name, and so called it "Isabella Regia"—a royal sort of an Isabella, which indeed it is. It is certainly a remarkable fruit, being much superior to the old Isabella as grown on the same grounds. It is fitted by its size of berry (and we measured several of the largest which were 15 16ths of an inch in diameter), to attain a leading place as a table fruit. We predict for it great popularity when it shall be grown in marketable quantities.

This prediction proved true. For several years Mr. Pierce resolutely held to his intention not to allow any one to have the variety, but afterward he gave cuttings to a few parties under promise not to distribute it. In some way this promise did not hold water, and finally the variety was offered for sale without authorization under such imitative names as "Isabella regina," "Royal Isabella," etc., instead of the name Isabella regia, which Mr. Pierce gave the variety and which was published with his consent in our issue of Oct. 18, 1879. Not only was this clandestine work done, but we believe that some parties went so far as to claim other origin for the variety than that described above.

Perhaps the public description of the grape next later than our original mention at the date given above was the following, by Prof. E. W. Hilgard, in one of his early viticultural reports:

Isabella Regia.—A remarkable giant-leaved and very prolific variety, or rater sport, of the Isabella, produced by Mr. J. P. Pierce of Santa Clara. The berries like the leaves are of extraordinary size and when ripe the fruit is exceedingly sweet and strongly aromatic. It is, therefore, acceptable as a showy, perfumed table grape, much liked by some, but readily surfeiting those who are accustomed to the *vinifera* grapes. The berries are too soft for shipment to any distance, but, all things considered, keep fairly.

We have been thus explicit about the history of this grape because of its authorized introduction and sale this season by the California Nursery Co. of Niles, Alameda county. This company, in view of the confusion of names brought about as described above, has decided to give the grape the name of its originator and now introduce it as the "Pierce grape" and in their catalogue for 1891 92 give the following description:

"The Pierce" (New). A sport from Isabella, originating some 12 years ago with Mr. J. P. Pierce, of Santa Clara. The foliage is remarkably large, and the vine an exceedingly strong grower and prolific bearer. The berries, like the leaves, are of extraordinary size, twice as large as those of its parents, black with light bloom, and when ripe are exceedingly sweet, delicious and slightly aromatic, the pulp readily dissolving. Mr. Pierce has had it in cultivation under every condition, and it has remained constant, showing no indication of running back to the parent. The entire crop of two acres has been shipped to San Francisco by Mr. Pierce for the past six years under the name of *Isabella Regia*, and always realizes the highest market price. We have arranged with Mr. Pierce for the exclusive right to propagate and distribute this valuable new grape, and now offer it for the first time.

The engraving on this page represents well the cluster and form of berry of the variety, but is reduced considerably from the size which it attains under favorable conditions. The grape should find a place in all collections and can no doubt be profitably produced for local markets, subject to such limitations as regulate the demand for all Eastern grapes on this coast.

THERE are 208,749 railroad bridges in the United States, spanning 3213 miles.



NEW HYBRID BEGONIA—PERLE HUMFELD.—See page 8.

CORRESPONDENCE.

Correspondents are alone responsible for their opinion.

Napa Valley Notes.

EDITORS PRESS:—Probably in no former year was there nearly as much dry-sowing of grain—wheat, barley and oats—as this fall, in this county. This is the case in no one particular locality, but this seeding has been general. So now, after the two or three gentle rains we have had, many fields are quite green with the tender plants. Whether this dry-sowing will eventuate in crops that shall be quite weedy, we shall note next summer and fall.

Twenty years ago, no farmer here thought of plowing before the rains had started the foul seeds that are always so numerous in our soil, even if rains held off till New Year's. But this fall, farmers were well along with their last season's work, and became uneasy over the long-deferred rains.

Disc cultivators and cutaway harrows are becoming very popular with our farmers, and numbers of them were used in seeding this fall. Other improved farm implements are being used, the old-fashioned, long-used ones being discarded. The consequence is, better work done, at less expense, with less labor.

To-day we are having our first real heavy rain. With the three or four inches that have previously fallen, this will make excellent plowing, and will cause the seed now in the ground to forge rapidly ahead. Farmers look for a prosperous season in 1892, expecting good crops and fair prices; in fact, farmers seem in better spirits than for several years.

Not so with grape-growers, however. Prices this fall were low, and there is slow sale for wine at low figures. Those who can hold for better prices are doing so. Some of our smaller wine-makers are combining in order to further their interests and to shield themselves from other combinations which would keep prices down.

Many vineyards in the valley are succumbing to phylloxera in whole or in part. Some men are uprooting healthy vines, for the reason that there has been so little profit in grape growing of late years. Consequently the area to vines is annually decreasing, for not every one whose vines are destroyed by phylloxera replants, either to resistant or nonresistant stocks.

Orchardists in many localities are well along with their pruning, and will have their work well in hand when spring comes. Pruning was commenced this year much earlier than usual. The outlook for fruit growing is excellent and the tendency is to plant more and more as year succeeds year.

Pasturage is very short. In fact there is little or none at all on our hillsides, which are almost as brown as in October. Stock therefore have to be fed if they are to be kept in even fair condition. The present storm will probably soon make the hills green, but the season has so far advanced that good pasture will last but a comparatively short time. This and the fact that the amount of hay stored in the county is limited, causes advancing prices for feedstuff. Better prices prevail for hay and grain than for several years.

Floating Cobwebs.

In a recent number of the PRESS allusion was made by a correspondent to large quantities of spider web floating in the air and appearing in fields. The theory was advanced that these floating webs first started from the tules where a peculiar variety of spider had its habitat. That may be true in part, but not all the spider webs we see floating in the air during the fall of the year, or, indeed, at other times, come from the locality mentioned.

The appearance of these floating webs and of large fields, often far distant from tules, almost covered with interlacing silken threads, spun by these busy insects, has puzzled many, or at least caused much wonder as to the cause. They are to be seen in the early morning particularly, probably because the dew thereon brings them into greater prominence.

Evidently these webs are spun by a minute gossamer spider, not often seen except by close observation, their color so nearly resembling the soil. But now and then they may be seen sailing through the air, spinning their slender webs as they go. That there must be myriads of them to spread so many lines is evident; and it is also apparent that they do much at night.

Another variety of spider—the one that spins among the grass and on shrubbery a closely woven square web—is a very reliable weather prophet. When these webs are seen in any considerable number, on any morning, laden with thickly clustering diamonds of purest water, one may be very sure of a fair day.

The study of spiders in all their variety, their habits, methods of working, is very interesting, and even a casual observer may learn much concerning them. What use they subserve in the economy of nature is a question that must have been asked by many an amateur entomologist, but has been far more often asked than answered. That they were not made in vain we may rest assured. The Creator has displayed as much care in forming the tiniest of these insects as on larger creations of His skillful handiwork, for each one is perfect in all its formation, and each is endowed with instinct that seems almost human, and with skill that excites the wonder of the most casual observer. R.

Napa, Dec. 19, 1891.

THE FIELD.

A Living on Eight and One-half Acres of Good Land.

EDITORS PRESS:—We frequently read in agricultural papers what can be, and what has been done on ten acres of land. Some of these statements, no doubt, are very near correct, while others border on fiction and were written more to be read than to be practiced. Persons reading such should try and draw the line where one begins and the other leaves off.

I have no doubt but many persons from reading such articles have attempted to make a living on ten acres, and made a sad failure. We see the results, every little while of farmers—no, I will say persons—attempting to make a success of working 160, 500 and 1000 acres.

Now, whose fault is it that these persons have not made a success, and who is going to point out the mistakes and warn them of dangerous ground?

If you employ a person to erect a building for you, and he proves a failure, destroys your lumber, and you find out he cannot saw a stick of firewood properly, you would hardly want to give him a certificate as a carpenter and joiner. If a person has an opportunity to farm, and proves a total failure, why should he be called a farmer?

The cultivation of the soil and gathering of crops has been termed menial employment, and the more menial, the less brains required. A good many persons thought it was only necessary to have a good bank account to become a successful farmer.

I would like to compile the experience of some of these many farmers that have come under my observation. I think it would make interesting reading, and a book little less thick than Webster's unabridged.

I would like to see a competent committee appointed by the Supervisors of every county, to make a thorough examination of every farm, and place a plain sign in front of any farm entitled to it "farmer," and leave the others blank, so we could easily see what per cent of farmers we had.

I think such a system would act as an incentive, and furnish the unlucky ones a place where they could go and compare notes, and possibly detect their mistakes and failures. I like to study the methods of the unsuccessful as well as the successful, for it is by this method that we gain information.

I have had in view for a long time one of these successful farmers, unpretentious in his ways but not lacking in public spirit. I want to tell you, and hundreds of others, in a plain way just what this farmer is doing on only 8½ acres of land. On account of native modesty, he does not care to have his name paraded before the public. I will say he is 43 years of age, has been married 18 years, has three girls and five boys, and intends to give them a good business and useful education. He has a one-story, hard-finished house (cost $1200), with seven rooms and painted. His barn is a combination of barn and hop-kiln (cost $1500), under which he keeps his two horses, two cows, wagons and tools. In the loft or second floor he has hay, grain and potatoes enough to last until the next crop comes in. Keeps two or three pigs, chickens for family use, and makes the family butter. Has one ranch wagon, one spring or family and one buggy. He cultivates five acres of hops, and the other 3½ acres are occupied with buildings and fruit trees. He employs only one man, five months in the year, at $1 per day and board, except hop-picking. The rest of the work is done by himself and family, all being workers.

This little place was purchased in 1869 for $1150, and I wondered at the time how he expected to make a living from it, there being only a small cabin on it. In 1890 he sold a little over $3500 worth of hops; in 1891, $1500. This year, from 90 cherry trees, he sold $450 worth; 100 Bartlett pears, $450 worth; 50 peaches and 10 apricots, $100 worth. His county and State taxes were $38; levee tax, $90. He has a little money loaned out and no debts!

This is not written with the view of attempting to show anything marvelous or to show that it is the greatest income ever got out of 8½ acres of land. I have had land that produced me nearly $2000 per acre, but it would not be good sense to quote such results against a yearly income. In this case, I wanted to show what pluck and perseverance, combined with good intelligence, can do toward producing thrift.

I think I hear some of the men say that they have 160 acres, more or less, and it takes most of the year's income to square the grocery, drygoods and meat bills—that they are tired of seeing it paraded before the public what great things have been done on ten acres. These thrifty farmers do not usually have a whole year's grocery or meat bill to pay when the crop is sold.

It is an unpleasant task to talk to or lecture persons about their failures, while they will listen for hours about their success. The two words, industry and economy, play an important part in the career of every household.

When you pay your store bill insist on its being itemized to the most trivial article. Then scrutinize it carefully and see how many articles on the bill you could produce at home or go without. First count the number of hams, even if they are "our taste;" the pounds of lard, dozens of eggs, pounds of raisins, gallons of vinegar, and vegetables, that are on the wrong side of the ledger. A piece of land that will not produce some or all of these articles should be abandoned to the owls and coyotes.

There is but little land in the State that will not produce alfalfa where water can be had, yet how few farms have one, two or three acres of alfalfa for cows, pigs and chickens?

I did not start out with the intention of discussing this thrift question, and I have merely touched on some of the most important features, for if justice is done it will admit of a wide range. I am not above criticism, and take some of these remarks to myself. I could write a very readable and somewhat amusing account of my early struggles in farming and continue it up to the present time.

But few persons like to write up their history and parade it over their signatures. I have not accomplished anything thus far that would read well in a book without the addition of a good deal of romance, and until I do I prefer to leave some of my light under the traditional bushel.

The owners of the 8½ acres are young, full of hope and vigorous, and are fully determined they will equalize matters so at home that when they go to town to buy headgear that they will purchase as many bonnets as they do hats.

I hope it will not be considered necessary, to carry out some of these suggestions, that a person must be penurious, small and niggardly.

Thrift first—liberality second. D. FLINT.

Sacramento.

Wheat in Washington.

When the great adaptablity of Oregon, and especially the Willamette Valley, as a wheat growing section is recalled, and the wealth that is annually returned for this staple product, it is not difficult to understand why the average farmer devotes himself heart and soul to wheat growing. Wheat is worth to day 90½ cents. This is of course an exceptional year as to prices, and wheat has not been as near a dollar a bushel for a long time, but it always brings good returns in Oregon for anything like good, honest cultivation of the soil.

Hon. N. G, Balock, of Walla Walla, president and executive commissioner of the Washington world's fair commission, has issued in the form of a bulletin, some interesting facts about wheat growing.

"I have endeavored to ascertain the cost of production per bushel and the profits per acre. In doing this I took three successive crops which averaged thirty-three bushels to the acre. All work was done by contract, the plowing, seeding, harrowing and harvesting being paid for by the acre and the threshing by by the bushel. The plowing cost $1.25 per acre; harrowing and seeding, 90 cents per acre; harvesting and heading, $1.50 per acre; threshing, 6 cents per bushel. This made the cost per bushel a little over 19 cents. I then added interest on the value of the land for two years and counted the cost of production at 29 cents. As the three crops sold in the field for an average of 55 cents per bushel, I counted the profits at $8.28 per acre for each crop."

At 90 cents per bushel this profit would have been something handsome.

It is generally considered that from September 15 to December 1 is the best time for seeding, though wheat sown in the summer, and at any time in the winter or early spring, will ripen at the same time, and in Oregon it is not strange to know of wheat being sowed in every month in the year. This is an advantage which the Eastern farmer, limited in his seeding time, can throughly appreciate.—*Albany Herald.*

Asparagus Culture.

The first point looking toward success, is in the selection of varieties, or perhaps strains, and the Conover's Colossal, when carefully selected, is very hard to improve on; but the most of the seed ordinarily sold has been allowed to degenerate. The Palmetto is a strain that is highly recommended by some. However, taking it all in all, the Barr's Mammoth seems to be the most desirable market strain; being of large size and comparatively new, it has not had as much opportunity to degenerate as other older kinds. The best should always be selected.

Propagation.

Sow seed early in the spring in beds or drills, and give good, clean cultivation. For the best results keep it growing as fast as possible all the time.

When plants are one year old thin to 12 or 14 inches by 2½ to 3 feet, and give good cultivation, with an abundance of good stable manure well forked in. If one does not wish to wait for seed to grow, plants can be bought cheaply and one year's time gained, which should be set out as directed above, setting the crowns not over two inches under the surface, if wanted for early crop, and if wanted early, plant in warm, sandy land, so the plants will start early in spring. Sandy, alkali land should be good for them, as they require salt in those parts of the country where it is not furnished by nature.

As to profits. I went into the wholesale markets in Los Angeles and was told that the early crop was worth at wholesale, to ship, from 15 to 18 cents per pound; from that price it ranges down to 4 or 5 cents a pound. At this price the early cuttings should bring $125 per cutting per acre, and the cutting could be done on an average of once a week. This would beat oranges or cabbages, or almost anything else.—*A. B. Eells in Santa Ana Blade.*

HORTICULTURE.

State Horticultural Society.

The regular monthly meeting of the State Horticultural Society was held at 220 Sutter street, December 18th. Prof. E. W. Hilgard presided. In the absence of Prof. E. J. Wickson, Emory E. Smith acted as Secretary. C. F. Wyer of Winters, Dr. H. D. Lathrop of East Oakland and G. W. Hinclay of Winters were elected members. The Board of Directors recommended that $50 of the Society's funds be donated toward the erection of the proposed Matthew Cooke monument, and a resolution was passed authorizing the appropriation of the money. The committee reported the receipt of $5 toward this worthy object from N. W Blanchard of Santa Paula.

The following letter was read from G. W Hinclay, relating to the Botan plum, and inclosed letters from J. T. Lovett of Silver, N. J., and Porter Bros. Comp Chicago, relating to the same subject:

Mr. Hinclay's Letter.

DEAR SIR:—I notice in some paper that the Horticultural Society will hold a special meeting morrow. I would be very much pleased to present, but my health is such that I cannot at present. No doubt you know that I have taken quite an interest in the subject ever since the Society (several months ago) took into consideration the propriety of changing the applied name of Abundance to another more suitable. I think it was a wise proceeding on the part of the Society, for I have long known that the name of Abundance was an applied name to a Japanese class of plums called Botan. Now, if the specious name of Abundance was applied by a nurseryman for the sole purpose of facilitating the sale of trees, I think your Society will be only performing one of the acts for which it was organized if they at once change it to a more suitable and appropriate name. I expect, should I live, to raise them in considerable quantities. Not knowing of any name more appropriate, I sent some to Chicago under the name of Mikado, believing as I did that I was doing nothing that was either wrong or selfish. I never have taken very kindly to the name of Abundance, and the name of Botan did not indicate any particular variety. In order to more enlighten your committee on nomenclature, I have written to Mr. Lovett, stating to him not to write me anything except what I could be free to use in the settlement of this controversy. Please introduce the letters. G. W. HINCLAY.

Winters, Cal.

Mr. Lovett's Letter.

Mr. G. W. Hinclay—DEAR SIR: Your esteemed favor of the 12th inst. received and noted. We will supply you 200 Abundance plum trees, the genuine sort, budded on plum, 1 yr. old, good trees, at $15 per 100; budded on peach, at $12 per 100.

The Abundance is a Japanese plum. We received it from a California seedsman nearly ten years ago, and it proved so valuable in the nursery rows, and its name being unknown, we gave it the name of Abundance because it was so very fine and yielded so abundantly. We have since learned that this plum is known in some parts of the country as the "Yellow-Fleshed Botan." As there are, however, so many varieties of plums known as Botan, such as the Sweet Botan, Late Botan, Early Botan, Red Botan, Yellow Botan and Yellow-Fleshed Botan, we are loath to abandon the name of Abundance for this very valuable plum. There is also a number of varieties of Japanese plums known as Botankio with prefixes and suffixes of Early, Red, Yellow, Late, etc., which are also called Botan by some. In fact, the Japanese plums familiarly known as Botan are becoming so mixed up and muddled that when you say Botan you hardly know what is meant; just as in California, when you say Chinaman, you do not know *which* Chinaman or what particular Chinaman. The truth of it is that in Japan the name of Botan is given to a certain *class of plums* and not to a *particular variety*. We think the term applies to the shape of the fruit, but are not sure, just as in this country we have the prunes, consisting of many varieties.

You are free to use this letter in any proper way you wish. Hoping it will give you the desired information, we remain yours truly,

J. T. LOVETT CO.

Little Silver, N. J., Nov. 19, 1891

Porter Bros'. Letter.

G. W. Hinclay, Esq.,—DEAR SIR: Goodell car 16,242 sold here yesterday. Your apricots were very ripe; the boxes sold at 80 cents; half-crates at 90 cents.

Goodell car 16,256 sold here to-day. Your apricots in like condition, and sold at 90 cents to 95 cents. Mikado plums were in good order, and we bought the box in at $2 ourselves, so that we could examine same thoroughly. We find them to be a very fine plum, and we think if they come in earlier and are shipped a little greener than this fruit was shipped, that they would arrive here in fine shape and bring a good price. It looks to us like a very desirable plum, as it is not only handsome, but also has an excellent flavor. We hope you will have plenty of them within a year or two, as we believe you can get a fancy price for same.

Hoping to hear from you again soon with notice of further consignments, we remain,

Chicago, July 2, 1891. PORTER BROS. CO.

The subject of changing the name of the Abundance plum and attempt at renaming the grape known as Isabella Regia (the Pierce grape) was reported back to the Committee on Nomenclature, and the president was requested to appoint the committee, which had not yet been done.

Mr. Wyer of Winters spoke upon the dried-

fruit question and outlined a proposition to establish a sample room in San Francisco, where all of the growers could send sample boxes of their fruit for buyers to examine and make purchases, thus doing away with at least one set of middlemen,

The following committee was appointed to report at the January meeting upon the feasibility of the scheme: C. F. Wyer, Leonard Coates, B. M. Lelong, E. W. Maslin and C. H. Allen.

Howard Overacker spoke upon the use of pumps for irrigation orchards, and said that he was going to put in an experimental plant for that purpose. The subject of planting young trees where old trees had stood, was discussed at length, and a number of cases in which the plan had proven a failure, were cited, especially in the planting of apricots and English walnuts, where oak trees had previously stood. It was suggested that in orchard, when trees were blown down or grubbed out for any reason, that before planting another tree in the same place, the ground should be thoroughly fertilized with well-rotted manure, and dressed with bone dust to supply the qualities which the old tree had removed. It was generally conceded that, owing to the difference in the feeding of the roots, young orchards could safely be started in growing vineyards. The disposition of prunings in the orchard was freely discussed by a number of the members, as was the pruning of the different varieties of trees. In pruning small orchards, the thumb and finger were declared to be the very best implement that could be used. Frank Kimball spoke of the growing and fruiting of trees at unusual seasons, and cited a case, on his own ranch at National City, of Red June apples, which were perfected in September.

E. W. Maslin spoke in behalf of the new Foreign Fruit Marketing Company, which is being organized by the State Board of Trade.

B. N. Rowley exhibited a box of figs, packed by M. Denicke of Fresno, which were declared to be the best flavored and finest appearing White Adriatic figs that had ever been shown in California. A fine box of Robe de Sergent prunes was exhibited by Leonard Coates. Specimens of the Buff North Carolina apple were exhibited by James Shinn. A box of Isabella Regia (the Pierce grape) was also exhibited. The following olives were exhibited by C. H. Allen: Atro Rubens or Vialacea, Macrocarpa, Nigrina, Oleo Rubra, Pendulina, Picholine, Redding's Picholine.

EMORY E. SMITH,
Sec'y pro tem.

Pruning Moorparks.

The possibility of improving the bearing of Moorpark apricot trees by severe pruning is mentioned from time to time, and experiments with the method are still being conducted. The theory seems to be questionable, because in regions where apricots have been most closely pruned, as for example in Southern California, the Moorpark has been practically abandoned as unprofitable. Even when pruned closely twice a year, the Moorpark is shy and uncertain in Southern California, as elsewhere.

Interesting data on this question is likely to be gained this year from the Santa Clara valley. At the meeting of the Campbell Horticultural Society, December 15th, Pres. McGlincy stated that as an experiment, when the fruit was off, he had severely pruned his Moorpark apricots, and hoped it would prove beneficial. This variety is known as a shy bearer, and if by summer pruning, the trees can be made to bear, it will prove a good thing for orchardists; but if not, the days of Moorparks will be numbered, for people will graft them into something from which they can hope, with reasonable assurance that they will obtain an annual crop.

It is not at all unlikely that the Moorpark apricots through this portion of the valley will be very heavily pruned, and the experiment made, to see if they are under all conditions persistently shy bearers.

THE APIARY.

Comb Honey vs. Extracted Honey.

EDITORS PRESS:—An oft repeated question is, Which pays best, comb or extracted honey?

One apiarist will tell you that comb honey can be produced the cheapest, all things considered. He will enumerate the many points for successful comb honey production, and prove to you that comb honey will pay better than extracted. Another apiarist will tell you that there is more money in extracted honey, and to the common bee-keeper he wonders which is right.

Well, in my opinion they are both right; the location and the bee-keeper is the answer. If they are situated near a good market, with superior shipping facilities, and the honey location is good, comb honey will pay the best. As a general rule, one man can attend to more bees when running for comb honey. Comb honey when put up in a neat, attractive package, will sell itself and not go begging for a market. But comb honey requires very delicate handling, and in isolated regions where there are bad roads it would pay best to run for extracted honey; so you see, the location must decide this point.

If I were going to a new country, and intended establishing myself in the bee business, I would try and have the apiary that was nearest my home market run exclusively for comb honey, while the out, or isolated apiaries, I would run for extracted honey; but if there should come a poor honey season and my home apiary should only partly fill up the section boxes, then I would extract all the honey and would therefore secure part of a honey crop anyway.

A person who buys a pound of extracted honey secures more honey than a person who buys a pound of comb honey, because one-eighth or one-tenth is wax.

If a good article of extracted honey is produced it can as readily be disposed of as comb honey.

Extracted honey if it candies can soon be reduced to the liquid form again; but if comb honey candies it will have to be melted, as no way has yet been devised for reliquifying honey in the comb.

A great many persons prefer candied honey, and in every neighborhood will be found persons who will buy the candied honey in preference to all other kinds. For myself, I think it is quite a treat occasionally to have some candied honey.

The honey gathered from manzanita crystallizes quicker than any other kind that I know of; if it is to be extracted, it must be taken out in a few days after being capped over. Water-cress honey also candies quickly.

Quite a point in extracting is, that it has a great tendency to discourage swarming, and in some seasons this is indeed a great thing.

A few eastern apiarists think that the use of the honey extractor is ruining the honey and bee business; that it tends to lower prices too much, and that there will soon be such an overproduction that nothing will be realized from the honey business. Nonsense! I don't think that there was ever an over-production of any kind of food, or ever will be.

What is needed is a systematic system of distribution, and a thorough building up of home markets. It is marvelous the amount of honey that can be sold annually in a small city of 2,500 inhabitants, if the right system of building up home markets is adopted.

Extracted honey is growing more in favor every day, and is being extensively used in various ways. I was reading a few days ago that the editor of the *American Bee Journal*, visited the buyer of a fancy bakery, and the buyer informed him that his purchases of extracted honey for 1891, amounted to $13,000, and we presume that there are hundreds of other bakeries in our land, who use equally as much if not more.

No doubt the analysis of honey, of different countries, would be interesting to readers of the PRESS; following is the analysis given in Blythe's "Foods, their Analysis and Compositions." (See page 129 Analysis made by Dr. Brown.)

COMPOSITION OF HONEY OF VARIOUS COUNTRIES.

	English.	Welsh.	Normandy.	Germany.	Greek.	Lisbon.	Jamaica.	California.
Water expelled at 103 degrees	19.10	16.40	15.50	19.11	19.80	18.80	19.46	17.90
Water expelled at a much higher temperature and lose	7.60	6.56	4.95	11.00	7.80	6.66	7.58	8.13
Levulose	36.60	37.20	36.88	33.14	40.00	37.26	33.19	37.85
Dextrose	36.50	39.70	42.50	36.58	31.20	34.96	35.21	36.01
Cane Sugar	Doubtful.	.....	.....	.....	.....	1.20	2.20	.....
Wax pollen and insoluble matter	Trace.	Trace.	Trace.	Trace.	1.05	1.90	2.10	Trace.
Ash	.15	.14	.17	.17	.15	.14	.26	.11

The one given is not an exhaustive analysis, however, for, in addition to what is given, honey contains minute organic acids, alkaloidal and bitter principles possibly derived from the pollen; small quantities of mineral matter, and invariably minute quantities of alchol, all of which are included in the two last horizontal columns of the table, but it suffices to show that 75 to 80 per cent of extracted honey is saccharine matter or sugar."—*Blythe.*

A German apiarist, testing the crystallization of honey, sampled up several bottles; part of them was placed in a dark room and part in a room exposed to light. That which was in the light room candied in a short time, while that in the dark room remained in the liquid form indefinitely. Still I think if that which was placed in the light room was kept at the same temperature as that in the dark room, it would not have candied either. If honey be kept at a temperature of 90°, it will not candy, whether in a light or dark room; 86° is the melting point of glucose sugar-crystals. All lower temperatures hasten crystallization; the less water honey contains the slower the crystallization, while its entire absence prevents candying altogether.

Extracted and comb honey should be stored in a dry, warm room. Comb honey should be kept in darkness in order to retain its delicate whiteness and keep from fading. Honey should never be kept in a dark place, as it will soon ferment and its delicate aroma is soon destroyed and it is unfit for use.

The production of comb and extracted honey in the Pacific States and Territories is still in its infancy. The honey resources of California, Nevada, Colorado and Arizona are just beginning to be developed.

Alfalfa is the honey plant destined to lead in all irrigated districts.

What was once regarded as a desert and worthless land is now being made to "blossom as the rose." The new systems of irrigation and the boring of artesian wells have accomplished these beneficial and marvelous results.

Aside from the irrigated alfalfa tracts, there are in Arizona and Colorado vast tracts of wild bee pasturage, the principal honey plants among this wild pasture being the mesquite and cacti.

Mesquite is said to yield a honey superior to alfalfa. One man describes it as being as clear as water and of an exquisite flavor. The cacti is also very prolific of honey. A bee-keeper in Arizona reports gathering a teaspoonful of unripe nectar from a single flower.

Grizzly Flats, Cal. S. L. WATKINS.

THE WORLD'S HONEY PRODUCERS.—The largest beekeeper in the world is Mr. Harbison of this State, who has 6000 hives, producing 200,000 pounds of honey yearly. In Greece there are 30,000 hives, producing 3,000,000 pounds of honey; in Denmark 80,000, producing 2,000,000; in Russia 110,000, producing the same; in Belgium 200,000, producing 5,000,000; in Holland 240,000, producing 6,000,000; in France 950,000, producing 23,000,000; in Germany 1,450,000 and in Austria 1,550,000, each producing 40,000,000 pounds of honey. But in the United States there are 2,900,000 hives, belonging to 70,000 beekeepers, and producing 62,000,000 pounds of honey yearly.—*Californian.*

SWINE YARD.

Inoculation for Hog Cholera.

The experiment at Ottawa, Ill., to test the value of inoculation as a preventive for hog cholera has now progressed sufficiently to allow a statement of facts, which will settle one of the points at issue, and probably the only one which can now be determined from this test. The report shows that 55 hogs were purchased (instead of 60, as originally proposed) and divided into three lots. Eighteen were inoculated by Mr. Cadwell, who was instructed by Mr. Billings, and who strictly followed the latter's method; 18 were inoculated by Dr. Schroeder, according to the method used by the Bureau of Animal Industry, and 19 were not inoculated and were held to determine whether the animals had been exposed to disease previous to inoculation, and whether the inoculated animals resisted the disease better than those which had not been inoculated. The inoculations were made on Nov. 28th, and the two inoculated lots were then put in the same inclosure, the animals not inoculated being kept by themselves. One of the hogs inoculated by Mr. Cadwell, according to Billings' method, was sick and refused its feed on Dec. 8th, and on the morning of Dec. 10th, it was found dead. On Dec. 11th, another hog inoculated by Mr. Cadwell died, and on Dec. 13th, two more hogs inoculated by Mr. Cadwell were found dead. None of the hogs inoculated according the method of the Bureau of Animal Industry had died at the time the last report was received.

As the first died 12 days after inoculation, the second 13 days after inoculation, and the third and fourth 15 days after inoculation, and as the hogs not inoculated are all well, and none of those inoculated by the Bureau have died, it is conclusively shown that the disease was caused by the inoculation made by Mr. Cadwell. All of the inoculated hogs were exposed to these animals in which the disease developed from the inoculation, and as a sufficient time had not elapsed for them to receive any protection, it would not be surprising if there should be a considerable percentage of loss in each of the inoculated lots. This premature exposure, of course, prevents any positive information being obtained from this experiment as to whether there is any marked degree of protection conferred by inoculation.

The results already obtained demonstrate the the danger of spreading the disease by inoculation, and particularly by the method used and recommended by Mr. Billings. This danger has been indicated by other inoculations made in Nebraska and Illinois, but it has never before been so clearly and incontestably proved.

In this connection, the following report made Dec. 1, 1891. by ex-Governor Robert W. Furnas, the statistical agent of the Department of Agriculture for Nebraska, is especially significant, as inoculation has been extensively practiced in that State under the immediate supervision of Mr. Billings. This report says:

"I will assume to say that the loss to farmers of hogs by 'swine disease' has never been so great as for the month of November. It has covered more territory and proved more fatal, especially in the eastern part of the State. All say: 'It is not cholera, but more akin to scarlet fever or pneumonia.' It seems to have shown new and more uncontrollable characteristics; has made its appearance on farms where never before known; among hogs raised on the farm with no known chance of having been communicated, and where best care has always been exercised. Farmers say, 'simply mysterious,' and abide results as philosophically as possible."

BERKSHIRE MEETING.—The American Berkshire Association will hold its 16th annual meeting at Springfield, Ill., Jan. 21, 1892. This Association, the oldest for recording the smaller breeds of improved live stock, deservedly continues its popularity with the breeders of that excellent breed of swine.

FRUIT MARKETING.

Distribution by Growers.

EDITORS PRESS:—Thanks for the clipping (if thanks are due to the clipping, I leave you to judge) from the New York paper which thinks our plan for cooperative fruit selling chimerical.

The motive for the animus on the part of the writer is apparent when one looks on the other side of the page and sees the advertisements of the *commission* merchants.

Evidently the writer believes in the text—"Thou canst not serve both God and Mammon," so he serves Mammon, which is his privilege, but his interests are not California's interest, and while his item may be a good sop for his patrons, the commission men, it in no way indicates a relief for the betterment of results calculated toward a juster distribution of return to the grower.

He invites me to come to New York next summer and visit the auction room. I have visited the auction rooms of New York and London, and besides any observations that I have made, have a personal, practical experience with the "modus operandi" of the auction room. I know the potency of a recognized "wink" by the auctioneer, and of the "combine" among the "peanut" men, and I wot that the writer of the article does, too.

What material difference may be conjured up in an auctioneer appointed by and for the growers, and in one by and for the commission men, and for "Peanuts"?

No, friend! One hundred or even five hundred venders cannot handle the great fruit crop of California, but 100 or even 50 will do as a *sample*, and if the 50 succeed, they will be multiplied to thousands, see?

What nourishing and health-giving food product is sold to the consumer in New York at 8 cents per pound? And yet the California fruit-growers sold hundreds of tons of dried peaches and apricots at 4 and 5 cents per pound. Cannot the growers find a retail market at 8 and 10 cents per pound among the densely populated centers of the large Eastern cities? Surely they can, and realize a much greater net return, and in addition, build up a market vastly greater than otherwise possible.

Does the writer know that there are no apricot growers in the world that receive less for their apricots than do the California growers? Why should they continue to receive less? Shall it be in order to accommodate *The Fruit Trade Journal*, the Eastern commission men and "Peanuts"?

Given the trial of say 50 venders at the start, and if these succeed, and shortly, "the multiplicity of details, and the necessity of the employment of an army of the most skilled and intelligent labor to properly handle car upon car of constantly perishing fruit," will be mastered by the employees of the growers as well as by the men now doing this work in their own interests, and when the trial shall have been made and found successful, you may keep your "multiplicity of detail" and welcome to you, but the grower will learn that his interests can be served best by selling to the consumer at a lower rate and at the same time receive for his product an equitable return.

Sacramento, Dec. 20. D. LUBIN.

EXPORTING APPLES TO EUROPE is becoming one of the most important features of the trade. Up to the first week in November, 555,000 barrels had been shipped from New York since the season began. Last year, 195,164 barrels were sent abroad.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST, by addressing the publishers.

The Master's Desk.

S. W. DAVIS, W. M. S. G. OF CALIFORNIA.

"Happy New Year" are the first words found on the Master's Desk this week. What a world of recollections and suggestions these oft-heard words bring! How many times we have spoken them and had them addressed to us! But it seems to me, with each succeeding year, these words have a newer and a deeper significance. When we have left the threshold of youth, and enter upon the duties of manhood and womanhood, we find the New Years coming upon us so rapidly, and each one so filled with care and responsibility, that we may well stop at the dawn of the first day of the year, and exclaim in sincerity, "Happy New Year." How I wish that simple exclamation would make *A Happy New Year* to every member of our noble Order, to all the readers of the RURAL, and to the good and true men and women everywhere! How I wish the world could, in all that pertains to society, be happy for at least one year! But alas! It is easy to say be happy; not so easy thus to be. The New Year will come, whether or not we want it. It will be "Happy New Year" to us, largely as we make it, or try to make it so. Disappointment, sickness, sorrow, death, may come to many of us. Certain it is to come to some of us; and though such are not to bring happiness, yet there is a happiness that comes of resignation—a happiness that comes to all who have intelligently, honestly and faithfully done their duty. There is happiness in the association of the good and true. Nowhere are they to be found in larger numbers or in more sincere association than in the Grange. In the councils of that fraternity, we find the family neighborhood reunion.

The father and the mother, the sister and the brother, the hired man and the orphan, all find pleasant companionship in the Grange. Those whose hearts have been saddened, and those whose minds have been troubled, will in the Grange find sympathy and pleasure. Why not, then, as we leave the Old Year behind, gladly welcome the New Year? Why not, through the influences and the opportunities which the Grange guarantees, make the year 1892 the happiest one of all, not alone for self, but also for friend, neighbor and the stranger? Let us profit by the past, study during the present, so that we enjoy and be useful in the future. To all, A Happy New Year! To the Grange in California and elsewhere, a thrice-successful Happy New Year! That it may be so, will depend largely on your efforts, confiding readers.

See that your subordinate Grange pays its dues to the State Grange up to Dec. 31, 1891. Send the name of the Master and Secretary, with postoffice address, as soon as they are installed, and your Grange will *at once* get the annual word for 1892. If you don't do this, don't blame the Master or Secretary of the State Grange if the word is not forthcoming.

"Act, act in the living present. Heart within. God o'erhead."

Who will do most for the Order in California? By their deeds we will know them.

The holidays are gone; now for the plow, the harrow, the pruning knife, the hoe, and to know how to use these tools join the Grange.

The Christmas number of the RURAL was a good Grange paper. We were sorry so much good Grange news had to go over, and hope that hereafter such will not be the case with the letters and correspondence sent to the Grange Department. Send in the Grange news, for we all want to hear from you.

Don't take La Grippe, but take the Grange grip. It is taught in every subordinate Grange.

The Michigan State Grange has just adjourned. We are glad to see that Bros. Luce and Woodman and Sister Woodman were in attendance to do and dare for the Grange. They know how to do both.

Prepare to receive the new word! You know how to prepare!

The Chinese, that odd people, require four things of a good woman, viz.: "That virtue dwell in her heart; that modesty shine on her forehead; that gentleness flow from her lips, that work employ her hands." While we may disagree with these people across the ocean on most things, who can seriously object to their estimate of a good woman? Perhaps their requirement of the work the hands should do is greater, than we would have it, but none-the-less the hands of a good woman will always find employment.

Much has been written on "How to Save the Boys." The New Year is here, and with it many boys will start for themselves. The best way to save all the boys, old as well as young, is to make home the best place on earth.

See how much, not how little, you can do for the Order. Every effort helps. You may be a humble member, but that matters not—help. We are all humble members. Official station only honors those who bring honor to the office. Better not hold an office than to bring no honor to that office. If you would have the honors of an office you must honor that office. But whether officer or member do your full share for the Grange. You will not, at the close of 1892, regret any effort put forth for the Grange.

The National Grange souvenir proclamation has been kindly received by the PRESS and the Order everywhere.

The Executive Committee of the California State Grange will meet at the office of the Secretary, 220 Market St., San Francisco, Cal., at 10 A. M. on Wednesday, January 13th, 1892. Members of the Order and others having business before the committee, will take due notice of said meeting. The ways and means of upbuilding the Grange will be considered, and suggestions to the better and quicker accomplishment of that work will be kindly and thankfully received. E. W. Davis, Chairman.

During the week a kind and highly appreciated fraternal letter from Bro. J. H. Brigham, the W. M., and also one from Bro. John Trimble, the W. Sec'y of the National Grange, were received. Thanks, brothers. Do it often.

Two Rock Grange.

EDITORS PRESS:—Two Rock Grange failed to hold a meeting on Dec. 3d, date of first regular meeting in December, which accounts for the list of officers not being sent before. We elected our officers Dec. 17th, as per list enclosed. There was a general change except the Lecturer and Chaplain. The Worthy Lecturer was retained, that he might become more proficient, or that he had filled the office with such honors that it was deemed best not to let him go. Our Worthy Chaplain—as we are taught in the Declaration of Purposes, "the office should seek the man"—is the proper man in the right place.

Master-elect, Bro. Denman, was an efficient Assistant Steward and I believe he will handle the gavel with as great honor as he did the pruning hook.

Bro. Martin—well, if he handles the emblem of his newly assigned station, as he did the gavel, *no* enemy will enter and rob the orchard or vineyard or steal the owl from his pole. If any of the State officers should visit Two Rock Grange, be sure you have the proper signal and correct pass, or you can never get by Bro. Martin and his big owl.

Your humble servant, the defeated Secretary, who has been at the Secretary's desk more than half of the time since Two Rock Grange was organized, needs no comments. Although as I am a *retired*—What did I say—I mean a *defeated* Secretary, I will never forget the PRESS or hesitate to ask for subscriptions.

Those newly elected officers will be placed in their respective places and started to work on Jan. 7th. The State Lecturer will be invited to install the officers. We will confer the third and fourth degrees and have the usual Harvest Feast.

Remember that the latch-string of Two Rock Grange hangs on the outside and within reach of all good Patrons.

La Grippe is raging through this vicinity, but so far no one is in serious danger. More rain is needed to start the grass and make plowing better.

Wishing the PRESS firm a Happy New Year, I am J. C. PURVINE,
Sec'y Two Rock Grange.

WE have in hand an interesting communication from John Minto of Salem, Or., on the Question of "Forest Preservation."

Woodbridge Grange.

EDITORS PRESS—Enclosed find list of officers for '92, elected by Woodbridge Grange. This is the busy seeding time with the farmers, when plows and harrows are brought out, and although they do not run day and night, it is told of some that lanterns are required to make the first few rounds in the morning.

Good horses and poor horses all have to work at this season. All kinds of plows, good and bad, are kept going, and it is some extra occasion if the Granger stops operations to attend the Grange. However, Woodbridge Grange mustered a fair attendance December 15th for conferring degrees. The usual Harvest Feast was spread in the lower hall of Grangers' Building, which we have lately purchased, and a general good time was had. Installation will take place Tuesday, January 5th. Meeting at 10 o'clock, with basket lunch. Yours fraternally,

N. VESPER WILLIAMS, Sec'y.
Camp McKee, Dec. 20th.

Kibesillah Grange.

EDITORS PRESS: — Our Grange has changed its meetings from the 1st and 2d Saturdays to the 1st Saturday of every month at 8 P. M.

Our last meeting was a very lively and enjoyable one. We were pleased to see the pleasant face of Bro. Dashiells in our midst, after so long an absence.

Balloting for our new officers was the work for the evening. They will be duly installed at the first regular meeting in January. We cordially invite all friends and hope they will be present at our January meeting, as we intend to hold open Grange during the installation of officers.

Brothers and sisters, we wish you all success and a "Happy New Year." Fraternally, ANNA ROBERTS.

California at the World's Fair.

The Southern California World's Fair Association has received the following letter from J. M. Samuels, Chief of the Department of Horticulture:

"The size of the court assigned to California is 88x270 feet. The error occurred, no doubt, in Mr. Fish's letter as regards space. As you will notice, this will give to California 24,000 square feet within the walls of the horticultural building. Besides, there will be allowed to her several thousand feet of table space for an exhibit of her fruits, which as yet cannot be definitely allotted until more of the States have made application. Northern California will have her proportion of the space, provided application is made from that part of the State for it. I doubt, however, if an exhibit of citrus fruit trees will be made from north of the Tehachapi pass. Therefore, Southern California will have this fine court to herself.

"You will notice that this is much more than California's share of available space at the command of the Horticultural Department, and may call for some protests from competing sources. I am personally of the opinion, however, that your State will use much more than the usual energy in making exhibits, and it is especially desired that the horticultural display at the World's Columbian Exposition be as fine as it is possible to make it.

"I have now a plan in hand which will no doubt enable the exhibitors from Southern California to make an almost unlimited exhibit of citrus and ornamental trees. The Landscape Department at the World's Fair grounds has assigned to the Department of Horticulture for the purpose of displaying fine specimens of plants, the grounds surrounding all the large buildings, provided we shall give them a list of such trees and plants as can be set in a short space of time. Therefore, if you will furnish the Department with a list of citrus fruit trees, pepper trees, desert palms, eucalyptus, olives, conifers of any kind or any other trees that would be rare in this latitude, and especially ornamental, I will try and find space for them on the grounds.

"These trees can no doubt be labeled, if desired, as from individuals or from the Southern California Horticultural Society, and whenever any one goes on the grounds, they can see from the small tags attached to these trees the source from which they were contributed. This will be a good opportunity to have your State advertise its horticultural resources. As you understand, this offer will be made to other States, and the ones that will report definitely what they wish to exhibit will have space allotted to them as long as it lasts. Those tardy in applying will have themselves to blame if they fail to obtain as much as they think they are entitled to.

"Mr. Fish made application for five acres of wooded land on the wooded island or some other outdoor space at my suggestion. I stated to him, however, that it would be very doubtful if that amount could be secured for his State. This space surrounding the other buildings, however, gives an opportunity to comply with his requests if the above conditions are complied with. The grounds will have black soil placed on them and be put in proper condition for planting shrubs and trees, but the exhibitor will be required to carry out the detail work."

A Northern California Association.

The *Sutter County Farmer* has the following: The Horticultural Society has set the ball rolling for having a Northern California World's Fair Association formed. The northern counties can better afford to join themselves together in this great work and make an exhibit collectively at the Columbian Exposition in 1893 at Chicago than for each county to separately exhibit her products there. The secretary of the society will notify each Board of Supervisors in all counties north of San Francisco to appoint five delegates from their respective counties to meet at Yuba City on February 17th and discuss the advisability of such organization. This will be the proper way to get at it, and the matter should be thoroughly discussed in all the northern and central portions of the State and some action taken on the same.

Government Wants a Big Tree.

The Tulare *Citizen* has the following: Postmaster Eckles of this place has received an official communication from Washington City, from the office of Hon. Horace A. Taylor of the Department of Government Management and Control of the World's Exhibition at Chicago, stating that it is the wish of the Secretary of the Interior to secure a section of one of the celebrated big trees of California (to be taken from Sequoia National Park, if practicable to do so), as a part of the exhibit at the Columbian Exposition. They state that the tree would be placed in a central locality in the Government building, and the interior of it furnished in a novel and attractive manner.

They are desirous of ascertaining the approximate cost of preparing a 30-foot section in suitable form and transporting it to the railroad. They also contemplate taking one or more thin sections, sawed entirely across the tree, for ceiling. As this exhibit comes from the National Park, and is to be placed in the Government building, it is entirely proper that the Government should defray the expense, yet it would make Tulare county the best advertised county in the United States outside of Cook county, Illinois. The Presidential visit to Tulare's big stump may have had something to do in bringing this matter to the front. It would be well for the City Board of Trade, through Mr. Eckles, to volunteer their assistance to further this enterprise.

The Olive at Pomona.

EDITORS PRESS:—Although there cannot be many persons who still believe that the olive tree is regularly tapped for oil, yet fruit-growers even know but little of its capabilities in the virgin soil and genial climate of California. Experience with young olive orchards here has proved that the tree comes into bearing as soon as the Navel orange tree and that it does not require expensive machinery nor workmen from abroad to convert the product into oil and pickles, as is generally supposed.

Growers in this vicinity have been busy during the last three or four weeks making their olives into pickles, and they may now be obtained at the stores at $1.20 per gallon; but in a few weeks they will all be consumed and no more to be had till the new crop comes in. People are inquiring how long it will be before there are olives enough produced to last the year round. The object-lessons from the young-bearing groves in this section will cause a large acreage to be planted the ensuing season. JOHN S. CALKINS.

Pomona, Cal

THE GREAT DAM ACROSS THE COLORADO RIVER.—The great dam across the Colorado river at Austin, Texas, is now making substantial progress. This dam will be, when completed, 1150 feet long, 60 feet high and 18 feet wide at the top. The upstream face is of limestone and is vertical; the downstream face is of granite, and the interior is rubble masonry of small stone and cement. The dam is intended to utilize the power of the Colorado river. The water power will run the electric light plant, furnish power for the electric railroads and for pumping the water supply of the city, and leave a surplus of some 13,000 horse power for the use of factories. It is about two miles above the city of Austin and the natural conditions are very favorable, as the river there runs between high bluffs and the bed is of rock, so that very little excavation is required to find a solid foundation. It will be the largest power dam yet built in this country. The estimated cost of the dam is about half a million dollars.

FLORIDA ORANGES DIRECT TO ENGLISH MARKETS.—We learn from a Florida paper that E. L. Goodsell, the New York merchant, is working up direct shipment of oranges from Florida to English ports, claiming that the cost of freight and commission to that market would be about 15c per box in addition to cost of marketing in New York. He places the cost in New York at 45c per box and in English markets at 60c per box—in both cases plus 10 per cent commissions. By shipping from September to December, a time may be struck when the European markets are bare of Mediterranean fruit.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page, Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same

Official Circular from State President F. A. & I. U.

To the Farmers' Alliance of the State of California, Greeting:

BRETHREN:—It seems to me that the time has arrived when I should again speak to the members of this great brotherhood throughout the Pacific Coast, and warn them against the schemes of certain parties to attempt to force Congress to guarantee the bonds of the Nicaragua Canal scheme. Some time ago, there was organized in San Francisco what is known as the "Traffic Association." It purported to have been organized for the purpose of obtaining some relief from the robbery practiced upon the producers of this coast by the grasping railroad monopolies entering this State from the East, and so far as it worked on this line, it had our hearty support. But this Association had no more than fairly organized when it was switched off upon the Nicaragua Canal scheme, and they appointed a committee to inquire into the matter, and said committee reported favorable to the bonds being issued by the Government, and their report was adopted by the Association, thus changing the object and intent of the Association from one to give us relief from the pirate railroad corporations to an institution to boom the Nicaragua Canal, and they now threaten to inflict upon us a petition for that purpose. Don't sign any such petition! We have placed ourselves on high ground upon this question and we mean to stand there until we get relief. In the letter to the Chamber of Commerce, I used this language: "About the end of President Arthur's term, he entered into a treaty with Nicaragua to guarantee the protection of the canal, but before the treaty was ratified, Cleveland was inaugurated and he promptly withdrew it. Warner Miller and others then came before Congress for a charter, pledging themselves that the Government would not be asked for any assistance to build it. The charter was granted upon these terms, which I believe they had no more authority to grant, without an agreement to defend the Territorial integrity of the States where such interests lie, than they had to grant a charter to build a railroad from Paris to Berlin.

"They are now willing to take the Government into partnership upon the same old terms—that it should furnish the means and the corporation pocket the profits. Congress also chartered a 'Construction Company' to build the canal. This, I suppose, is a kind of 'Credit Mobilier' or 'Contract and Finance Company,' which you have probably heard about before, chartered for the purpose of dividing the profits among three or four of the principal stockholders. But Miller and others say there is no risk to run by the Government. If this is so, let them put up their private means, of which they have sufficient to build the canal without any aid from the Government. But suppose $100,000,000 would not complete the work, then they would no doubt ask the Government to take a second lien, as in the Pacific railroads, and the money given them by the Government would be used to corrupt the members of Congress as in the former case, and the courts would step in and declare the corporation did not owe the Government anything until the bonds were due, and in the end I fear the United States would have to pay the bonds and interest, as in the Pacific railroads." In my message to the State Alliance, I used this language: "I placed the Alliance on the highest grounds in the Nicaragua Canal letter to the Chamber of Commerce, viz., That the people of this nation had voted their last subsidy to great corporations for the purpose of controlling commerce, or hatching out a new brood of millionaires; that if the Government desires to invest $100,000,000 in this enterprise it must *own the canal* and run it in the interests of the people." In my letter to the *Bankers' Magazine*, Sept. 15th, 1891, I used this language: "The people of this great country have voted their last subsidy to build up monopolies who oppress them with the very gifts so generously bestowed. We believe hereafter when the people furnish the means for the construction of these great public highways, they should own and control them, and run them in the interest of the people.

"We have already built all the great public highways to the Pacific Coast, and paid for them by taxation, and they are now used to oppress the very people who made the donation, and are pressing us to the wall with their thieving rates of fares and freights, and while we subsidize the steamships with thousands of dollars every year, they enter into combinations to rob the producers. The Pacific Mail, after receiving subsidies from the Government, receives bribes from Huntington & Co. of $700,000 a year to keep up the freights and fares by sea. This amount, in addition to the subsidies, we pay every year in the enhanced price of freights. This canal would be a great benefit to the Pacific if two things were done, and only a curse without them—the ownership of the canal by the people and the abolition of the tariff restrictions on the ports of the Pacific States. If these two things are *not done*, it will make Victoria the large seaport of the Pacific Coast and enrich the British Empire at our expense, and the great merchants and manufacturers of San Francisco can have the privilege of laying back and getting rich off each other by trading jack-knives. No! you may depend upon it that the Farmers' Alliance will never assist in building up any more private corporations to oppress them. If it can be built upon the conditions indicated, the Farmers' Alliance will give it their hearty support." From these quotations from public letters and documents, it is plain to be seen where we stand. We don't intend to go into partnership with any more private corporations to build up the great public highways of commerce, especially where we furnish all the money, and the private corporations get all the turkey. This is what made us so sick. We did expect this Traffic Committee would at least try to give us some relief, but as soon as they are fairly under way they bring in their Canal doctors, and after examining the patient, feeling the pulse, they shake their heads. "Bad case, very bad case. You are very sick," and proceed to prescribe another dose of government bonds. I tell you gentlemen, this is what has made us sick. The very thing we complain of, and we don't propose to take another dose of the same medicine, even if we have to change the doctors. Let us see how this partnership business has worked where we have tried it. We went into partnership with Jay Gould, Sidney Dillon, Russell Sage and Oakes Ames & Co. of the Union Pacific Railroad. We furnished all the money to build the roads, and enough additional in lands and bonds to make all of them millionaires, from thirty to eighty times over, and how do these virtuous partners treat us now. They boldly proclaim their intention not to refund any of the money stolen from their partner, and even refuse any kind of a settlement unless we give them one hundred years at 1½ per cent interest. This gang has built up about 56 outside corporations, and as long as they pay dividends, their partner is not "in it" with them, but as soon as the stock is worthless, and pays nothing, these virtuous pards vote all the stock to their partner, and then (as in the Oregon Short Line), they will gobble up the bonds, and vote as directors that their partner shall guarantee the payment of interest from the earnings of the old Union Pacific.

They receive money into one hand as a private corporation, and pay it into the other as a contractor with their silly old partner. Thus the whole thing seems to be a species of thimble-rigging, with this difference from the old style—the "little joker" is always found under the thimble. It makes no difference which thimble you lift up, it is there. But you may say that this Canal Co. will have Government directors to look after our interests. Why, bless your innocent souls, we have had five directors in the Union Pacific board for over 27 years, say about 75 in all. Have you ever heard of them? Can you name a dozen? Can you name as many as God required to save Sodom from destruction? We occasionally hear of one who did not like to report "all right." But you will soon hear that he was "persuaded" to sign. There was one honest man on that board; his name was C. H. Snow, and he made a report March 5, 1869; but he was so lonely that he was "bounced" the first opportunity. The partnership in the Central Pacific was more infamous if possible. A committee appointed to investigate its affairs reports it rotten to the core. The Pattison Committee reported that if the road had been honestly conducted, they could have paid off the Government debt of about $70,000,000, and received a dividend of six per cent upon the capital invested, and reduced the freights and fare $140,000,000 in the last 20 years. If this is so, and probably it is, that corporation has robbed the producers of this State of $140,000,000, and their partner of as much more. But I have no time to follow up this matter at present, and, in conclusion, will say that the record of our partnership with these corporations constitutes the blackest history ever written in any country, not excepting Warren Hastings in India. In that case he robbed an alien race, in this it was our own people. If the people of this State want more light on this subject, I stand ready to give it.

The time has arrived when the great industrial classes are tired of their allegiance to a clique who are ever ready to boom any legislation in the interests of the rich and against the common good. Already their mutterings of discontent are heard upon the plains of Kansas, and the wheat-fields of the Dakotas and Minnesota, from the corn-fields of Illinois, Indiana and Iowa, as well as from the Pacific Coast. The stability and prosperity of this nation depend upon the honesty of the masses. You would not look to the ward politicians, or the boodlers of the last Legislature, or the courts who turn them loose after they are in the clutches of the law to maintain the purity of this Government. You would not go to the gilded palaces of those who revel in their ill-gotten wealth, but to the farm-laborers, the manly workman at the forge, the lathe and the bench, and the great middle classes to maintain the power and purity of this great Government.

Now I say to this Canal Committee don't make the mistake of ignoring the modest wishes of the people. They do not ask the confiscation of the ill-gotten gains of any corporation, but we do demand a fair deal in the future, and we intend to have it, and we are on the skirmish line now, and will not permit the enemy to entrench themselves behind additional bulwarks in the shape of Nicaragua Canal Bonds.

MARION CANNON,
Ventura, Cal., Dec. 21st. State President.

Money as a Measure of Value.

[Written for the RURAL PRESS.]

Value as a thing does not exist. Value is a relation between human want and supply. Its increase is in proportion to increase of want or diminishment of supply. Nothing on this earth has or can have an absolutely stable value (in its relations to mankind), because human want, supply and the relation between them are continually changing; and as value in anything is simply the outcome of these three elements, it must vary with their variations.

As value is a relation (or, one might say, the result of relationship), and as all relations are continually changing, more or less, the phrase "fixed standard of value" is devoid of sense. There cannot be any "fixed" standard of value, with one important exception to be soon noted. Money cannot be a standard or "fixed measure" any more than anything else. It is as idle to talk about "money" being a measure of value as to talk about potatoes being a measure of value.

Here, now, is one additional point to be borne in mind: There is a difference between money applied to the purchase of commodities and money applied to the extinguishment of debt.

The real value of money is what you can get for it. That is the only standard of value there ever was or ever will be for money.

There are two purposes for which money may be used, and only two: 1. For the purchase of commodities. 2. For the payment of debt. If we could always get the same amount of any commodity for the same denomination of money, then money might be said to have a "fixed value," or to be a "fixed measure of value." But we know that the amount of any commodity which we can get continually varies, consequently the real value of the dollar (or piece of money) continually varies, so far as the purchase of commodities is concerned. But, on the other hand, if we can always extinguish the same amount of debt with a certain piece of money, then that piece of money has a stable value for the payment of debt. It is a "fixed measure" for this latter purpose, and this only. So the value of money may be at once unstable and stable, depending upon the use to which the money is put. But now it is again necessary for us to have a care. If the piece of money is to have a stable value for the payment of debt, the denomination imprinted upon its face must be the only "standard" of its value for the payment of debt—that is, of the amount of debt which it will extinguish, no matter what the money may cost the debtor when he buys it with produce. If the value of a piece of one kind of money is to be fixed by comparison with another kind, and the ratio between them is subject to change, then all the value of the piece is unstable. It has, hence, no stability of value whatever.

F. P. COOK.

A WRETCHED DEED.—The severity of the famine in Russia will be aggravated by the wretched deeds of conscienceless greed. The cable brings accounts of a consignment comprising 1,800,000 pounds of barley flour which was purchased from the dealers in Libau with a view of regulating the price of wheat in the St. Petersburg market, as well as to afford relief to the famine sufferers. An investigation proved that the entire consignment was adulterated with chalk dust and other substances. They comprised such a large proportion of the consignment that the use of the alleged flour would constitute a very dangerous menace to the health if not the lives of those who partook of it. If a strong paternal government is good for anything it ought to be able to hang all who may be detected in such infernal villainy.

ANOTHER CONSIGNMENT FROM MR. KOEBELE. By the Australian steamer, which arrived on Saturday, Mr. Lelong received a large consignment of predaceous insects, sent from New Zealand by Albert Koebele, who is now searching for beneficial insects in foreign countries, as our readers already know. The present consignment included about 20 different species of insectivorous beetles, mostly of the ladybird families, which he found eating various scales and woolly aphis. The insects have been forwarded to Mr. Coquillett at Los Angeles for culture and colonization. Mr. Koebele believes his captures will be found to be as effective in their several ways as has the Vedalia cardinalis.

ELECTRICITY IN BREWING.—It is considered by a writer in the *Brewers' Journal* that the application of the electric light would tend to increase the amount of yeast formed during the concluding processes of fermentation in the brewery.

Farmers' Institute at Fowler.

The managers of the Fresno County Farmers' Institute, to be held at Fowler, Jan. 7, 1892, have prepared a program, which appears below. The Selma *Irrigator* says: The whole time of the session is to be given to the subject of raisin culture, including the important topic of marketing the crop. It seems necessary to urge the necessity of some effort to effect a change in the present existing state of affairs if the past far-famed prosperity of Fresno Co. is to continue. Not only the fruit-growers, but business men of all classes, are financially interested, and it is expected that a large audience will be present.

The committee have secured the services of N. W. Motheral of Tulare, whose experience of late has fitted him to deliver an address that shall point out the way in which farmers may cooperate to their own advantage. Full time is allowed for discussion, and no vine-grower in the county should willfully absent himself from that meeting.

Program.

MORNING SESSION—10 A. M.

Called to order by.....Pres'dent Laird
Music.....Pianist
Invocation.....Rev. M. Giffen
Song.....Fowler Choir
Address of welcome.....Mr. Giffen
Response to address of welcome.....Mrs. Lizzie Fowler
Reading of minutes.....Secretary
Paper on best varieties and cultivation of raisin grapes.....J. H. LaRue
Paper on vine pruning.....J. H. Harding

AFTERNOON SESSION—1:30 P. M.

Music.....Fowler Choir
Roll-call, responded to by quotations.....Institute
Paper on curing and packing of raisins, Mrs. A. D. Barling.

RECESS.

Music.....Fowler Choir
Address on marketing fruit.....N. W. Motheral

EVENING SESSION—7 P. M.

Music.....Fowler Choir
Reports of committees.....
Paper on "Duties and Responsibilities of Members," Mrs. M. B Stewart.
Music.....
Recitation.....Miss Nellie Boyd
Lecture.....
Music.....

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DEC. 22, 1891.

465,690.—VEHICLE SHAFTS—J. R. Brought, Mojave, Cal.

465,755.—WEATHER STRIP—S. R. Deacon, Electric, Cal.

465,464.—FIRE ESCAPE—E. W. Dixon, Forest Grove, Or.

465,615.—REFRIGERATOR CAR—E. T. Earl, Los Angeles, Cal.

465,530.—HOOK—R. L. Kirby, Pomeroy, Wash.

465,624.—HYDROCARBON BURNER—J. R. Morse, Los Angeles, Cal.

465,490.—MUSICAL INSTRUMENT—A. Olson, Mishawaka, Or.

465,491.—TRACTION WAGON STEERING APPARATUS—J. B. Osborne, Daggett, Cal.

465,566.—EXTENSION JOINT FOR URINALS—Jas. Shepard, S. F.

465,769.—STEAM ENGINE—C. W. Tremain, Portland, Or.

465,570.—SPEEDING AND REVERSING GEAR—F. E. Tremper, S. F.

465,738.—EXCAVATOR—J. H. L. Tuck, S. F.

465,741.—HAIR-WORKING MACHINE—G. A Williams, San Diego, Cal.

The following brief list by telegraph, for Dec. 29, will appear more complete on receipt of mail advices:

California—Hans C. Behr, San Francisco, instrument for measuring units of work done by a machine; Frank C. Collvile, Oakland, electric annunciator; William A. Brown, San Francisco, wrapping machine; Henry Elliott, Los Angeles, lock; C. I. Hall, San Francisco, valve for hydraulic elevators; Adam Heberer, Alameda, steam boiler; James L. Henderson, Alameda, motive engine; Charles B. and T. D. Hunt, Winters, truck; Alden B. Kelbara, Oakland, and C. Young, Sacramento, metallic packing; John C. Lock, San Jose, car coupling; George E. Woodbury, San Francisco, ore concentrating machine.

Arizona—Wm. H. Ayres and H. Schroeder, Whipple Barracks, bow and stringed instrnments

Oregon—Jonathan W. Hunt, Kirby, memorial burial tablet and indicator.

Washington—Caleb D. Page, Tacoma, dumping trap.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

KLAMATH LANDS NOT OPEN.—An important decision was handed down in the Interior Department, Monday, being the case of Phineas D. Holcomb, involving an application to make homestead entry within the Klamath River Indian Reservation. Secretary of the Interior Noble in his opinion says: "It is clear that it was not the intention of Congress to restore these lands to the mass of public domain to be disposed of under the direction of the public land laws. By the order of the Secretary of the Interior of February 25, 1889, the Commissioner was directed to refuse all entries or filings attempted to be made within the boundaries of the reservation above named, and by an executive order of October, 1891, the tract was included in the Hoopa Valley Reservation.

THE LUSK FAILURE.—A meeting of the creditors of A. Lusk & Co. was held Monday. A statement was read showing that the company's liabilities amounted to $695,000. The assets are at present unavailable, with the exception of $75,000, which can be raised at once. The sentiment of the creditors was in favor of allowing the company to resume business, as it was thought that if time were given, a portion of the firm's indebtedness would be lifted.



The Opening Year.

Your hand, New Year since we must comrades be
Through the strange circles of the seasons four!
Plodding in lonely paths 'mid drifting snow
When days are dark, and whirling tempests roar
Will your strong guiding arm be 'round me pressed?
And when the ice-bars melt, and warm blue streams
Laugh in the sun, and leap toward the sea,
Will you, then, share my happy spring-time dreams—
The waking songs that birds and poets know?
And when red roses burn on bended sprays,
And lovers roam through shadowy woodland ways,
Will you keep kindly pace? and last when brown
Lie the sweet fields, and faded leaves come down,
And we are tired, both, and fain to rest—
Will you be friends with me, still true and near?
Then take my hand and heart, dear comrade year.

—MADELINE S. BRIDGES, in *The Ladies' Home Journal.*

Love's Pain.

[Written for the RURAL PRESS by C. P. N.]

A very hard and painful thing is this,
That hearts ask sympathy from none but they
Who sweetly yield us love they would not stay;
Who love us tenderly with such a bliss
As we drink deep through word and look and kiss;
And yet that those we know in this sweet way,
Love shrinks from paining with our wan—array!
That love from self should sympathy dismiss!

Yet we our every ill with love must share,
Else love is grieved. In seeking not her own
She tramples peace when bought at other's loss.
Strange reasoning of love, that she would bear
Her own life's constant round of trials alone,
Yet grieved be if love share not his cross!

The Shape of Her Dress.

[Written for the RURAL PRESS by MRS. C. P. STETSON.]

Does this title strike the woman reader or the man reader, if there be any, as something strange?

Probably not, and yet if it were "the Shape of her Skin," there is a perceptible absurdity. What shape *could* her skin be, but the shape of her body, which it is made to cover. The skin by itself is nothing; it is only a covering, and its beauty and value depend on its perfect fulfilment of use.

To consider the skin by itself as having an individual existence and shape of its own is preposterous.

And the dress?

Ah! that is different. A dress is a thing in itself, having a most decided individual existence, and a shape more surprising than any natural form. It quite surpasses Nature, for her shapes are all the result of special use, and the shape of a dress is not only without use, but against use, not only having no relation to the form it is meant to cover, but contradicting and injuring it.

The dress which I last heard of as having a "shape," was a piece of exquisite organdie muslin, soft, fine and sheer, with a large but delicate pattern, in gentle colors, a most beautiful fabric.

I turned to plead with the happy possessor that she have it so made as to do justice to its beauty, that the pattern might show freely in broad, soft, changing folds, with the lovely, rippling flow a figured fabric has over limbs in motion.

Oh, yes! she was going to have it made with a plain, full skirt—over this, and she showed me a heavy sateen which was to line it.

As well put feathers over a coat of mail—butterfly wings on a turtle! How could that dream muslin show for anything over a heavy, close-fitting garment of sateen.

I ventured to remark on this, but she rebuked me. She must have the sateen underneath, or the dress would have no "shape!"

"But *you* are the shape," said I, "it will have your shape, and has no business to have any other."

No, she did not agree. Her own shape she did not wish to show, and the dress must have some shape of its own to cover hers.

It was a little instance and common enough, almost universal, but what vistas of ignorance and poverty it opens up! Ignorance of all laws of truth and harmony, use and relation, poverty of that unconscious daily beauty, which is our natural right, and we do not even know it.

We are content to live in fat or meager, unwholesome, ill-made bodies, which are a burden and a mask to the spirit, instead of the perfect vehicle of thought and feeling they should be.

We are content to cover those poor bodies, thankfully hiding their known deficiencies and supposed uncleanness, with garments which cruelly injure our physical use and happiness, and give the lie to every motion of the soul.

We are content to live in these poor bodies and poor dresses, in houses as bad as either; houses brainless and beautyless, neither of perfect use as habitations nor of any satisfying loveliness as the outermost shell of the human creature.

We are content, partly because we know no better, and partly because we have not yet learned the relation between circumstance and conduct. We do not know that beauty and goodness and truth are one.

We think it makes no difference what shape our dress is, our body, or our house—only the soul. But the soul lives in these things, and should manifest itself freely through all three.

Debarred this, ignored, opposed, outraged, the soul shrinks back, and is daily and hourly crushed and hurt by its ignominious coverings. It is so plain to see! If our bodies were those perfect and ready servants that they should be, our impulses toward doing right would not be so checked and hampered as they are now.

The soul suffers constantly from the inability of the body to perform its behests. Once given a body beautiful from full and perfect use, and we should find it far easier to grow nobly upward than we do now; and if the body were so perfect, how we should revolt from these imperfect clothes!

To have the swift and graceful movement of free limbs tied down by close-bound skirts, the full breaths of mighty lungs held in by immovable waists and bands, all the marvelous changing expression of that image of God given the lie by the shape of a dress forsooth! We would not bear it.

Once the human body fully won and worn, and with such garments as befit our princedom, then our houses would become fair and perfect also, be they large or small.

You can not wear lies on your outside and not feel it in your soul. Fancy an angel in a fashionable dress! It is the bitterest mockery to put this live immortal creature, crown and fruit of the ages, into the tangled upholstery of modern dress.

The eyes of love should shame us when that immortal passion stirs a heart that can not beat for the stays that crush it.

Our baby's hands should shame us when their clinging fingers wander amazedly among the senseless curves and folds and trimmings that he must not disarrange nor soil.

Think of a hen saying to her chickens, "Go away, you'll muss my feathers."

Every hampered step and clumsy movement that we make should shame us. To think of this divine body, God made and made like God, being unable to perform its simplest movements well because of the swaddling clothes we wear; unable to express its high, free spirit because of the false, ignoble "shape" of these things we hide in.

This question of human clothes is more than economic, more than hygienic, more than artistic, more even than specifically "moral;" it is a question which closely concerns the soul-life and soul-growth of the world—a thing of mighty import to us all.

Can we not try to study it, we women? looking at the subject with new eyes, from a new standpoint, as a matter not of stooping, but of noblest duty.

The fashioning of a body to clothe and serve the human soul was a great task; and the fashioning of garments to clothe the body and express both body and soul is a great task also.

We need noble artists to teach us how to rightly dress, and we need all of us to patiently and reverently study the subject, that we may be clothed as becomes our rank—the immortals.

LESS WINE DRINKING AT DINNERS.—It is an undoubted fact that the serving of many and heavy wines at large dinners, is gradually becoming a thing of the past, writes George W. Childs in the January *Ladies' Home Journal.* Of course, I do not mean that wines are no longer served, for they are, and will continue to be, so long as civilized men consider them a feature of dinners. But I do mean that of the varieties of wine, there are fewer, of the quantities, less, and of the qualities, lighter, than was the custom ten years ago. Were I preparing for a large dinner for men—which is always, from the nature of things, more heavily wined than an ordinary "mixed" dinner—I should not think it in the least degree necessary to order anything like the same amount or assortment of wines that would have been imperative a few years ago. And in confirmation of the statement that the qualities of the wines served are becoming lighter, the simple fact that at the average English dinner table, port wine has been almost entirely superseded by claret, may be cited. It is also becoming a very ordinary thing at English dinners to meet prominent men who do not drink wines of any kind, and in our country this is also becoming more and more a fact. Of course, a dinner must have fluids; the best of solids require some liquids with which to relish them, and a dinner would be but wasted energy and material without them. But I think it is no longer imperative to serve wines, or, at least, we can serve with them some other beverage which will be of equal pleasure to the constantly increasing set of people who find that wining and dining together is rather too heavy a combination for their comfort.

THE lovers are wandering amid the flowers. She has just plucked off the petals of a rose. "You see," he remarked, "even the flowers tell I love you." "Now I am going to ask one if you will be faithful to me." "Do; do you know I'd like to see how that turns out myself."

Rural Bathrooms and Bathtubs.

[Written for the RURAL PRESS by MRS. J. HILTON.]

You have all heard of the party who was insulted when told by their hostess whom they had just come to see: "there," pointing to a door, "is the bathroom." She supposed that a bath would be the first thing they would want after a long, dusty ride, but they took it as a reflection upon their cleanliness. I have met a good many people that I should be slow to mention the bathroom to, mainly because they had had such poor facilities for bathing more than the face and hands during their life time, that it would be almost a penance for them to bathe all over more than once a month or so.

It has always seemed strange to me that farmers almost invariably leave out the bath room when building a house, the very ones who need a good bath every day, for plowing, pitching hay, grain and straw, is all very dusty work. And the farmers wives who toil at sweeping, cooking, hosing in the garden and such work, instead of being able to go into a private room and have a good wash, must needs go without, or else lug into their bedrooms a horrid round tub that it is impossible to get more than a third of the body into at once, or else take a sponge bath with the risk of spattering their nice clean floor. Some say it is such a trouble to heat water to carry into a bath tub even if I had it. Well, it would be, if you had to heat and carry in three or four pails full of hot water. But let me tell you how a friend managed. She had said to her men folks everytime they built a house or added an addition, "be sure and allow for a bathroom, it does not have to be more than six by eight but a larger one would be nicer." Do you think she ever got one? No, not she, not that way; they would put on a lot of fancy fixings on the front poarch, but a six by eight bathroom, oh! no, that would cost too much.

A Homemade Bathroom.

She possessed her soul with patience and when everything was propitious she got her bathroom; and don't she enjoy it.

Her back porch was the whole length of the house and about ten feet wide; on that porch was a movable cupboard four by six, that was not used except for a few things that could be stored elsewhere. One day the oldest boy had a vacation and when asked by his mother if he would help her to make a bathroom, he laughingly assented, provided she would find the material. She explained her plan; by taking off one side and end of the cupboard and putting the end that had the door in that it would make one side 10 feet long, the six foot side would do for one end and the wall of the house would make the needed other side and a couple of boards would finish out the end still left on the cupboard, thus making a room six by ten, and seven feet high. What was to be done with the top, as the boards that had been on the top were now too short and it would not be nice to leave it all open. They found two long strips of board and some old matting and covered it over as neatly as possible, and then the tub was the next affair to get. An old horse trough that leaked too badly to use but that happened to be about the length and width of a bathtub, was brought up to the house, all rough places taken off and the seams corked up with strips of cloth. A thick coat of linseed oil and yellow ochre which is only six cts. per pound, was put thickly over the bottom and wherever the cracks were, inside and out, and left to dry for two weeks. As there was a plug hole in the end of the tub, a corresponding one was bored in the wall. The tub was set up on two oil can cases, and a tin spout, made from a piece of an oil can, was pushed through the wall and fastened to the end of the tub. Hooks were fastened inside the room in convenient places for the clothing. A pin cushion fastened to the wall, a sardine box with a cake of soap within it was fastened on the wall just in handy reach of the bather when in the tub, and a towel and wash rag hung on one of the hooks, and there she was, all rigged out.

How to Bathe With a Pailfull of Water.

One hot day after everything was ready for use and being in perspiration from hoeing in the garden, she decided that a good hot bath just then would be very much like a turkish bath. Feeling too tired to make up more fire and heat water to fill the tub, and seeing that she had a kettle full of water too hot to bear her hands in, she decided that she would do like the Japanese lady did that she had been reading about a short time before, only instead of sitting on the floor she would sit in the bathtub and the water could run out onto the ground outside. So she filled an old pail with the hot water, set it within the tub, fastened the door, disrobed and sat down in the tub, first putting a woolen cloth in the tub where she intended to sit, with the pail between her feet, then took her bath. I hold that it is much more cleanly to wash that way than to immerse the whole body in the water at once, for with the wet cloth well soaped and rubbed over the face, chest and arms, then comparatively clean water is always in the pail or can, to wash off the soap and dust from the whole body, and it can be used very much hotter than when the whole body is immersed. That kind of a bath never weakens like a full immersion in hot water, and the main saving is in time, 15 or 20 minutes being long enough for disrobing, bathing and dressing.

Anyone who has a room suitable but no tub, a four foot box wide enough to sit in and use the arms freely and so that the water splashed will fall within the box, will be just as good for that kind of bath as a longer one. I have seen boot boxes that would do finely if they were calked up and painted as directed above, and they are so much more satisfactory than a round tub that I know that it would pay for the trouble of fixing them. Even if you must use your bedrooms for a bathroom fix the box and nail leather handles on the ends and it will be as easy to carry as a tub and you will enjoy it much better.

Los Alamos, Cal.

John Wanamaker's Wife.

The wife of the Postmaster General is her own housekeeper, and when it is remembered that her duties include the management of four homes, some appreciation of the systematization which accomplishes such management may be experienced, writes Alice Graham McCollin in an interesting sketch of Mrs. John Wanamaker in the January *Ladies' Home Journal.* One of these homes is in Philadelphia, where the family spend the early winter, the months of November and December. The rest of the winter season is given to Washington, where they have a second beautiful home. The summer is divided between "Lindenhurst," a magnificent house and estate about fifteen miles from Philadelphia, and "Lilenmyn Cottage," a smaller country house at Cape May Point, which gets its rather peculiar but entirely original name, from the diminutives of the daughters of the house—Lillie and Minnie. The house in Washington contains a fine art gallery, which must be taken as an evidence of its mistress' devotion to fine paintings and statuary. For dramatic representations Mrs. Wanamaker cares little, but music, in the form of either concert or opera, finds her always a delighted and attentive listener. She is a most enthusiastic Wagnerite, explaining her love for this school of music by her inheritance of German blood from her mother.

In appearance she is most pleasing. Her face, though not strictly beautiful, is a most charming and delightful one, and her expression while usually grave and preoccupied, is constantly broken by smiles, which brighten her gray eyes and display a charming mouth of beautiful teeth. She is of medium height, and weighs perhaps one hundred and forty pounds. Her figure is plump and pretty, and her gowns, which are usually gray, black or dark purple in color, always fit it perfectly. Her hair is brown, and by its utter absence of gray tries still further with her appearance to conceal the fact of her grandmotherhood. She wears it twisted high on her head and in a light curly wave over her brow.

She is most generous and kind to her friends of whom she has a great number, and is fond of taking them with her on trips and journeys of great and small length, always entirely at her own expense. They are never given an opportunity to spend any money on these occasions, but also, they are never allowed to see or feel the cost of their entertainment. It is perhaps characteristic of her, that her generosities, like her duties are, accomplished quietly, unostentatiously, far from the sight of men, but that they are all performed, both duties and charities, her happy busy life, and the number of people who call her blessed, are evidence.

"Ethel," said Lionel Bertram Jones, as he dropped his slice of bread in the plate with a noise that set the canary in the gilt cage overhead chirping merrily. "Ethel, I have something to say to you." They had been married four weeks, and the time had not arrived when she did all the saying. "Do you remember the day on which I proposed to you?" "Yes," she replied, I will never forget it." "Do you remember," he went on, as he abstractedly drilled a hole in the loaf with the point of a carving knife, "how, when I rang the bell, you came to the door with your fingers sticky with dough, and said you thought it was your little brother who wanted to get in?" "Yes." "Oh, Ethel! How could you? How could you?" "How could I what," she responded, as a guilty look crept into her face. "How could you make me the victim of such a bluff?"

WOMEN PROFESSORS.—A two hours' discussion took place November 20th, before the Academic Senate of the University of Zurich, on the admission of women as professors. The committee of the Senate, constituting a majority of the same, then moved "That it is at present inopportune to permit women to enter the corps of teachers at the University." The opposition made the counter motion, "That there is no reason why women should not be suffered to form a part of the University Corps." The ensuing discussion resulted in a vote of nineteen to ten in favor of the first motion. The rector of the University was in favor of the second motion, but, as presiding-officer, could not vote. Further, one professor sent his written vote in favor, which was not accepted. So large an affirmative vote shows a remarkable advance.

"What does Good Friday mean?" asked one schoolboy of another. "You had better go home and read your Robinson Crusoe," was the withering reply.

Grand Words to a Noble Friend.

Among the letters received by the poet Whittier on the recent occasion of his eighty-fourth birthday, was the following from Oliver Wendell Holmes, the poet's old friend and contemporary:

My Dear Whittier:—I congratulate you on having climbed another glacier and crossed another crevasse in your ascent of the white summit which already begins to see the morning twilight of the coming century. A life so well filled as yours has been cannot be too long for fellow-men and women. In their affections you are secure, whether you are with them here or near them in some higher life than theirs. I hope your years have not become a burden, so that you are tired of living. At our age we must live chiefly in the past—happy is he who has a past like yours to look back upon.

It is one of the felicitous incidents—I will not say accidents—of my life that the lapse of time has brought us very near together, so that I frequently find myself honored by seeing my name mentioned in connection with your own. We are lonely, very lonely, in these last years. The image which I have used before this in writing to you recurs once more to my thought. We are on deck together, as we began the voyage of life two generations ago. A whole generation passed, and the succeeding one found us in the cabin with a goodly company of coevals. Then the craft which held us began going to pieces, until a few of us were left on the raft pieced together of its fragments; and now the raft has at last parted, and you and I are left clinging to the solitary spar, which is all that still remains afloat of the sunken vessel.

I have just been looking over the headstones in Mr. Griswold's cemetery, entitled "The Poets and Poetry of America." In that venerable receptacle, just completing its half-century of existence—for the date of the edition before me is 1842—I find the names of John Greenleaf Whittier and Oliver Wendell Holmes next each other, in their due order, as they should be. All around are the names of the dead—too often of forgotten dead. Three which I see there are still among those of the living—Mr. John Osborne Sargent, who makes Horace his own by faithful study, and ours by scholarly translation; Isaac McLellan, who was writing in 1830, and whose last work is dated 1886, and Christopher P. Cranch, whose poetical gift has too rarely found expression. Of these many dead, you are the most venerated, revered and beloved survivor; of these, few living the most honored representative. Long may it be before you leave a world where your influence has been so beneficent, where your example has been such inspiration, where you are so truly loved, and where your presence is a perpetual benediction. Always affectionately yours, OLIVER WENDELL HOLMES.

Chaff.

"WHAT are you reading, my dear?" "A letter from mother, pa." What does she say?" "Oh, nothing." "H'm! Are you sure it's from your mother, my dear."

"YES, she's pretty and amiable and all that, but she's awfully lazy; her mother can't get her to do anything." "Dear me, and she's one of the leaders of the Society of the Helping Hand."

WIFE—Your overcoat is all over mud. Husband—It fell last night when I was coming home. Why didn't you keep a firmer hold of it? Because I had it on at the time.

Curio Dealer—Here's a skeleton of George Washington's pet cat. Collector—I don't want one so large. What's this small one? Curio Dealer—That's the skeleton of the same cat when it was a kitten.

SHE—Would you believe it? That vicious little Mrs. Weston has taught her baby to call its father "Grandpa." He—What did she do that for? She—So that Weston shall not forget that he is old enough to be her father.

MOTHER—I'm afraid that husband of yours neglects you dreadfully, my dear. He's always at his club when I call. Daughter—Yes, mamma, but he's at home all other times, I assure you. Strange to say, the old lady didn't think any the better of him even then.

SERVANT GIRL (to census taker)—Mind you put down in your book that I am the 11th girl miesus has had since the beginning of the year. Census Collector—That's no business of mine! Servant Girl—Very likely; but I want everybody to know what sort of a hole this is to live in.

AN old bachelor says that giving the ballot to women would not amount to anything practically, because they would keep denying they were old enough to vote until they got to be too old to take any interest in politics.

Two Polish peasants happen to meet. "Tell me, did you know that Naida's cow was dead?" "Good heavens! But you are not going to tell him the news as blunt as that?" "No, I shall prepare him. First I am going to tell him that his mother has died; then I can break the news about the cow."

CAUGHT.—"Any letters this morning, Mary?" "Nothing but a post-card, ma'am." "Whom is it from, Mary?" "And did you think I'd be reading it, ma'am," said the girl, with an injured air. "Perhaps not, but any one who sends me a message on a post-card is stupid and impertinent, that's all?" "You'll excuse me, ma'am," said the servant, loftily, but that's a nice purty way to be talkin' about your own mother!"

YOUNG FOLKS' COLUMN.

How Snap Helped His Mistress Out of Trouble.

[Written for the RURAL PRESS by CAROLINE E. SANDERS.]

Terese Totham was the name of a little girl whose playmates always called Twinkle Totty, perhaps because her brown eyes twinkled with merriment, and she was altogether such a happy, joyous child that she seemed twinkling all over with fun and glee. But there came one sad day when her bright eyes were full of tears, and instead of sparkling with happiness, she appeared quiet and melancholy, and the worst part was, that it was only the day before Christmas. For weeks before, she had been almost dancing with delight in anticipation of the pleasure in store for her, not only the nice presents she would surely receive and the happy time she always had at home, but then, too, her mamma had said she might invite her Sunday-school class to take dinner with her, a half-dozen little girls with whom she was quite intimate.

"And now to think it is all spoilt, Snap," said she to her dog as he came and stood beside her near the fire. Snap, whose right name was Sardanapulus, given to him by her papa, because he would always cry unless he had a soft bed, wagged his tail in a quiet, sympathetic sort of a way, and looked up in her face as much as to say, "I understand all about it."

"I do believe Snappy," she continued "that mamma thinks you are to blame though she would not hurt my feelings by saying so." At these words, Snap stopped wagging his tail and gave a little whine as though his feelings too were wounded by such an insinuation, "but we can guess who is at the bottom of it though Poll sits there in her cage blinking her eyes and pretending not to see anything, just as she always does before she flies down on your back. But suppose you go hunt for it," she added, as she opened the hall door.

Off started the dog, barking furiously and smelling around under all the trees and shrubs, but after making the circle of the garden, he returned empty-handed, as it were.

The trouble was this: That morning at the breakfast table, Mrs. Totham announced that her purse had mysteriously disappeared. She had left it lying on her bureau, intending to start out immediately after breakfast to do her Christmas shopping. "It contained all the money I had reserved for that purpose," said she, "so if it is not found, I can buy no presents or have any guests here that day." Poor little Terese felt her heart sink, for she knew it must be as her mamma had said, for her papa had only his salary to support them and would not go beyond it. They did not for a moment suspect their faithful Mina, their only servant, who had lived with them since before Terese's birth, and the hall door was kept locked so that no one from the outside could have taken it. Knowing Snap's mischievous propensities when a puppy, and that he had not as fully overcome them as his little mistress thought he had, Mrs. Totham had, before she mentioned her loss, searched every nook and corner where he would have probably hidden it, but it was nowhere to be found, and, as she had said, "it really seemed a most unaccountable thing." So the day passed on and a shadow of gloom appeared to have gathered around the usually cheerful little household.

"Mamma," said Terese, softly, as she came and stood beside her the latter part of the day. "Mamma, I never thought before how sad it was for children who have to spend Christmas just like any other day, and I want to ask you if I may take some of my books and toys to our washerwoman's little girls, for I heard her tell Mina the other day that there would be no Christmas at their home."

"Yes, dear," replied her mamma, "and I hope this will be a lesson you will never forget: To always remember the poor, and most especially upon the birthday of our dear Saviour, who said when here upon earth: 'The poor ye have always with you.' And now you see, daughter, how some good can come from every seeming misfortune if but met in the right way."

"Yes, mamma; for if everything had gone on as usual, I do not believe I should have thought of poor Dinah's children."

When Terese returned from her errand of mercy, she had forgotten all her own disappointment in the enjoyment of giving so much happiness to others. A snowstorm had come up and the wind blew so hard that her umbrella could not keep it from flying in her face and all over her; but she was well wrapped up, and the sharp, frosty air made both her and Snap feel bright and merry, so as she came up the garden walk, her mother, who had been standing at the window watching for them, said to herself with a smile: "My little Twinkle is happy again."

"What does Snap see in the tree, dear? What is he barking at?" she asked, as she threw open the window.

"I cannot see anything, mamma," she replied, then "Oh yes, yes, yes; Oh come quick, mamma, do just only look! Isn't that too good!" and with many more such wild exclamations, she danced around the tree with Snap barking at her heels in a great state of excitement, so that it was several minutes before Mrs. Totham could understand what it was all about. There, behold, from the end of a branch which reached nearly to her room window hung her lost purse!

Of course, the robbery was soon traced to Miss Polly, the parrot, who it was remembered was out of her cage when the window was opened to air the room. No one evinced quite so much joy as Snap, no doubt because he was so glad to clear himself from all suspicion, while Polly sat on her perch looking very glum and downcast at being detected in her mischief.

Affection of the Horse.

[Written for the RURAL PRESS by FREDDIE GUNDRUM.]

I would like the readers of the RURAL PRESS to know how affectionate colts and horses may sometimes be, and not only the great affection, but also the great intelligence they exhibit.

I heard a gentleman tell my father the following story: He had a mare and a two-year-old colt, not her own, which had been companions all spring and summer in a lot which contained a barn.

About the middle of October, the mare was wounded and blood-poisoning set in and she became very sick. She was in the barn and the colt stayed close by. The colt was fed hay and grain, and what time it could spare from eating, it remained close by its elder companion. After the sick animal had become very bad, and not having lain down for five days, she laid down, but could not rise again.

Several men helped her upon her feet, and she started out in the large lot. After going some thirty rods, she stumbled and fell to rise no more.

After lying there for some time, she gave a very loud and shrill neigh, and the owner, who stood by the sick animal, saw immediately the colt rush out of the barn and come to its companion as fast as its legs could carry it. It came close and put its nose up to the older animal's face, and it seemed to quiet her distress. The colt stayed around awhile and then returned to the barn for food, but soon the mare would give that same shrill call, and the colt would run to the sufferer. This was repeated for 36 hours, the sick animal all the time growing worse and beyond help.

Now when the colt would start for food and water, the mare would give that signal and the colt immediately returned.

The colt now began to show still deeper affection by licking the mare's face and not leaving her again all day, refusing to either go for food or water.

The owner carried food and water to the colt while it remained by the side of its sick companion. When it became very tired, it would lie down directly in front of the sick animal, with its head to hers, keeping up its caresses. These caresses seemed to ease the sufferings, and when the dying companion seemed to suffer the greatest, the colt was the more vigorous with its caresses. This scene continued until death relieved her.

Some people may learn a lesson from this show of affection and sympathy manifested by dumb animals.

Escondido, San Diego Co., Cal.

GOOD HEALTH.

Heart Disease.

"Yes," said an eminent physician, "heart disease is common; it is, perhaps, much more frequent than is generally realized, if you take into consideration all the forms of heart disease. The heart, like other organs, is the seat of a large number of diseases, and the expression, 'heart disease' is as indefinate as the term skin disease; it may have a score of different meanings. I am inclined to believe that heart diseases are more common than they formerly were," he continued. "This is due to the great nervous and physical strains which attend our modern modes of living. But it is a great wonder that the heart is not more frequently the seat of disease than it is when we consider its delicate mechanism, its ceaseless labor, and I might add, the abuse to which it is subjected. The heart is one of the most exquisitely constucted machines that can be conceived of. With its four chambers, its four sets of valves, and supplying its own motive power, it toils constantly, faithfully, for its three-score years and ten without rest, without repair, responding to every demand, however unreasonable, until, finally exhausted by labor or degenerated by disease, it is no longer capable of carrying on its function. It falters, then resumes its work, falters again as if to warn its host that he must be less exacting; again resumes and again falters, until, sooner or later, the last point of endurance is reached and it ceases to beat.

A Tired Heart.

"Did you ever hear of 'a tired heart'? No one ever thinks that the heart may become fatigued. But it is true, and frequently the fact. The heart is just as liable to suffer from fatigue as is any other muscle in the body. I have never seen it mentioned in the books, but the condition may be recognized almost as positively as any other abnormal state of the organ. A positive diagnosis cannot be made at once in most cases, because of the resemblance of the physical conditions to those present in dilation of the heart. But under rest and proper treatment the heart returns to its normal condition in a comparatively short time, which is almost an impossibility in the case of a dilated heart. Not a few cases of so-called nervous 'prostration' are nothing more than fatigue of the heart.

"Life would be prolonged by a little more attention to the heart; by paying a little respect to the most faithful servant we ever have. A good deal of good might be done, also, if parents would teach their children the danger of overtaxing the heart. They should teach them to stop and rest a few moments during their play when they are able to feel the violent throbbing of their hearts against the chest-wall."

WHERE QUICK EYES AND A CLEAR HEAD IS NEEDED.—When a railroad company, says the Philadelphia *Record*, handles as many million tons of coal annually as the Reading does, the question of weighing it becomes a matter of some importance. Skill and long experience have solved the problem, however, and the bulk of the vast coal tonnage of the leading coal-carrying road in the country is weighed on four scales, and then they are not crowded. The weight of the empty car is marked in chalk on the outside. As the car approaches, a clerk takes the number of the car and its weight, the weigher calls out the gross weight, and the difference is the weight of the coal. The cars run as fast as ten miles an hour across the scale, and it is very seldom that one has to be stopped and brought back for reweighing, although that is done when the weigher is at all uncertain about his figures. The men at the scales can generally tell within a hundred pounds or so what a car contains. As soon as they see the class of car coming, they know the number of tons it contains, and have the scale so prepared that only the hundredweights need be adjusted while the car is moving over it. Expert officials of the company can tell at a glance what each class of cars should contain, and if, in looking over the weight sheet, any car appears either too heavy or too light, it is brought back and reweighed.

INCREASING USE OF PATENT MEDICINES.—Thirty years ago the revenue from patent medicines in Great Britain was $210,000. It now amounts to many millions annually.

DOMESTIC ECONOMY.

Why Lobsters and Crabs Turn Red.

"What makes lobsters and crabs turn red when they are boiled?" said the observant fish man, in reply to a question. "Well, strictly speaking, they don't. The lobster or the crab is just as red before it is put in hot water as it is afterward, only it is subdued by a mingling of blue in its make up that gives it a grayish-blue appearance. The blue and red of a live lobster or crab are pigments in the shell. As long as they are there together, the red becomes gray. But both of these pigments are not fast colors. The blue won't wash, but the red is there to stay. If it were possible to keep lobsters or crabs alive for any length of time in the sun, the blue would fade out as quickly as the same color does out of a cheap flannel suit, and the shells would be a vivid red, as if they had been boiled. It is not an uncommon thing to catch live lobsters and crabs, more frequently the latter, that are entirely red. It has been determined, however, that this eradication of the blue pigment is the result of disease. Live red crabs and lobsters are never put on the market. So the reason a crab or a lobster turns red, as the saying is, when it is boiled, is because the hot water instantly washes the fugitive blue coloring matter out of the shell and leaves only the fast red. It does not take long boiling to change the color. If you were to rescue a lobster from its hot bath two seconds after it is submerged, you would find it as red as if it had been boiled for an hour."—*N. Y. Sun.*

CELERY OMELET.—Two eggs, two tablespoons milk, two tablespoons chopped celery, salt and pepper to taste. Beat the yolks till thick, add milk, celery and seasoning. Beat the whites stiff, and fold and cut them into the yolks. Cook in hot buttered pan till brown underneath. Place in the oven till dry on top. Fold over and turn out.

BAKED FISH.—After cleaning the fish thoroughly, let it stand in salt water for two or three hours. Rub it well, inside and out, with pepper. Make a dressing of breadcrumbs, one tablespoonful of butter, a small onion chopped fine, pepper and salt to suit the taste. Stuff the fish with this dressing, and tie or sew up. Put it in the pan, with water enough to cover. Sprinkle it over with flour, and put in a small piece of butter. Bake slowly one hour. Garnish with hard-boiled eggs.

EGGS FOR SUPPER.—Take a little nicely flavored brown gravy, and put it into a shallow piedish which has been well buttered. Place it in the oven, and let it remain until it boils, then take it out and break into it as many eggs as will lie side by side together. Sprinkle seasoned breadcrumbs over all, and place the dish again in the oven until the eggs are set. Have ready one or two rounds of toast. Take the eggs up carefully with a slice, lay them on the toast, pour the gravy over all, and serve hot.

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The Week.

As we go to press, the heaviest storm of the winter is at work on the Pacific Coast. High winds, accompanied by copious rainfall, cover the territory from Central California northward, and the indications are for southward extension, until the whole State is well moistened. The rainfall is still short of the normal figure at most California points, but the deficiency is rapidly decreasing. Those who have taken a hopeful view of the season have so far the laugh on the pessimists, and propose to keep it, if nature will do her duty. Everything is now wet enough for work, and a little warmth will put every one "up to the eyes in clover," as the saying is.

We hope our readers will not forget to send something good to the citrus fair, which will open in Auburn, January 11th. We have not seen a full copy of the premium-list, but we understand it will have awards for all good horticultural things. We hope next week to give the RURAL something of a citrus and foothill flavor to harmonize with the great event at Auburn. If our correspondents have something juicy of this kind to put into it, send it along quick!

Develop the Waterways.

We are glad to see that propositions for improving our watercourses and supplementing them with navigable canals where necessary are attracting more attention than formerly. The truth of the claim that water is the natural protection against the extortion of rail-owners should be made the most of, has always been acknowledged in a perfunctory manner, but, like other truths, it is of little account until men begin to act upon it. Just now the time seems to be auspicious for a more thorough discussion than has yet been had, also for adopting plans of action involving State and Governmental appropriation and assumption of individual obligations, which shall result in facilities for water traffic wide-reaching and effective.

We doubt if there is a State with such extensive means of internal navigation which makes so little use of them as California. It has been shown that instead of improving our watercourses we have allowed them to be seriously injured by mining debris, and that we have in fact much worse rivers, for all purposes to which rivers may be put, than we had in the early days of our history. This is certainly a course quite at variance with the procedure of other commonwealths in which rivers have been guarded from encroachment and improved notably. It is certainly time to wake up on this subject; to see to it that the rivers are not further injured under any pretext whatever, and at the same time arrange for their improvement and development for internal navigation.

There should be general and systematic action on this subject, including little streams and sloughs reaching from our bays into productive regions, and including also great schemes for bringing the most remote interior valley points into water communication with tide-water wherever there is water to float a barge and land rich enough to fill it with produce. Of course, all this perhaps cannot be done in a generation, but fortunately some very great undertakings can be accomplished within a reasonable time and with a reasonable expenditure of funds. Why should the great Santa Clara valley and its thriving city of San Jose be dependent for outlet of its produce upon three lines of rail all owned by one company, while a short canal would make it a port upon one of the grandest bays in the world?

It is fortunate that the great San Joaquin valley is awakening to the fact that its vast industries and splendid future should not be corralled by one single track railway. Other railways are talked of, it is true, and there should be others, and yet the possibility of water traffic nearly the whole length of the valley is within reach at quite a moderate cost. We have been interested in reading a good article on this subject in the Fresno *Central Californian* of Dec. 26. It speaks at length of the productive capacity of the region, to show that a waterway composed of rivers, sloughs and canals, could be made profitable as a business enterprise. It then outlines a plan by which the work could be accomplished, as follows:

The canal is a public enterprise, and we believe should be built and maintained at public expense. San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern counties should unite in building and operating the canal, and thus secure the greatest possible benefits to the citizens of these counties. A tax should be levied upon all the taxable properties of the six counties to construct and equip the canal, and a Board of Directors, consisting of one member from each county and one at large, to be elected by the people, should manage the traffic. Rates can then be fixed so as to derive a revenue barely sufficient to meet operating expenses, and low freight charges would be permanently guaranteed to the people of this valley. Estimating the cost of building the canal at $6500 per mile, and its total length from Stockton to Bakersfield at 220 miles, it would require $1,430,000 to construct it. The taxable property in the six counties above named is upward of $156,000,000. A direct tax of 92 cents on the $100 valuation would yield $1,435,000 in a single year, or enough to build the entire canal; but there are other favorable circumstances to be considered, the first of which is that the river channel can be used with slight improvement from near Stockton to Firebaugh's, a distance of say 75 miles. Any expense necessary for the improvement of the river channel should be covered by Congressional appropriation, and in all probability would be. Then there would remain only 130 miles of canal to be actually constructed, allowing for 15 miles of deep water in Tulare lake. Twenty-five miles more between the lake and the river would only require the deepening of the present channel of Fresno slough, so that the actual expense of constructing the canal would not in all probability amount to more than 120 miles at $6500 per mile, or a total of $780,000. A direct tax of 50 cents on the $100 valuation in the six counties would yield this amount. To make the tax as light as possible, however, it might be advisable to collect only one-fifth each year for a term of five years. That the people of the six counties to be benefited would voluntarily tax themselves for this purpose we believe goes without question, hence the *Central Californian* will advocate making the great San Joaquin valley canal a public enterprise.

We do not undertake to say that this would be the best way to carry out such an undertaking, that is a matter for consideration. At the same time, the figures, which we take it for granted are reasonably accurate, show that it would not be a difficult matter to make the whole San Joaquin valley independent of railway dictation and extortion, which is now the chief barrier to its progress. Such subjects as that taken up by our Fresno contemporary should be inquired into by all public journals and public-spirited individuals. This question of relief by water for extortionate railway charges will yield to discussion and to cooperative action, and such force should not be denied it.

Riverside Growers' Trust.

We gave, in a previous issue of the RURAL, an outline of a discussion among Riverside orange-growers looking to co-operative fruit selling. At later meetings the proposition seems to have taken definite form, and according to last week's Riverside *Press*, a number of growers have formed a corporation under the laws of the State, styled "The Riverside Orange Trust," each stockholder being allowed but one share for each acre of bearing orange orchard of which he is owner. The shares are placed at the nominal value of $10. Each shareholder signs a contract of sale of his entire crop to this corporation, which proceeds to market them to the best advantage. At the end of the season, the price realized for each different variety is averaged and each stockholder receives the same price for the same grade and quality of fruit. At the time the fruit is delivered, the corporation, having arranged a bank credit, will pay each stockholder for his fruit, as follows:

For Seedlings, $1; Navels and Bloods, $2; Mediterranean Sweets and Paper rind St. Michaels, $1.50; half-cash, balance when collected.

This corporation has entered into a contract for three years with the Griffin & Skelley Company, to pack and sell their oranges, this firm having agreed not to buy or sell oranges during that time on their own account, nor to handle oranges for any one else outside the corporation, without the latter's consent.

E. F. Kingman has been appointed secretary. His salary will be paid by the stockholders, and he will have a desk in the office of the agents, inspect all correspondence relating to sale or disposition of fruit, and act as an accountant generally, in the interests of the stockholders.

The sale of stock this year has been limited to 500 shares, representing 500 acres of orange orchards, or about 400 carloads. This is being rapidly taken up, over 300 shares having been subscribed for the first week. It is expected that the balance will be taken within the next ten days.

We have given this outline of the plan adopted by the Riverside growers in order that the large number of our readers who are now contemplating cooperative action, may compare their methods with those they have been contemplating. We propose that the RURAL PRESS shall be a sort of clearing house of information of this kind. Where many are thinking and acting toward similar ends, it is very desirable that each should have the advantage of the bright thoughts and shrewd plans of all. The idea of producers cooperation is old, but the application of it to our local conditions is new, and should receive the widest and most careful consideration and discussion.

IMPLEMENTS BURNED.—We are glad to know that Baker & Hamilton had a good amount of insurance upon their warehouse at Sacramento which was recently destroyed by fire. The contents of the warehouse were wagons, reapers, buggies, scrapers—in fact, all kinds of agricultural implements, barbed wire, rope, etc., aggregating a value something like $80,000, which some accounts say was fully insured.

New Hybrid Begonia.

[Written for the RURAL PRESS by W. A. T. STRATTON of Petaluma.]

The illustration gives a fair idea of this beautiful plant, the new hybrid begonia Perle Humfeld. The color of the leaf is a deep dense green, heavily dotted with silvery spots. In habit it is of vigorous growth, the larger pointed leaves displaying their silvery markings in a most attractive and novel form; entirely distinct from any other variety in cultivation. The foliage is remarkably large for this class of begonias, often measuring ten inches in length by six inches in breadth. Indeed, no begonia of recent years claims so many points of interest as this new variety, being rapid of growth, easily grown, and brilliant and attractive in foliage.

The variety belongs to the hybrid Rex class. A few years ago, hybrid Rex begonias were unknown. We only had the flowering begonias and the Rex class, but by hybridizing the Rex and the flowering varieties, a more hardy class has been produced, partaking of the character of the Rex in foliage, and with the upright habit and flowering character of the latter.

In the hybridizing or crossing of these sorts the *Begonia discolor* was produced, which may really be considered the most valuable break in the hybridizer's work; and from *Discolor*, fertilized by various flowering varieties, nearly all the beautiful hybrids of recent years have been produced.

They all have beautiful, attractive foliage, many of them as beautifully zoned as Rex sorts, and as many of them also have fine flowers, it is not saying too much in their praise to assert that no conservatory, however extensive it may be in its appointments, is complete without a collection of these autocrats of all foliaged begonias.

Their culture is simple and easy. The soil should be a light, rich, silky loam. The term "silky loam" is a trade phrase, so to speak, to indicate a soft, delicate texture. The roots being fine and tender, must have a soil suited to their wants, to insure success. To simply grow them is quite different from growing them in their perfection.

Many persons are in the habit of collecting loam from under forest trees for their begonias, as if this was leaf loam. It is a mistaken idea. There is no leaf loam in California of good quality that I have ever seen. Our long, dry summers seem to destroy all the nutrition in these decayed leaves, and though it may be of value to mix with soil that may be too heavy, to aid in making a light loam, I much prefer the more practical way of using fine, sandy loam and well decomposed manure in equal parts.

Hybrid begonias do not enjoy the hot, blazing sunshine. They require warmth and shade to get the best results, and in contrast to the Rex varieties, that demand a moist atmosphere, the hybrids require a dry one.

As a window plant, they may be grown most successfully, but they should not be exposed to draughts of air. In fact, no plant, unless it be of a cast-iron constitution, can withstand the alternate changes of the extremes of hot and cold air, so commonly experienced in window plants. Give them a reasonably good care, and no class of tender plants in cultivation will give more real pleasure for the labor than the hybrid Rex begonias.

A Manly Compliment.

EDITORS OF THE PRESS:—Wishing you most sincerely a happy and a prosperous New Year, I further congratulate you on the PACIFIC RURAL PRESS having arrived at manhood. As an infant and a boy, it has always had a manly way of its own. Its decorous deportment, its cleanly habits and entire absence of the disagreeable which characterizes so many boys of the press, has given it a character of which it may be proud, and has attracted the attention of the thoughtful and progressive.

During the time I have been acquainted with the PRESS, I do not recollect a word in it that could offend the most fastidious, and while it has been careful not to offend, it has had an opinion of its own, which, when opportunity called, has been expressed forcibly and clearly. I am only sorry that I have not been able to encourage the boy according to his merits, and now that he is a man, we will look for all of the manhood that was predicted by the boy, and sincerely hope that new friends, true friends, grander hopes and more glorious victories await the deserving efforts of the PACIFIC RURAL PRESS and its painstaking, untiring corps of editors and managers. Respectfully and fraternally yours,

J. W. MACKIE.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Another Irrigation Convention.

The discussion of irrigation topics seems to be the order of the day. Hardly had the echoes of the Salt Lake Congress died away before preparations were made for holding another convention in Montana, to be confined to delegates from that State alone. This gathering will take place on the 7th of January, and 194 delegates have been chosen from various portions of the State.

The idea of holding State and Territorial Conventions for the consideration of irrigation matters is a good one. While the entire arid region is interested in a general way in irrigation development, yet each locality has peculiarities of its own and interests of diverse character. It by no means follows that what is applicable to one section is suitable to all. Hence the desirability, before holding further meetings such as that at Salt Lake, of first having preliminary local conventions, where local needs may be discussed, and some definite form of action decided upon. Then, when a plan has been outlined, it will be time to hold another National Convention, the delegates to which shall attend with a distinct idea in their minds of the best course to pursue, and of all the detail that is desirable to carry out.

While the recent convention at Salt Lake did well in enunciating the broad principle of the desirability of allowing each State and Territory to deal with the reclamation of the arid lands within its borders, this proposition had not been sufficiently discussed beforehand to allow of the formulation of any distinct plan for carrying out the scheme. In fact the delegates to the Congress did not appear to have any very clear idea as to the details. They were unanimous as to the broad principle of cession to the States and Territories, but beyond that they did not go.

But before any measure looking to the carrying out of their plans can be adopted, the public will demand the fullest details of the entire scheme of reclamation, and to meet this demand a great deal of work must be done. It is to be hoped that the Montana Convention will formulate some suitable plan and thus open the subject for discussion.

Irrigation in Placer County.

A plan is on foot to supply water for irrigation in a portion of Placer county, where it is believed better results can be obtained from the cultivation of the soil with that aid than when sole dependence is placed upon the rainfall. From the published accounts, it appears that the proposition is to sell perpetual water rights upon the basis of the miner's inch of flow. Five hundred dollars is the amount asked for each inch, the purchaser being given ten years in which to complete payment, in the meantime paying six per cent interest thereon. In addition, $7 50 a year is to be charged for the cost of delivering the water to the purchaser. This makes a payment of $37.50 annually for each inch delivered.

A miner's inch, perpetual flow, is sufficient, according to the practice that obtains in Southern California, where the greatest economy in the use of water is enforced, to irrigate from four to eight acres of land. On the assumption that one inch to six acres is a fair average, there would therefore be an annual tax of $6.25 an acre to be met by the irrigator.

When the full payment of $500 an inch shall have been made by the irrigator, the interest charge ceases, but at the same time it is only fair to include in the expense of irrigation the same rate of interest on the $500 invested. At the rate of an inch to six acres, the water right would cost $83.33 an acre. The owner of a 20-acre farm would therefore find himself under the necessity of paying $1666 for the privilege of paying annually in interest and charges for delivering water a further sum of $125.

When this proposition is contrasted with the district system, the benefit of the Wright law becomes apparent. Under that law, the average cost of supplying water rights is some $8 an acre, instead of $83. The annual expense for delivering the water is but a few cents an acre, and the irrigator owns his own water, instead of being compelled to contribute to the funds of some corporation or individual who has established a monopoly of the sources of supply. If the would-be irrigators of Placer county will look into the matter a little, they will soon see that their best interests will be subserved by the district system, rather than by the one proposed.

Reclamation in Lassen County.

The Union Land and Stock Company, a Sacramento concern, are engaged in reclaiming the barren wastes of Madeline plains, says the Reno *Gazette*. They commenced the construction of a dam in Squaw valley (Red Rock creek) two years ago, and carried it to a height of 30 feet last fall. They now propose to build it to a height of 70 feet. At that height, it will back the water up to an average depth of 45 feet and cover about 640 acres. This is known as dam No. 1. They have just completed a dam four miles south of dam No. 1. It has a retaining wall 35 feet wide at the bottom and is built to a height of 10 feet; from this on it was run up 15 feet higher, tapering to six feet on top. The system includes three dams—the third will make a reservoir that covers 500 acres to a depth of 30 feet. The two reservoirs will furnish water sufficient to irrigate 50,000 acres of as fine land as ever the sun shone on. From reservoir No. 2 a canal has already been constructed, nine feet wide at the bottom and 16 feet on top, around the canyon to the valley below, and the plains of Madeline will blossom into one of the most promising sections in the near future.

Desert Possibilities.

A man in Southern California who thoroughly understands lemon culture, and who has succeeded in successfully curing California lemons, so that they rank with the best in the markets of the world, says that a lemon grove which is as it should be, will pay $1000 net per acre every year, says the Bakersfield *Californian*. Certain conditions are requisite. No frost, of course, but above and beyond that, a dry, even temperature is absolutely essential.

There are little nooks all along the edges of the Mojave desert clear along its course, as far as to the Colorado river, where a small amount of water can be had; where there is no frost and, if located with the proper exposure, no wind; where surely that dry serenity of atmosphere, in which lemons do so much delight, is the condition every day in every year.

One of the loveliest oases in the wide, wide world has been built right out of sand in the desert of the Smoky valley in Nevada, by piping a very small stream of water from Kingston canyon. A traveler on his weary way through all the aridness of Smoky valley comes suddenly upon this dainty little green gem and declares it the Garden of Eden. And truly it is, for everything grows and peace and balminess reign. Yet the thrifty housewife, to whom credit for this oasis is due, has never thought of lemons—perhaps she never saw one—but raises splendid vegetables and a few posies.

That water is sufficient for several acres—ten, perhaps, with a Riverside economy in its use—and if lemons are lemons, as we are led to believe, in the 20 years the good old lady has lived there, she has lost $200,000 by not being in lemons.

In what is called the Mojave desert, mountain chains are not continuous, but are more as though the chain had been broken into links and strewn at random in dreary wastes of sand and cacti. Yet it is likely that near the head of the principal canyon in each mountain link, quite an amount of water can be found, and in that same canyon, or reasonably near it, are generally little valleys which, if watered, would prove exceedingly fertile.

A good lemon man and the Mojave desert ought to get together.

Congressional Aid Asked.

Senator Dolph has introduced a bill to aid the several States and Territories to reclaim the arid lands within their boundaries. It provides for the loaning by the United States of funds to States or Territories for the purpose of assisting the construction of reservoirs, wells and all other works to be used for the development, conservation and furnishing of water supply for irrigation and in aid of agriculture. Loans are to be made in any sum not exceeding $2,500,000 in any one year to a single State or Territory, nor exceeding a grand total of $10,000,000 to any one State or Territory. The terms provide for the issue by the State or Territory of irrigation bonds of the denomination of $500 each, redeemable in five years and maturing in 50 years and bearing interest at the rate of one per cent per annum, to be deposited with the United States Treasurer, and the Secretary of the Treasury is to issue thereon United States notes in the amount of the par value of the bonds, the said notes to be legal tender.

Whether Congress can be induced to pass any such bill as this remains to be seen; but the view taken of the proposition even in the sections that are most vitally interested cannot be said to be very encouraging. While all are convinced that some action by the General Government should be taken, there is a wide spread skepticism as to whether the public sentiment of that portion of the country where the necessity for irrigation is not felt can be brought to support any such measure as that proposed by Senator Dolph.

So far as the security behind such a loan as that proposed is concerned, there could be nothing better. If the matter be honestly conducted, and the money loaned be economically applied to the construction of works for the irrigation of arid land, that land will become at once, upon being supplied with water, the best security possible for the repayment of any reasonable loan that may be made. The average cost of supplying water need not, except in exceptional cases, exceed $10 an acre. There is an abundance of testimony to the effect that lands that are so arid as to be absolutely without value, become, upon being supplied with water, worth from $25 to $250 an acre. Perhaps a fair average would be $50. A loan to the extent of $10 upon such land, therefore, is certainly well secured, and there can be little reason to fear any default in its payment.

If this fact can be emphasized so strongly that the public will endorse such a proposition as this, well and good. To do this, however, will require a vast amount of labor and much time. The entire subject of irrigation is such a mystery to nine-tenths of the people of this country that to educate them upon the subject will require the most persistent effort for an extended period. In the meantime, and until such education shall have been completed, it must be confessed even by the most ardent friend of irrigation that the outlook for obtaining legislation of the character referred to is not particularly encouraging.

A Great San Diego Enterprise.

The opening of the Linda Vista and Otay Irrigation Districts in San Diego county has been brought about by the development of the Mt. Tecarte Water System, by which 100,000 acres of these mesa lands, extending from the Sweetwater river on the north to the Mexican border line on the south, are to be reclaimed.

Len B. Harris, Jr., the mining engineer, gives the *Chronicle* the following particulars of the great work done in the neighborhood of those districts:

"It was thought impossible to float the mesa lands until within a few years back, when it was found by a party of investigators, of which I was one, that the Cottonwood river might be diverted from its course through Lower California, and made to cover over 100,000 acres. Surveys proved that the water of the Cottonwood could be brought through Dalzura Pass, distant 30 miles from San Diego to Jamul valley, and thence by way of Janal Meca into San Diego itself, if necessary. This led to the planning out of the Mount Tecarte system.

"The pioneers were: J. F. Sinks, Vice-President of the San Diego Bank of Commerce; J. W. Young, H. P. Whitney, G. H. Mulfield, D. D. Maynard, T. E. Pope, S. J. Sieb, and several others. Surveys were projected and work commenced four years ago. Cottonwood river has a summer depth of 18 inches, and in winter runs a torrent.

"A cut has been made through Dalzura Pass, 1000 feet long and 20 feet deep. Another important work is now being done, and within a year or so the great undertaking will be completed."

At the junction of Pine Valley and Cottonwood creeks a dam will be constructed 100 feet high and 450 feet on the crest. A reservoir covering 800 acres, and containing 6,000,000,000 gallons, is to be built. The cement used is obtained at Jamul at a comparatively trifling cost. From the dam a flume, 15 miles long, will extend to Jamul creek, terminating at Dalzura Pass, where an elevation of 1450 feet is reached. The flume will cost at the rate of $10,000 a mile. At Dalzura the water will be diverted into ditches, and conveyed over three districts (including Otay and Linda Vista) of a total acreage of 95,000, with a reserve capacity of many thousand more. But the marvelous usefulness of the almost exhaustless system does not end here. At the west terminus of the Otay mesa the branching waters leap over a chasm of 300 feet, developing a horse-power of 1500, which may be used to operate factories or electric dynamos. The system in its totality also includes the supplying of San Diego with drinking water.

The total cost of the work will be $1,000,000, and the recently formed district will vote bonds sufficient to cover this sum.

Notes of Irrigation Progress.

The temporary setback caused to the Madera district by the discovery of a technical error in the confirmation proceedings has only had the effect to emphasize the determination of the friends of the district system to persevere and perfect their organization. They are as enthusiastic as ever, and if any have hoped they would be discouraged, that hope is not well founded.

Suit has been commenced to dissolve the Selma district. The parties who have exhausted legal technicalities in retarding the progress of this district will come into court and allege the delay caused by themselves as reason why the district should be broken up. This is a rather peculiar method of procedure, to say the least.

The directors of the Tule River district held a meeting recently at Woodville for the purpose of deciding on the dimensions of the proposed canal. Engineer Newman was instructed to survey the line and report on the cost. If the price is suitable and meets with the approval of the directors, operations will be commenced at once, and the ditch will be carried through Porterville to Woodvillle and beyond that point. The Irrigation District embraces 18,000 acres of land, which, when irrigable will become very valuable.

The supervisors of Los Angeles county have granted the petition for the organization of the Glendora district, and have set January 13th as the date for the election.

A bill of exceptions has been filed by the plaintiff in the Elsinore District case, recently decided against them. A notice of intention to move for a new trial was also filed on the grounds of insufficiency of the evidence to justify a decision, and that the decision was against law, and errors in law occurring at the trial and excepted to by the plaintiffs.

The South Riverside Land & Water Company advertises for bids for the construction of a large amount of pipe lines, tunnels, etc.

Irrigating Grain.

Among countries where irrigation is generally practiced, California stands alone in the unwillingness of her farmers to make use of the irrigating canal in producing wheat. For some reason impossible to define, they have a deep-rooted opposition to this innovation, and even where there is an abundance of water running to waste, that could be utilized upon the wheat field at small expense, they prefer to sit idly by and see their grain suffer from lack of moisture rather than undertake the small trouble and expense of supplying from the irrigating canals the needed water.

The farmers of Colorado, Utah, Arizona and other portions of the arid region are held down by no such fancy and governed by no such stupidity as this. They were quick to see the benefit of the application of water to their grain lands, and it has become a general practice with them, wherever practicable. The result is that they have become independent of the vicissitudes of the climate and reap good harvests regularly regardless of the rainfall.

In speaking of irrigating grain, it must not be supposed that application of water to the growing crop is meant, except under unusual circumstances. In this case, the irrigation is best done before the crop is planted. If water be applied subsequently, in most soils a crust will form upon the surface which cannot be broken without damaging the young plants, and harm rather than benefit will result.

By giving the soil a thorough saturation, however, before plowing, and by plowing deeply, a seed-bed may be prepared that, with the aid of the rain that is certain to fall, will produce a good crop even though the precipitation be much less than the amount usually regarded as necessary to mature grain.

Perhaps a little personal experience of the writer upon this point may be of benefit, as it explains his earnest belief in the advisability of using water in the grain field wherever practicable. He found himself some time since in control of a ranch in the south upon which was a tract of about 20 acres which had been regularly cropped with grain until it had become apparently exhausted. The last owner of the place had for several successive seasons not obtained enough from it to pay the cost of seed and plowing. This latter process, by the way, had been done so faultily that at a depth of three or four inches a hard, almost impervious crust had been formed, through which it was impossible that the roots of the grain should penetrate, and which also prevented the moisture from saturating the soil to any depth. Only by thoroughly soaking the field could it be plowed as it ought to be. Near at hand was an irrigating canal, in which, during the fall and winter, the water ran to waste. The experiment of irrigating for grain was determined upon. Shallow furrows were accordingly struck out at intervals of 20 to 25 feet across the field in both directions, and into these the water was turned. It was allowed to run slowly for two or three days until every foot of the surface had been covered and thoroughly soaked, until, in fact, the field was so soft that a man would "mire down" in it anywhere. After thus being saturated, the water was shut off, and in about two days' time the soil was dry enough to plow. The clevis was set so that the plow was sunk almost to the beam, and such a stirring up was given to that worn-out field as it had never had up to that time. The neighbors frequently halted to laugh at the poor greenhorn who was spending so much time and taking so much trouble in the preparation of his little grain field, and they kindly informed him that he was a fool for his pains, and that he would not get enough back to pay for the seed. But he persevered, and when the field had been thoroughly plowed barley was planted, and it was then left to its own devices. That barley grew as if bewitched. Never had such a stand been seen in the neighborhood, and when it was harvested there were four great stacks that had more grain in them than any 80 acres in the same locality produced without irrigation. In a word, it was a triumphant success.

The irrigation of grain may be practiced on a large scale fully as profitably as on so small a one as the case just noted. Down in Kern county last year wheat was irrigated at a cost of less than ten cents an acre, and the result was a harvest larger by a hundred per cent than the average. Wherever grain-growers have had the enterprise to make use of the water running to waste in the irrigating canals, they have been amply rewarded. Why more of them do not thus insure the certainty of a good crop is a mystery that passes comprehension.

Steam Power Irrigation.

There appears to be a widespread belief that the only successful method of obtaining a supply of water for irrigation upon a scale of any importance is by the use of ditches wherein the water flows by gravity from the source of supply says the *Chronicle*. The proposition to utilize pumps operated by steam or other power is uniformly discouraged, and the idea has been sedulously fostered that the expense of such a method of irrigating will far exceed the benefits to be derived and will be much greater than the cost of water supplied in the ordinary manner.

One of the reasons for this belief or for encouraging people to entertain it is not far to seek. Were the pump system generally adopted

where it is practicable, the occupation of a great many canal companies would be seriously injured, and the business of selling water for 10 to 50 times more than it costs would suffer serious curtailment. Hence nothing has been left unsaid which would tend to discourage experiment in this direction.

Despite the opposition and discouragement, however, several successful experiments have been carried out in providing a supply of water by steam pumps, and others are now underway. One of the latest is reported from Butte county, where a similar enterprise now under successful operation has encouraged the construction of still another pumping plant, consisting of a 25-horse power engine and an eight-inch centrifugal pump by which water will be raised from a well and distributed over the orchards and vineyards of the Rio Bonito Company. Similar efforts in the same neighborhood have shown this method of irrigation to be reasonable in cost and in every way successful.

From the southern portion of the State come reports of similar success in pumping water. Mention was made some time since of the remarkable success of such an experiment at Yuma, where water was raised from the Colorado river. Now a similar enterprise has been commenced at The Needles, where a plant will be put in to irrigate a large tract on the high mesa above the same river. The advantage of such a plan is obvious. In order to obtain water by gravity in localities like this, where the river has only a small grade and the banks are high, it would be necessary to go a long distance up stream and construct a canal many miles in length, which would be a constant source of expense to keep in repair. The interest alone on the first cost of such a canal would much more than pay the expense of operating a pumping plant sufficient to supply all the water needed.

The San Bernardino *Times-Index* reports the experience of an irrigator in that valley who has pumped water to irrigate a large tract of land for a number of years. He obtains his water from a surface-well 18 feet in depth, and with an engine and plant, costing not to exceed $1000, is able to pump, when required, 50 inches of water under a four-inch pressure, night and day, continuously. He has found the cost of this water to be much less than the cost of water taken from ordinary irrigating ditches, where a number of miles of ditches have to be built and kept in repair.

In the San Joaquin valley there are many cases where settlers, unable to obtain water from the companies controlling the canals, except at exorbitant prices, have put in pumping plants with invariable success. They have set a good example, which, were it more generally followed, would have a salutary effect in more ways than one.

Tree and Vine Growths in New Mexico.

G. O. Shields of Eddy, New Mexico, sends us a list of measurements of growth in Pecos valley, New Mexico, a region which is now being settled up under irrigation auspices. The figures may be interesting to our readers as indicative of what that new country can do, and also for comparison with growths in other parts of the county.

The following table shows growths made by various fruit trees, grapevines, etc., during the past summer.

Tree or Vine.	Growth in Feet.	Inches.
Raisin grape	16	9
Apple	4	5
Pear	4	8
Plum	5	9½
Cherry	1	8½
Crab Apple	1	9
Mulberry	1	8
Black Locust	8	7
Apple	8	11
Apricot	5	8
Peach	3	9
Box Elder	6	1
Mulberry	7	8
Lombardy Poplar	6	2
Castor Bean	8	4
Peach	7	2
Cottonwood	16	3
Osage Orange	14	7
Native Willow	16	5
Pecan	6	2
Black Walnut	4	11
Plum	8	1
Mulberry	6	4

Witt Bros. have several cottonwoods, nine years old, that are 62 to 64 inches in circumference and over 60 feet high. Mr. Hogg has a peach tree three years old from the seed that is 3½ inches in diameter and 17 feet 5 inches high. He has a cottonwood four years old that is 28 inches in circumference. Mr. Gilbert has a pecan tree six years old that is 24 inches in circumference and 23 feet high. He has a black walnut tree three years old from the seed that is 12 inches in circumference, 11 feet 10 inches high, and that bore several walnuts this year. Maynard Sharpe of Eddy has two peach trees two years old from the seed that bore and matured seven peaches this year. He has one apple tree two years old from the seed that bore three apples the past season.

OREGON HORTICULTURAL SOCIETY.—The Seventh annual meeting of the Oregon State Horticultural Society will be held in the City Council Chamber of Portland, Oregon, on Tuesday and Wednesday, January 12 and 13, 1892. A very attractive program has been prepared, and the attendance should be large.—Dr. J. R. CARDWELL, Portland, President, and E. R. LAKE, Portland, Secretary.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

PALERMO ORANGE NOTES.—Cor. Oroville *Mercury:* W. J. Grier is entitled to the honor of shipping the first box of oranges East this winter from Palermo. They were shipped in style, too, with different colored tissue wrappers bearing the inscription: "From the Orange Grove of W. J. Grier, Palermo, Butte Co., California." They were sent to his brother, T. J., at Lead City, Dakota. Palermo's older orange groves are loaded with oranges this winter, and present a beautiful appearance to passers-by, as their golden globes flash from the network of dark-green leaves.

THE WHEAT CROP.—Biggs *Argus:* We have made inquiry among a number of farmers, both on the adobe sections and the red lands, in regard to the condition of the wheat crop, and all are well satisfied with the crop showing at present. The rains have not fallen altogether satisfactorily, but the intervals between the showers during the last month have been short, and the first sprouted wheat, instead of rotting as was first feared, has continued to grow, although retarded somewhat, and will come out all right. All the grain has now sprouted and is growing nicely, and with a reasonable amount of rain from now on, this section will raise its usual abundant crop. The open season has enabled the farmers to get in more grain than usual, probably more than has ever been planted during any one season before, and with a fair showing for good prices next year, bright prospects are in store.

THE FORESTRY STATION.—Chico *Enterprise:* W. S. Lyon, botanist of the Forestry Commission has been visiting the Chico station, and we are told has made some arrangement for some work being done. A part of the ground is to be prepared for some seeds to be planted this winter. Several rare plants and trees have been received from Australia, and the Commission will plant seeds of several different varieties of trees including the broad-leaved wattle, a native of Australia, the bark of which is said to be a good substitute for oak tanbark.

RIO BONITO ORCHARDS.—Oroville *Register:* In this vicinity there are six miles of continuous orchards. The lowest of these is the Reed & Johnson orchard of 550 acres, Hatch & Rock, 1650 acres; Alexander & Hammon, 300; Hatch & Rock, upper place, 220 acres; W. Treat, 160 acres; M. Goldman, 31 acres; Mr. Preble, 20 acres; Rio Bonito Colony Co., 80 acres; Marion Biggs, Jr., 50 acres; R. A. Moore, 40 acres; John Beall, 30 acres; A. Goldman, a second tract, 30 acres, and two other 20-acre tracts. This gives a total of 3176 acres. More trees will be set out this winter, but the number we did not ascertain. This gives over 300,000 trees, however, on the west side of the Feather river in what is known as the Rio Bonito country. The trees all look in fine order and have a splendid growth.

Colusa.

WILD HOGS.—Sites Cor. Colusa *Herald:* There is quite a number of wild hogs in the hills near this place. Not long since, Jas. Kennedy killed one that dressed about 300 pounds.

PECANS.—*Herald:* J. R. Farris has gathered his pecan crop and is enthusiastic over the adaptability of our soil and climate for this valuable nut. A few years ago a couple of bushes were sent him from Texas and he set them out, and again took them up and transplanted them, and yet they flourished. The tree has a long root similar to the walnut.

Fresno.

RAISIN SHIPMENTS.—Fresno *Expositor:* The total amount of freight shipments from this county in 1891 is enough to make one carload of ten tons every half hour the whole year, day and night. This is an enormous quantity. The most valuable article is raisins, footing nearly 28,000,000 pounds. Mere figures are apt to confuse, rather than give an idea of the exact number, when the number is large. In the raisin crop of Fresno county this year, there were 1,376,795 boxes of 20 pounds each. These boxes, laid end to end like bricks, would build a wall ten miles long and 40 boxes high. The same boxes, stood on end, would form 80 columns, each column overtopping the highest mountain in the world. Laid end to end, they would form two lines from the top of the Sierras to the top of the Coast mountains, and enough boxes would be left to form a string from Fresno to Modesto. Last year the number of boxes was 873,220. The gain from last year is 503,575 boxes, or a gain of 57 per cent. this is an enormous gain, in the face of the injury to the raisins from the hot wave in July.

Humboldt.

APPLE TREES CONDEMNED.—Eureka *Standard:* Horticultural Commissioner J. D. Barber visited Ferndale and condemned a large number of apple trees. The diseased trees came from a nursery in Oregon, and were being delivered by W. A. Gilmore. They were infected by the wooly aphis. Mr. Barber served notice on the agent to either disinfect or destroy the trees or ship them out of the county within 10 days, the agent agreeing before witnesses to comply fully with Mr. Barber's instructions.

Kern.

LARGE ACREAGE SEEDED TO GRAIN.—Delano *Courier:* J. P. Stewart has now at work 62 head of stock on the Harrelson ranch. One hundred and ten acres of grain is being seeded each day, and the work will be continued till the total area of 4400 acres is seeded.

Lake.

TREE PLANTING. — Lakeport *Avalanche:* Messrs. Krumm and Fisher, who bought land of Frank Gibson, on Glenwood ranch, are just beginning the work of putting in 20 acres, each, of prunes. This, with that already planted by Mr. Gibson, makes a block of 60 acres for 1891 and 1892, by the three parties. The former gentlemen will also put out ten acres of other orchard. Other orchards on the ranch make in all 155 acres of prune and other trees. Marshall Arnold also has 20 acres of the same tract, the planting of which has just begun.

Los Angeles.

THE ORANGE CROP.—L. A. *Californian:* In the early part of the season, California indulged in an aspiration rather than an estimate, that the orange crop might reach 6000 carloads. The shipments last year were 4600 cars, and the increase was only about 30 per cent. Many new trees had been coming into bearing, and many young orchards that bore lightly last year should produce more this year; then all the old orchards had been taken excellent care of, and here was more ground for hopefulness. The present crop hinges on these facts: The budded varieties generally are bearing a good crop; the seedlings a light one. The seedlings are large trees which often bear 15 boxes each, while the budded varieties are much smaller, with proportionately less surface, and four or five boxes is a good crop per tree. The young orchards will run at only half a box to one or two boxes per tree. The ratio of budded to seedling trees in the whole section is perhaps ten to one. The crop of San Bernardino county will be larger than it was last year, by a very considerable amount. The same is true of Orange county, although the increase will be smaller. The same will apply to San Diego, Ventura and Santa Barbara. The deficit will therefore fall on Los Angeles county, which last year produced 2200 carloads, and the year before, 781. Here is where most of the seedlings come from. Then the wind of last week knocked off, say 300 cars, mostly in Los Angeles county. These are about all the facts. The *Citrograph* says the season will turn out 5200 cars. Spencer K. Sewell puts the crop at 3000 cars, alleging that Los Angeles county will fall back to the figures of the year before last, and that the increase in the other counties will not be very large. The Southern Pacific people estimate the crop at 4500 to 5000 cars.

IMPORTING FLORIDA ORANGE TREES.—Pomona *Progress:* The importation of orange trees from Florida has brought thus far this season over $1000 into the hands of the Southern Pacific Railroad Agent in Pomona for freights. In two days last week J. A. Driffill paid $1450 in freight on lemon trees.

Napa.

ASYLUM ORCHARD.—Napa *Register:* Six or seven men, employes of the asylum, who are on that portion of the Asylum farm known as "the Spencer tract," have been for some time engaged in grubbing out oak and other trees, most of them of comparatively small growth, on the hillside toward the southern line of the above named tract. Already some 50 acres have been cleared of trees and shrubs and plows started. All the land grubbed will be turned over this winter. In all, 75 or 100 acres of virgin soil will be put under cultivation. As soon as convenient, this land will be planted to prune, apricot and other fruit trees, Dr. Gardner intending to raise all the fruit the Asylum will require, fresh or dried, on the farm. The soil on the tract mentioned is, for the greater part, of good depth, and that it is productive is evidenced by the rank growth of trees and shrubs to be seen on every hand. In many places the decayed vegetation of countless years makes this land well adapted to the purpose to which it will be put.

Orange.

GRAIN CROP.—Newmark & Edwards estimate the grain crop of Los Angeles and Orange as follows: Wheat thrashed 364,588 sacks and barley 1,106,269 sacks. Wheat averaged 133⅓ pounds per sack, making a total of 486,000 centals (or hundredweight); average value, $1.40 per cental. Total valuation, $680,400. Barley averaged about 110 pounds to the sack, making the total centals 2,216,895, at a valuation of 90 cents per cental, equals say $1,095,200. Corn is a very difficult grain to get data on, being shelled and marketed from the field, or held in cribs till spring, as may suit the farmer's convenience. Grain in public warehouses and mills, Los Angeles county, Dec. 1, 1891: Wheat, 207,120 centals; barley, 377,600 centals. Orange county: Wheat, 12,000 centals; barley, 75,000 centals. The wheat raised in this and Orange county is principally red (called white Russian), Defiance and Scotch Fife, being less liable to rust than Australian. The Los Angeles Farming and Milling Company raise much fine Australian on their ranches in San Fernando valley. Four cargoes of wheat have been made up in these counties. Two by Spreckels Brothers, loaded at San Pedro. The balance of the wheat not needed for seed is now principally in the hands of three local mills.

San Bernardino.

A LARGE CITRUS GROVE.—Riverside *Press and Horticulturist:* A thousand-acre orange and lemon grove is to be planted in South Riverside by an association of gentlemen under the name of the Orange and Lemon Grove Company.

San Diego.

FARM NOTES.—Ducoo Cor. *San Diegan:* It rained .65 of an inch Dec. 19: This makes a total of 1.14 inches for the season. The mountains were white with snow this morning. Farmers are rejoicing and teams are in demand. Plowing will be commenced in every direction now, as the ground is in fine condition. There is already nearly 1000 acres in wheat and barley that were sown dry. Deputy Bug Hunter Smith of Escondido has been doing this valley lately and has found several orchards infested with San Jose scale, and in every case the owner has dug the trees up and burned them or has applied an effective remedy.

Shasta.

TO BEGIN PLANTING.—Anderson *Enterprise:* Fruit-tree planting will soon begin in this neighborhood, and while there will be many thousand trees planted, we think the number will fall short of each of the last three preceding years, which were exceedingly heavy years of planting.

Solano.

THE FRUIT-GROWERS' ASSOCIATION.—Dixon *Tribune:* The fruit-growers of Solano and Yolo counties living in the neighborhood of Winters have organized an association with the following officers: G. W. Thissell, Pres.; Wm. Baker, Vice-Pres.; C. F. Wyer, Sec'y and Treas. Meetings will be held on the second and fourth Saturdays of each month. Many of our orchardists are novices in the business, and will be glad to avail themselves of the opportunity of profiting by the experience of these successful horticulturists.

BARNHART FARM NOTES.—Cor. Dixon *Tribune:* From present indications, the coming season will be all that the lowland farmers could desire. This idea prevails generally, and all the tule farmers in both Solano and San Joaquin counties are seeding vast areas of land in anticipation of a dry season. Seventy head of mules were sent over to Stockton recently to assist in preparing ground for sowing. All the land sown lies in or adjacent to the tules. Four scrapers were also sent over to strengthen the levees along the banks of the San Joaquin. The nine eight-mule teams which were sent away are hardly missed from the number still at work here. More than 80 head of animals are still at work on the levees, which have grown broader and higher until they now look like small-sized mountain ranges. Still, Manager Barnhart is not satisfied. He intends to continue the work, weather permitting, until nothing short of a cloudburst can make an impression on the embankments. The grain is already springing up fresh and green all over the broad plains, and in a few more weeks they will be thickly carpeted with growing wheat and barley.

Sonoma.

SEBASTOPOL PACKING CO.—Sebastopol *Times:* The Sebastopol Packing Co. held a meeting Dec. 21st, at which was received 10 per cent of the $20,000 subscribed. The meeting was well attended, with signs of growing interest. The proper steps were taken, and articles of incorporation filed with County Clerk Juilliard. The ground for the cannery has been purchased by the Directors from John A. Brown, and is located east of the Winery of the Santa Rosa road.

HOP CULTURE.—Healdsburg *Enterprise:* Jno. McMinn, Secretary of the Sonoma County Hop-Growers' Association, furnishes a list of hop-growers in Guerneville, Healdsburg and Santa Rosa districts, with the number of bales produced by each for the current year. In Guerneville district, A. McPeak is credited with 42 and R. S. Drake with 80 bales—a total of 122. Healdsburg is credited with 13 growers, ranging from 33 bales produced by J. T. Sheehan to 155 bales by M. Redding—a total of 993 bales for the district. In Santa Rosa district, 45 individuals and firms are named, ranging from 2 to 520 bales, R. Peterson being credited with the latter number, Ah Sam, a Chinese, standing second with 405 bales, Joseph Purrington third with 400 bales; and the district foots up 6259 bales, an aggregate of 7285 bales for the three districts mentioned. The same authority reports 23 new hop yards started, covering an aggregate of 361 acres, Farmer and Peterson standing at the head of the list with 75 acres, John Peterson following with 40 acres, C. Y. Caldwell and Miller and Purrington with 30 acres each and S. Gillmon with 25 acres. There has been no disease in the Sonoma hop fields, and the product commands an extra price.

Tulare.

PRICES OF RAISINS.—Hanford *Journal:* There is a great difference between reports from different parties, of prices ruling in the East for raisins. Several persons residing in Eastern towns have written to relatives here that California raisins are selling there at from 25 to 30 cents per pound. While these statements are arriving from individuals out of the trade, a gentleman who had consigned his goods to a certain firm to be sold, received word from said firm that they were "just in receipt of a letter from Chicago which states that three cars of choice London layers from Fresno were sold last week at $1.10 and $1.15 per box for three-crown; also a copy of an auction sale in Philadelphia of 2000 boxes of London layers carried over from last year in cold storage, and sold by the agents there at 50 cents per box, which would not cover freight and warehouse charges. All these things go to show that the market is in a horrible condition, etc." The grower who received this letter informs us that he believes that the main cause

of the difference in price between the producer and the consumer is the lack of distribution of the California raisin crop. Nearly all the raisins are sent to one of five cities—New York, Chicago, Boston, Philadelphia or St. Louis. There is a consequent glut in the raisin market in these cities, and the goods are sold at prices ruinous to the producers, and the middlemen get the big profits. Lack of proper distribution is one of the principal causes of the low prices of raisins this year, and the remedy therefore should be and is a subject of earnest discussion among the horticulturists.

BUTTER SCARCE.—*Journal:* Butter is a very scarce article in Hanford now. A great deal of the milk from the dairies hereabout goes to the Hanford cheese factory. Farmers who make butter find no difficulty in securing city patrons who agree to take butter the year round, and pay remunerative prices therefor. There is a call for more butter milking in this vicinity, as a large amount of this product is shipped in here annually to meet the demand.

CANAL WORK.—The Tulare Lake Canal Company, of which ex-Mayor Pond of San Francisco is president, Mr. Turnbull is vice-president, and in which C. W. Clarke, a large landowner of this county, is interested, have just finished building a dam, which cost about $2500, across Tulare river, four miles from the lake, and now a canal, which is 36 feet wide and is to be 10 miles long, is in course of construction. This canal will irrigate some 50,000 acres when completed, and will supply with water for irrigation what was Atwell's island, in Tulare lake, in the '70s.

LEVEE BUILT.—Hanford, Dec. 21: The Kings river levee, which redeems from overflow about 11,000 acres of rich agricultural lands on the south side of Kings river and north of this city, was completed last Sunday. It is a little over 14½ miles in length and varies in height from 3½ to 10 feet. I. N. Weight of Tulare was the contractor and it took on an average 250 horses and 100 men to complete the work in 80 days.

Ventura.

STARCH FACTORY RUNNING.—Cor. Ventura *Free Press:* The Hueneme Starch Factory started up in full blast on Dec. 21st, and is now chewing up murphies worse than any Irish paddy. Potatoes are not coming in very fast just at present, owing, we suppose, to the fact that few know that the factory is started. Mr. J. E. Borchard, who was the prime mover of the project of building the factory, hauled the first 660 sacks of potatoes, but as they are capable of handling 100 sacks per day, these will not last long. J. B. Alvord has followed suit and will deliver 500 sacks more.

ARIZONA.

FRUIT CULTURE IN SALT RIVER VALLEY.—Gen. E. S. Gill of Phoenix in *Orange Belt:* The first fig orchard of any consequence was planted in 1887. It consists of sixty acres, and on an adjoining ranch eighty acres were planted the next season. Since then, additions have been made on these two ranches and others until now there are over 500 acres planted to figs in the valley. Our soil and climate seem to be especially adapted to the successful cultivation of the fig, and I may add, the raisin grape. The soil contains an unusual amount of saccharine matter and as a consequence the figs are very sweet and luscious. The skin is thin and tender, and there is no necessity for dipping in lye to cut it, as is the case in most of the fig-growing districts of the Mediterranean. All that is required to put them in first-class condition for the market is a little bleaching. Two crops a year can be relied on, and in some seasons three and even four crops can be produced. Raisin culture is also new with us, but the work already done shows that we will produce a very superior quality of raisins, equal to the best from the famous El Cajon district in San Diego county. This is owing to the great amount of sugar in the grape. For the same reason we cannot produce good light wines, but there is no question that Salt River valley grapes will produce a very superior article of port, sherry and burgundy. The oldest orange orchard in the valley will be three years old in February. Over 500 acres were planted to oranges last year, and twice that acreage will be planted this season. The success of orange-growing, particularly on the foothill lands, is now assured, as well as the growing of figs, raisins and the deciduous fruits. Apricots, especially, do well all over the valley.

NEVADA.

CATTLE NOTES.—Reno *Gazette*, Dec. 10, W. S. Bailey, while in Smith's valley, Lyon county, bought 400 head of cattle—100 head of beef for his market here and in Virginia and 200 stock cattle for his Churchill county ranch. He says the people of Mason Valley are holding public meetings to discuss the building of a creamery, and have about decided to build one. Mr. Bailey is going to put a 500 cow creamery on his Churchill county place, and has the lumber on the ground to build it. Mr. Bailey has been trying the experiment of dehorning old cows to be fattened for beef, and is highly pleased with the result. He says he dehorned 100 head with great success. He says three men can run 100 through a chute in a day and do the job. Mr. Bailey is thoroughly convinced that old cows feed better and take on fat more readily, make better beef and in every way are more satisfactory by being dehorned. He says there are fully 2000 head of beef being fed in Mason Valley and about the same number in Churchill county. J. M. Tunnell came up from San Francisco after the two steers fattened by Louis Dean, which were shipped to that city where they will be fed until just before Christmas and then taken to the shambles by Mark Straus of the Bay City Market. Dean sold them to C. W. Welby for $500 and Straus bought them of Welby. They are twin brothers of the Shorthorn family and weigh in the neighborhood of 3000 pounds each.

BEEF CATTLE.—Reno *Gazette,:* A careful estimate of all the cattle this side of the mountains, foots 22 680, divided up as follows: Ruby valley, 880; Clover valley, 600; Paradise valley, Owens river and all points north of Winnemucca, 2000; Lovelocks, 2000; Mason valley, 2000; Antelope valley, 400; Carson sink, 1500; Truckee meadows, 8000; Barney Horn, 800; Honey lake, 4500. Besides these, there are about 2500 in Shasta valley; looks as if San Francisco butchers would have to pay for beef before spring. Beef is selling now at Omaha for 11½ and 12 cents. Washington has none; Oregon is short; Arizona will not contribute any considerable number to the market, and it looks decidedly encouraging for the feeders this year. The *Gazette* will be greatly disappointed, if beef is not worth 7 or 7½ cents before the close of February.

Better Horses for California.

The interest is manifestly increasing over the State among good, intelligent farmers and breeders for a larger class of good, heavy horses and fine single and double carriage teams. Whoever has large draft or fine carriage horses to sell finds a ready market at good prices, while small, inferior and unreliable stock will not sell at any price worth raising. If the farming community in general would pay more attention to breeding to good imported pure-bred registered stallions the improvement in the horse industry would soon be felt throughout the State in the price of horses, and no enterprise well followed will increase the prosperity of any section more than producing the best kinds of coach and draft horses that always sell at paying prices in any market. Eastern horses of ordinary quality are shipped here and sold at good prices on account of the demand for kind, reliable, well-bred stock for general use. They can be as well or better raised in California by using only good sires as to pay transportation and profit to bring them from the East. Importers and dealers are now introducing in this State several kinds of breeds of excellent merit and proven endurance in the Eastern States, and having no superiors. Holbert & Conger of Los Angeles, importers and dealers, showed some grand Shire draft horses and the great German coach horse Adonis, at our last State Fair, and we learn are now receiving at their stables in Los Angeles, two carloads of Shires, Cleveland Bays and German coach stallions—all imported this season direct from Europe, and among the very best that could be bought. This firm is the first to introduce the celebrated German and Oldenburg coach horse on the Pacific Coast. Their German coach stallion Adonis, sold to Mr. Sperry of Stockton, is rapidly making a State reputation for the best coach type. With this importation they have two younger ones of much quality and character—a raven black and mahogany bay, as well as Superior Clevelands and Grand Shires, all registered full bloods in Europe and America. We are satisfied no successful breeder can make a mistake in using this kind of stallions to the exclusion of all grades and scrubs.

The growth and development of the Pacific Slope will certainly demand as good horses for coach, carriage and draft uses, as are now produced for sporting purposes.

Scientific Examination of Soils.

We have received a copy of Wahnschaffes' "Examination of Soils," published by Henry Carey Baird of Philadelphia. It is a compilation of the various methods of mechanical and chemical analyses as pursued by German chemists, and includes some of the appliances devised by Prof. Hilgard of our State University. It does not include, however, the important contributions made to a knowledge of the subject by French chemists, and is therefore deficient as a general review of the subject. The publication is not adapted to the use of farmers, but is a text-book for consultation in the laboratory, and should be included in all book collections for such purposes. It is sent postpaid for $1.50 by the publishers.

Early Treasures.

EDS. PRESS:—To-day I picked on the Asylum Farm, near this city, fine samples of our favorite California poppy (*Eschscholtzia*) in full bloom, with many buds clustering about them. These are the *avant couriers* of the grand army of wild-flowers that will come trooping on in a month or two. This is very early for these flowers to bloom in this valley. Have they been noted in bloom elsewhere by any of your readers, I wonder, this winter?

Also the same day I gathered fresh sprays of Maidenhair fern (*Adiantum*), coffee fern, (*Pteris Androme dafolia*), the pretty "Lace fern" and the common "Polypodium." R.

Napa, Dec. 26.

WHY PLANTS GROW ERECT.—Why trees or other plants grow erect has never yet been definitely determined. It has been supposed to have some relation to the action of light. Certainly, a plant usually growing erect turns toward any opening for light in a dark cellar, but when there is no light, they grow erect. Dr. Maxwell S. Masters has recently called attention to some cases in an English coal mine 1000 feet deep. Some props made from green posts pushed out into growth, and though in absolute darkness they were perfectly erect. They were perfectly blanched.

AN INGENIOUS INVENTION is an orange peeler that removes the coat without cutting the inner skin. It is claimed that 1000 oranges may be peeled without soiling finger or glove, or losing a drop of juice. The peeler is a piece of wire, nickel-plated, very much in the shape of a button-hook, but with a tiny blade let into the inner bend of the hook. When the point of the hook is drawn into the fruit it slides between the pulp and the peel without danger of entering either, while the blade divides the peel easily and rapidly, after which it may be removed without trouble.

WINTER BUTTER.

To meet with ready sale at good prices butter must not only be sweet but rich in flavor.

To the dairyman and farmer a satisfactory color is an item of great importance, and there have been many preparations put on the market for this purpose.

The Improved Butter Color, made by Wells, Richardson & Co., Burlington, Vt., is far ahead of all other colors, in shade, strength, and purity. It is free from taste or smell, absolutely without sediment, and gives the natural shade produced by good June pasturage. The manufacturers offer to mail free enough of this preparation to color sixty pounds of butter on receipt of six cents in stamps. We hope all the butter-making readers of the RURAL PRESS who do not use the Improved, will take advantage of this generous offer.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

CEDAR GROVE STOCK FARM.

Mr. J. T. Mock, of Danville, Ky., says: "I can cheerfully recommend Quinn's Ointment to all horsemen as the very best remedy in use. Would not be without it." For Curbs, Splints, Spavins, Windpuffs, or any enlargements, give it a trial. Sample box 25 cents, silver or stamps. Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

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Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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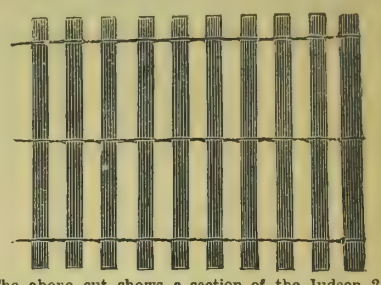
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For Grangers' Bank of California,
ALBERT MONTPELLIER,
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GEORGE TOURNY, Secretary.

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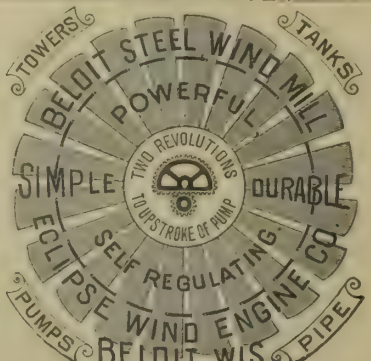


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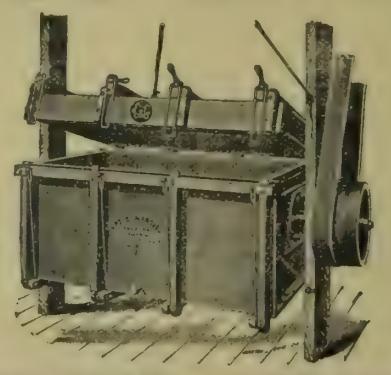
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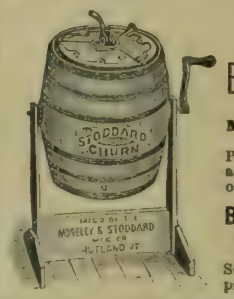
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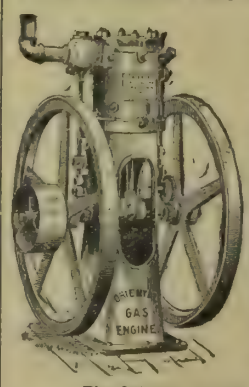
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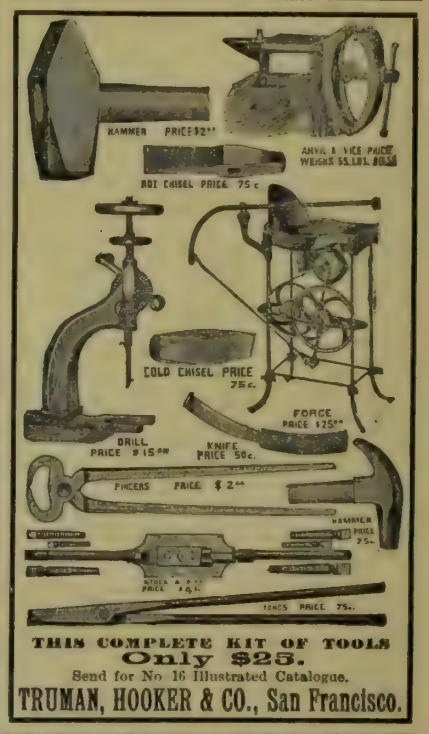
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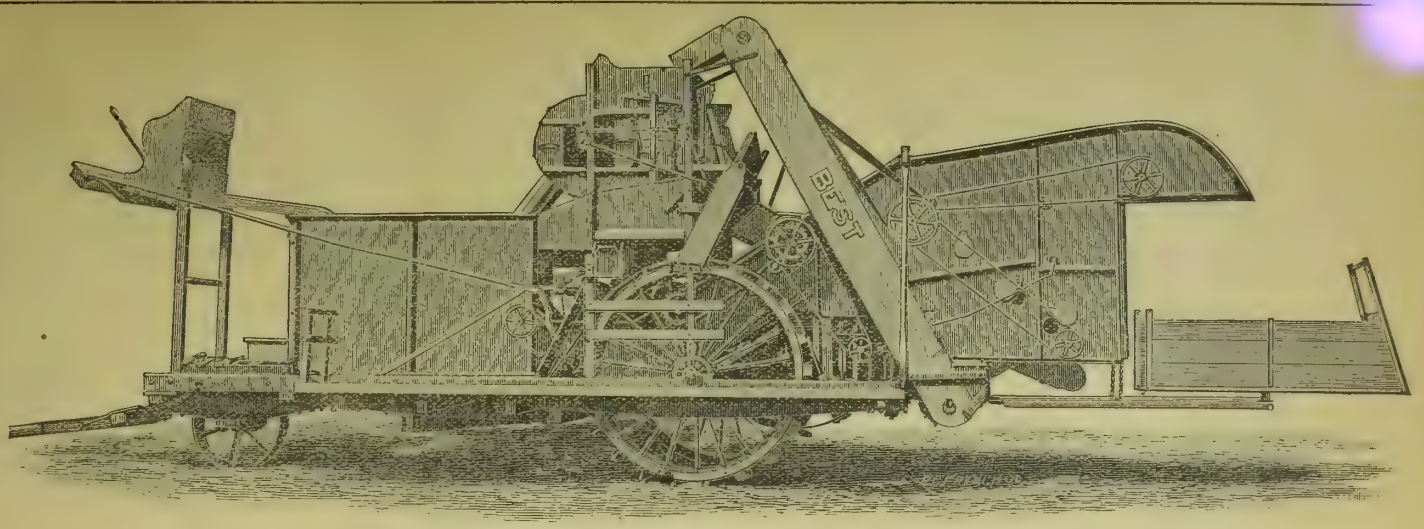
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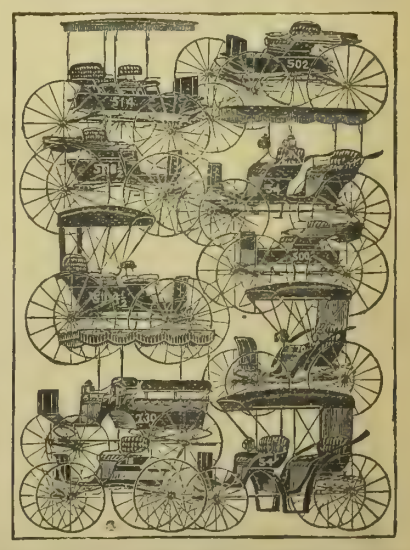
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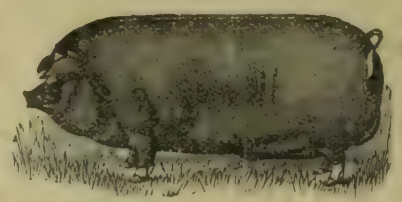
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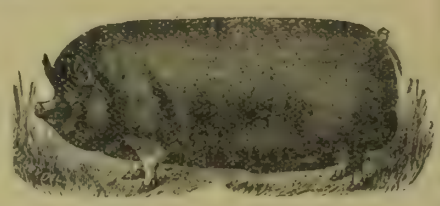
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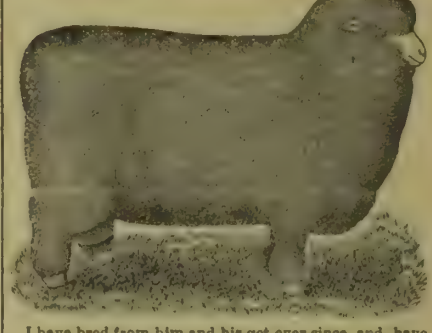
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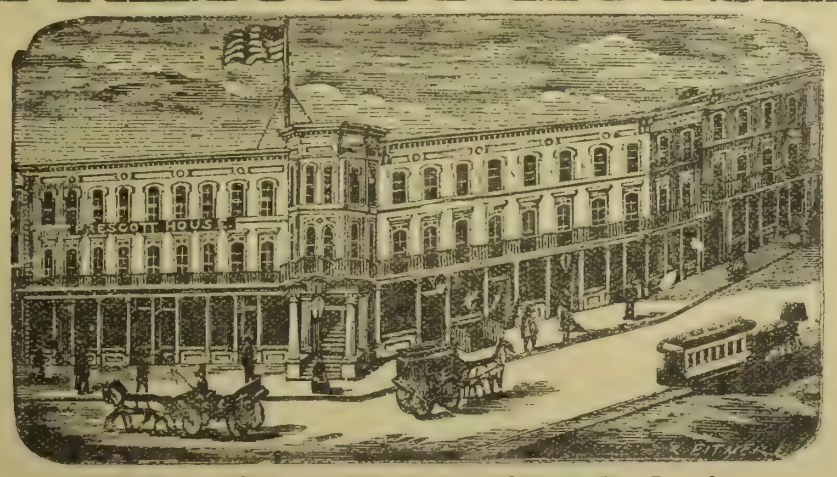
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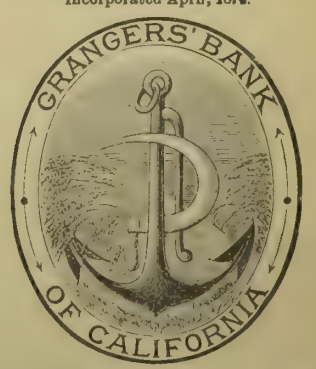
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 29, 1891.

The year goes out on a stronger market, excepting for orchard products, than usually obtain. The causes that have operated to bring this about, have been touched on from time to time in this department, and therefore are familiar to those who keep informed on the market. Rains following cold north winds have brought a genuine cheerful feeling to the trade, for with favorable weather from now on, we will have large crops of farm products. This feeling is emphasized by the rains having held off well into winter, which is accepted as a forerunner of a longer continuance in the spring and summer months. The grain market has held to strong prices, particularly wheat. The Eastern and European markets for wheat have fluctuated only slightly.

Foreign Grain Review.

LONDON, Dec. 28.—*Mark Lane Express*: Only a fractional business was done in English wheats. The Board of Agriculture reports the crop of inferior quantity and quality. In many districts an abnormal proportion of grain has been shed in the fields. Foreign wheat and flour sold slowly and generally at a decline. Barley, corn and oats declined, but the absence of Russian supplies has given them a tendency to revive. At to-day's market prices of best English wheats were maintained; ordinary grades and corn were steady; malt and foreign wheats dropped 6d; flour was unchanged.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May.
Thursday...	.....	.....	8s8 d	.....	.....	.....
Friday.....	.....	.....	.....	.....	.....	.....
Saturday...	.....	.....	.....	.....	.....	.....
Monday....	8s8¾d	8s7½d	8s8 d	8s8 d	8s8 d	8s8½ d
Tuesday ...	.....	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s9d	43s6d	43s	Firm, inactive.
Friday	....	....	....	
Saturday	....	....	....	
Monday	43s9d	43s6d	43s9d	Inactive.
Tuesday	....	....	....	

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Dec.	Jan.	Feb	March.	April.	May.
Thursday	177	177½	177¾	181	....	180½
Friday	....	....	....	....	....	....
Saturday...	....	....	....	....	....	....
Monday	175½	175½	177½	179½	181½	178
Tuesday.....	....	....	....	....	....	....

Eastern Wool Market.

NEW YORK, Dec. 27.—Wool sales at New York are light, being 286,000 pounds of domestic and 165,000 pounds of foreign. Holiday week is as ally a quiet one here; besides, our assortments have been pretty well overhauled. New England had an encouraging week, with values well maintained. At the moment there is evidence of a disposition to work into economical foreign stock, but as yet it has caused no feeling of weakness among holders, and it is believed that after the first of the year the offering of domestic will be brightened up by desirable round parcels that can and are expected to come from the interior. California wool is solid, though the movement is light. Boston sold 3,000,000 pounds of domestic, and 600,000 pounds of foreign. A large proportion of business was in fleeces and high grade wools. In addition to the free sales manufacturers carried away many samples of important lines.

Dried Fruit Review

NEW YORK, Dec. 27.—A good-sized line of sacked peaches brought 6c, the price being an inducement. Sacked prunes are unvaried from the counts last noted. Several cars of Three Crown raisins in sacks were sold at 4¾c, the top price for extras being 5c. Two Crown brought 3¾c. Boxes are dull and unsettled, loose and layers are quoted about alike in actual sales. Buyers could be approached better if the East had some trustworthy estimate of the unmarketed raisins on the Coast. As it is they are all inclined to magnify the primal holdings and will keep up the "hand to mouth policy" of buyers until something definite can be disclosed. A favorable point in the situation is the wine consumption at a good end of the season. Apricots are weaker.

Hops.

NEW YORK, Dec. 27.—Hops are quoted strong, with confidence: the world's markets are all favorable: exports are active: almost 4,000 bales go out this week, making for the season thus far 37,000: at the same time last year, 15,500; best State, 21½c; Pacific, 22c; special lines are held above; there is an effort to hold regular future sales on Change.

Local Markets.

WHEAT

	Buyer Season. H.	Buyer Season. L.	Buyer 1891. H.	Buyer 1891. L.	Seller 1891. H.	Seller 1891. L.
Thursday.	188½	188½	181⅜	181⅛	....	....
Friday....	....	....	....	....	....	....
Saturday .	....	....	....	....	....	....
Monday ..	187⅛	187½	....	....	....	....
Tuesday..	....	....	....	....	....	....

BARLEY

	Buyer Season H.	Buyer Season L.	Seller 1891 H.	Seller 1891 L.	Buyer 1891. H.	Buyer 1891. L.
Thursday...	115½	115½	....	....	111⅛	111
Friday.....	....	....	....	....	....	....
Saturday ..	....	....	....	....	....	....
Monday.....	114⅛	114½	....	....	111	110½
Tuesday....	....	....	....	....	....	....

BAGS—The rains have created a stronger tone to the bag market, although so far as we know there are no changes to report in quotations. Hand-sewed standard-sized are quoted at 6¾@7c for June-July delivery.

BARLEY—The local market has held to fairly steady prices. The demand for feeding continues large, owing to more outdoor work. In futures, trading on Call has been light. The following are the reported sales on Call:

Morning Session.—Buyer 1891, 400 tons, $1.10¾. Buyer season, 600 tons, $1.13½; 300, $1.13¾; 900, $1.13½; 400, $1.13¾. Seller season, 100 tons, $1.07 ⅛ ctl. Afternoon Session.—Buyer season, 300 tons, $1.13⅝; 500, $1.13½; 600, $1.13⅝. Buyer 1891, 500 tons, $1.10¾; 100, $1.10½; 400, $1.10. Seller 1891, 700 tons, $1.10½ ⅛ ctl.

BUTTER—While dealers report light stocks and only a moderate demand, yet owing to rains and improving pastures, they are not disposed to let a buyer go if a slight concession will do for a bait.

CHEESE—The market has a weak and somewhat irregular tone. The stock here is light, as is the demand. Receipts, it is claimed, will soon begin to come forward more freely.

EGGS—Judging by increasing receipts from the southern part of the State, feed is improving, which if the case, Californian will soon supply the demand, when prices will rule lower.

FLOUR—Concessions are still in order for round parcels. Bakers are taking more flour from Eastern Oregon and Eastern Washington. They buy it for making a certain kind of strong bread.

WHEAT—The sample market is reported slow, but firm. In futures, trading is light, barely enough to justify reporting. The following are the reported sales made on to-day's Call:

Morning Session.—Buyer 1891, 200 tons, $1.80. Buyer season, 1200 tons, $1.86; 2400, $1.85⅞ ⅛ ctl. Afternoon Session.—Buyer season, 900 tons, $1.86; 400, $1.86¼ ⅛ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 29th, were as follows:

Flour, qr. sks	155,871	Bran, "			11,543
Wheat, ctls	531,803	Buckwheat "			...
Barley, "	19,804	Middlings, sks			3,365
Rye "	156	Chicory, bbls			115
Oats "	10,642	Hops, bls			168
Corn "	4,238	Wool, "			151
*Butter "	354	Hay, tons			1,411
do bxs	25	Straw "			121
do bbls	....	Wine, gals			151,290
do kegs	8	Brandy, "			50,560
do tubs	....	Raisins, bxs			1,668
do ½ bxs	23	Honey, cs			28
†Cheese, ctls	302	Peanuts, sks			335
do bxs	....	Walnuts, "			68
Eggs, doz	21,800	Almonds, sks			286
do "Eastern ..	72,340	Mustard, sks			....
Beans, ctls	2,072	Flax, sks			....
Potatoes, sks	27,302	Popcorn, sks			25
Onions, "	918	Broom corn, bbls			....

*Overl'd —— ctls. †Overl'd 531 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Dec 27, '90	July 1, '91 to Dec. 27, '91.
Flour, ½ sks	125,814	250,842
Wheat, ctls	559,399	930 799
Barley, ctls	9 ,391	26,805
Oats, ctls	177,581	271,595
Wool, bales	5,745	5,626
Hops, bls	333	336
Rye, sks	....	2,839
Potatoes, sks	42 421	19,471

Cereals.

The strength of the wheat market at home and abroad has created no little surprise in certain quarters, but to the bulls it has not proved a surprise, for they expected the year to go out on strong markets, which they argued would more than likely bring better prices in the spring. While this may probably prove correct, yet the fact must not be lost sight of that the spring markets for shipments from this coast will depend largely on the crop prospects abroad. A ship leaving this port consumes from four to five and one-half months on passage, which would bring spring shipment arrivals outward, into European new-crop season. The list of vessels on the way to this port is gradually growing smaller, as it is to Oregon and also to Puget Sound ports. The exports (flour reduced to wheat) from this port since July 1, 1891, aggregate about 500,000 tons. The vessels in port now loading will take out an addition of about 150,000 tons. The bulk of this has been provided for.

Generous and well-distributed rainfalls in the valleys and on the foothills, with heavy deposits of snow on the mountain ranges, will encourage farmers in the belief that we are to have a propitious season, and acting on it, they will unquestionably put in large crops of grain.

The barley market has held strong. The light receipts and continued good demand cause the bears to confine their operations to cross orders and fictitious sales, so as to try and break prices. The receipts from Oregon continue light.

Oats hold up well, notwithstanding the North is sending us unusually large quantities. So far this season, the increased receipts from up North aggregate about 5000 tons. The supply of Californian is light.

Corn is essentially unchanged. The demand and receipts appear to be about evenly balanced.

Rye is slow and easy.

Feedstuff

For ground feed, the demand, which was quite active, is now slow, owing to rains causing dairymen and stock-feeders to look for a decided improvement soon in pastures. Receipts of bran are large, and with any falling off in the demand prices will shade off.

The receipts of hay are light, but as feeders confine their purchases to actual requirements, the market does not strengthen, but on the contrary it is easier for poorer grades.

Live Stock.

The market has a stronger tone for bullocks, with a slight advance obtainable. Cold weather has stimulated the consumption, which has also been aided by fewer fruits and vegetables. Mutton sheep are firm. Lambs and calves are scarce. Hogs are essentially unchanged.

Fruit.

Receipts of oranges are increasing, causing prices to shade off. The quality not being of the best, buyers bid lower for those not fully ripe. Ripe oranges move off freely.

Limes and lemons are quiet at steady prices.

Although pears are in light supply yet the market is barely steady.

Persimmons move off slowly at unchanged prices.

Northern counties and Oregon are sending to us liberal supplies of apples. The more choice varieties, if not defective, meet with quick sales at quotations. The low prices and an absence of other fruits have a stimulating effect on consumption. The receipts clean up well.

For raisins the market is quiet and will probably continue so until the spring trade opens here and at the East. Low prices have caused them to go into more general distribution than ever before, which has laid the groundwork for large demands in future.

Dried fruits are slow. All forced selling is met by lower bids from buyers. The latter appear disposed to wait until they can form a better idea how the spring trade is likely to be before venturing, except at lower prices, on the market. Holders, as a rule, are not offering, seemingly preferring to hold for one or two months. They believe that the market cannot go much worse, but may do better.

Vegetables.

Cold winds have given way to heavy rains, which with clear skies will cause more attention to gardening. The truck market is poorly supplied, although the southern part of the State continues to send us green peas, etc., but in small quantities.

Onions are firm and higher for the more choice good keepers.

Potatoes have a stronger tone for good keepers free from worms and other defects. Oregon is beginning to send us more liberal supplies. The rains will lessen the receipts of Californian.

Miscellaneous.

From reliable advices up to Dec. 29, the following summary tonnage movement is compiled:

	1891.	1890	In port. 1891.	In port. 1890.
San Francisco.	232,392	194,812	*131,325	*47,092
San Diego	*21,008	12,678	5,149	21,262
San Pedro	5,612	7,478	....	
Oregon	53,106	35,368	46,412	
Puget Sound	25,375	41,937	.	68,354
Totals	337,493	392,273	182,886	

*Engaged for wheat, 1891, 92,455 1890, 44,710

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Dec. 25, are as follows:

	1891.	1890.
Wheat, ctls	7,812,619	5,286,788
Flour, bbls	523,741	542,000
Barley, ctls	754,703	166,376

Poultry, while reported unchanged, shows a stronger tone, with an advance obtainable for the more choice.

Honey is quiet, as is beeswax.

In beans there is nothing new to report. It looks very much as if a quiet movement is on foot to corner supplies.

Hops continue to steadily advance. On this coast there are very few unsold.

For wool the market is reported firmer, but the absence of assortments is against sellers.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. TUESDAY, December 29, 1891.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 10	Extra, City Mills	5 40 @ 5 50
Butter	2 30 @ 2 65	Do Country Mills	5 25 @ 5 50
Pea	2 35 @ 2 65	superfine	3 40 @ 3 65
Red	1 90 @ 2 05	**NUTS—JOBBING.**	
Pink	1 70 @ 1 95	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 55	Do Choice	8 @ 9½
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 55	Do Chili	7½@ 9
Wld Peas, blk eye	1 50 @ 1 75	Almonds, sft shl	11½ @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	6 @ 7½
Do Nile	1 35 @ 1 45	Brazil,	6½@ 8
split	4 @ —	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 30	Peanuts	3½@ 5
Do good to choice	32½@ —	Filberts	11½ @ 14
Do Giltedged	35 @ —	Hickory	7 @ 8
Do Creamery rolls	35 @ —	Chestnuts	11½@ 16
Do do Giltedge	36 @ —	**ONIONS.**	
Eastern	18 @ 30	Silver Skin	60 @ 1 20
Cal. pickled	25 @ 23½	**POTATOES.**	
CHEESE.		Early Rose, sks	30 @ 50
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling	35 @ 55
Do gilt edged	14 @ —	Do do Salinas	30 @ 1 15
Young America	12 @ 15	Sweet's	2 50 @ 3 00
EGGS.		Garnet Chiles	40 @ —
Cal. ranch, doz.	37½@ —	River Reds	30 @ 45
Do do selected	42 @ —	**POULTRY AND GAME.**	
Do store	25 @ 35	Hens, doz	5 00 @ 7 00
Eastern	25 @ 35	Roosters, old	5 00 @ 7 00
FEED.		Do young	5 50 @ 8 00
Bran, ton	16 50 @18 50	Broilers, small	3 50 @ —
Feedmeal	26 00 @ —	Do large	5 00 @ —
Gr'd Barley	24 00 @27 00	Fryers	5 50 @ 6 50
Middlings	20 00 @22 00	Ducks	6 00 @ 9 50
Oil Cake Meal	25 00 @27 00	Geese, pair	2 00 @ 2 50
Manhattan Food ⅛ cwt.	7 50	Turkeys, Gob'r.	16 @ 18
HAY.		Turkeys, Hens	16 @ 18
Wheat, per ton	14 00 @ —	Do Dressed	18 @ 21
Do choice	15 50 @ —	Manhattan Egg Food ⅛ cwt.	11 50 @ —
Wheat and Oats	13 00 @ —	**PROVISIONS.**	
Wild Oats	12 00 @ —	Cal. Bacon, he'vy, lb	9½@ —
Cultivated do	12 50 @ —	Medium	11 @ —
Barley	11 00 @ —	Light	12½@ —
Alfalfa	10 00 @ —	Lard	9 @ 11
Clover	12 00 @ —	Cal. Sm'k'd Beef	11½@ —
Straw bale	50 @ 60	Hams, Cal salt'd	10 @ —
GRAIN, ETC.		do Eastern	12½@ —
Barley, feed, ctl	1 07½@ —	**SEEDS.**	
Do Choice	1 12½@ —	Alfalfa	7 @ 8
Do Brewing	1 12½@ —	Clover, Red	10 @ —
Do do Choice	1 15 @ —	White	17½@ —
Do do Giltedge	1 20 @ —	Flaxseed	2 50 @ 2 80
Do Chevalier	1 20 @ 1 45	Hemp	4½
Do do Giltedge	1 48½ @ 1 52½	Mustard, yellow	2 80 @ 3 00
Buckwheat	2 00 @ 2 25	do Brown	3 00 @ 3 25
Corn, White	1 35 @ —	**WOOL.**	
Yellow, large	1 26¾ @ 1 31½	**SPRING, 1891.**	
Do small	1 33¾ @ 1 38½	Humb't & Men'cino	20 @ —
Oats, milling	1 45 @ —	Sac'to valley	16 @ —
Feed, Choice	1 42½@ —	Free Mountain	19 @ —
Do good	1 35 @ —	S Joaquin valley	13 @ —
Do fair	1 30 @ —	do mountain	18 @ —
Surprise	1 50 @ —	Cala'v & F'th'll	16 @ —
Black Cal	1 60 @ 1 95	Oregon Eastern	14 @ —
Do Oregon	1 45 @ 1 60	do valley	21 @ —
Gray	1 32½@ 1 41½	So'n Coast, def	11 @ —
Rye	1 75 @ 1 80	So'n Coast, free	13½@ —
Wheat, milling, Gilt edged	1 85 @ —	**FALL, 1891.**	
Do Choice	1 83½@ —	San Joaquin	9 @ 12
Do fair to good	1 80 @ —	Mountain	10 @ 15
Shipping, choice	1 80 @ —	Humb't & Men'cino	14 @ 18
Do good	1 78½ @ —	**HONEY.**	
Do fair	1 75 @ —	WhiteComb, 2-lb	10 @ 13
Common	1 71½@ —	do do 1-lb frame	12 @ 14
Sonora	1 71½@ 1 80	White extract'd	6½@ 7
HOPS.		Amber do	5½ @ 6½
1891 Choice to Ex.	20½@ 21½	Beeswax, lb	22½@ —
Fair to Good	14½@ —		

Live Stock.

HOGS.		Third quality	4 @ —
Light, ⅛ lb, cents	4½@ —	Bulls and thin Cows	2 @ 3
Heavy	4 @ —	**VEAL.**	
Stock Hogs	3½@ —	Small	7 @ —
BEEF.		Large	6½@ —
Stall fed	6½@ —	**MUTTON.**	
Grass fed, extra	6 @ —	Wethers	8 @ 9
First quality	5½@ —	Ewes	7 @ 8
Second quality	4½@ —	Lamb	9 @ —
		Do Spring	12½@18

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	10 @11
Do do prime	3½@ 4	Do do choice	11 @12
Do do choice	4 @ 4½	Do do fancy	12 @13
Do sliced, common	3½ @ 4	Evap, peeled, in boxes, choice	15 @—
Do do prime	4 @ 4½	Do do fancy	16 @17
Do do choice	4½@ 5½	**PEARS.**	
Evap. bleached, ring. 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com.	3 @ 4	Evap, sliced, in boxes	6 @—
Do do prime	5 @ 5½	Do ring do	10½@—
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @—	Pitted, sun-dried	4½@—
Do do choice	7½@—	Do evap. boxes, choice	—@—
Do do fancy	8½@ 9½	Do do do fancy	—@—
Evap. choice, in boxes	9½@10	Unpitted	2 @ 2½
Do fancy, do	10 @10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5 @ 5½
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	5½@—
Do white	3½@ —	Do do 40 to 60	6½@ 7½
Do do washed	—@—	Fancy sell for more money.	
Do do fancy	—@—	**RAISINS.**	
Do do pressed	—@—	London Layers, choice ⅛ bx	$1 50@ —
Smyrna boxes	—@—	Do fancy, do	1 75@ —
Do sacks	—@—	Layers, ⅛ bx	1 25@ —
GRAPES.		Loose Muscatels, common, ⅛ bx	1 00@ —
Sun-dried, stemless	3 @ 3½	Do choice, do	1 20@1 30
Do unstemmed	2½@ 3	Do fancy, do	1 50@ —
NECTARINES.		Unstem'd Muscatels, in sacks, ⅛ lb	4@ 5
Red, sun-dried	3½@ 5	Stemmed do do	5@ 5½
Do Evap., in boxes	6 @—	Seedless do do	6@ —
White, sun-dried	5 @ 6½	Do do ⅛ 20-lb bx	1 15@ —
Do evaporated	6½@ 7	Sultanas, unbl, bxs	1 15@1 40
PEACHES.		Do bleached, in bxs	1 30@1 60
Sun-dried, unpeeled, common, bleached	3½@—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	
Do do prime, do	4½ @—		
Do do choice, do	5½@—		
Do do fancy	6 @ 6½		
Evap, unpe'l'd, choice	6 @—		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. TUESDAY, December 22, 1891.

Limes, Mex	5 50 @ 6 50	Do Lady Apples	1 00 @ —
Lemons, box	1 50 @ 4 00	Grapes	50 @ 75
Do Sicily	5 50 @ 7 00	Do Black	75 @ 1 25
Oranges, Winter small box	50 @ 1 25	Pears, box	35 @ 75
Do Seedlings -		Do Winter Nellis	75 @ 1 25
River Ide	2 00 @ 2 50	Beets, sk	— @ 1 00
Los Angeles	1 25 @ 1 75	Carrots, sk	50 @ —
Do Navels—		Okra, dry, lb	15 @ —
Los Angeles	2 00 @ 3 00	Parsnips, ctl	— @ 1 25
Riverside	2 00 @ 3 50	Peppers, dry, lb	12 @ 20
Duarte	2 50 @ 3 50	Turnips, ctl	50 @ —
Apples, box	40 @ 75	Cabbage, 100 lbs	55 @ 65
Do choice	1 00 @ 1 25	Garlic, lb	3 @ 4½
Do extra choice	1 50 @ —	Squash, Mrft, tn.	6 00 @ 9 00
		Pumpkins, ton	7 00 @ —

Lessons in Volapük.

The International Language of the Entire World.

LESSON 12.

THE REFLEXIVE VERB AND THE IMPERSONAL VERB.

The *reflexive* form applies to active verbs only, and is expressed by suffixing the pronoun OK to the proper person of the verb, or by using the personal pronouns, instead of *ok*, for the first and second persons, in which event these pronouns are declined thus:

Flapobok or flapob obi, I strike myself.

Flapolok or flapol oli, you strike yourself.

Flapomok, he strikes himself—never *flapom omi*, which means only he strikes *him* (some one other than himself.)

Reciprocity is expressed by the adverb BALVOTO when the reciprocity would be expressed in English by "each other," or by KO BALVOTO when the English would be "with each other," or by BALIM LEN VOTIM when the English would be "of each other;" thus:

Hetoms balvoto, they hate each other,
Golobs ko balvoto, we go with each other.
Tikols balim len votim, you think of each other.

The *impersonal* form is always the third person, and may be either active or passive. It adds the indefinite pronoun OS to the verb root; thus:

Tötos, it thunders. Etötos, it has thundered.
Pasagos, it is said. Pesagos, it has been said.

Exercises.

Uts kels hetoms balvoto binoms badik—Om it no kidom jiblodi obik, ab jiblod omik e obik kidofs balvoto—Man e vom at tikoms gudiko balim len votim e vipoms binön fiens—Cils et golobs ko balvoto al dom fatela omsik lä flum al givön ome flolis svidik kelis laboms in nams omsik; no li-logol otis?—It otötos no ob nob len dom olik—Jipul obik elemof plo of buki ab elemof magis e flolis plo blod smalik ofik—Yagoms nimis in fot nöka obsik—Li-vipol lemön jevali et keli elogobs len lom fiena obik?—Pasagos das man e vom at laboms cilis balsebal, lul omas binoms jipuls e mäl puls; cils et lödoms in dom ot ko nefs tel e jinets fol.

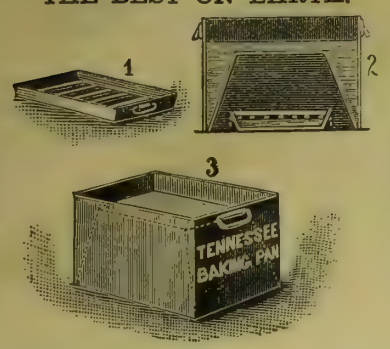
These children ought to kiss each other and think of each other as brothers and sisters—Children, it is not well to strike each other; it is better to kiss each other—They have been walking together and have come to (al) your house to see your grandfather—Think of one another in the most friendly manner and you will be good boys and girls—The man who teaches himself goodness will not teach his friends badness—Who says that it did not thunder in the forest by the river shore? The chair under the table is the one which your little boy can have—Let us go together to your sister's house to see her books and pictures—Which animal will you buy, a horse, a dog or a cat? The boys who live in the house in front of the forest hate each other and teach each other to be bad.

This series of twenty lessons was begun in the PACIFIC RURAL PRESS of Oct. 10, 1891. Those desiring assistance in the systematic study of the language will be put in the way of obtaining it without cost by addressing A. L. Bancroft, *Oifel* for California, 303 Sutter St., San Francisco.

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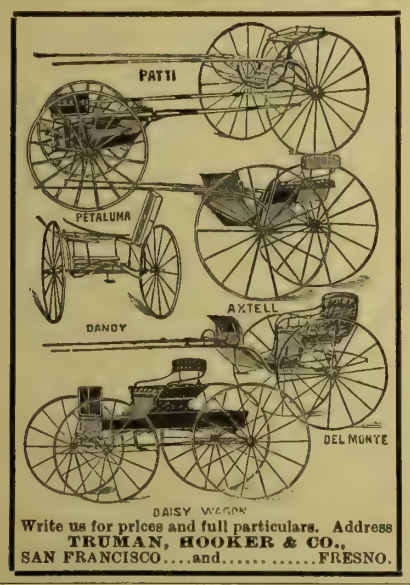
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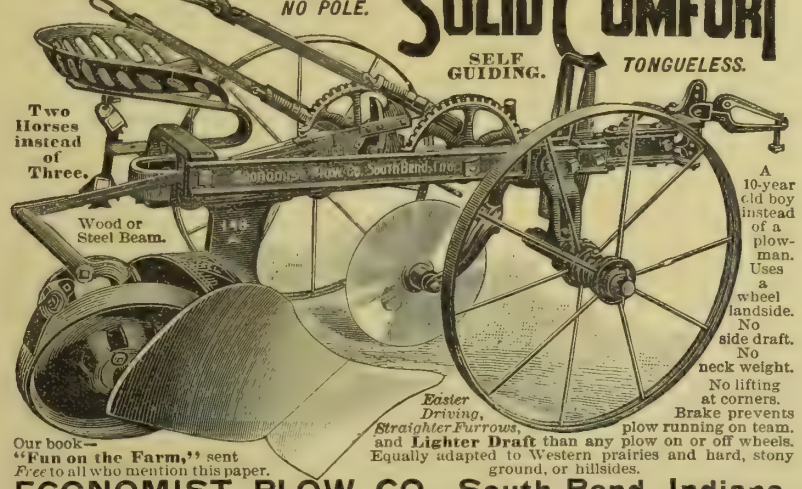
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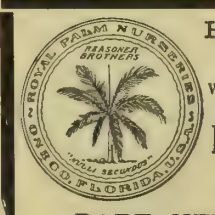
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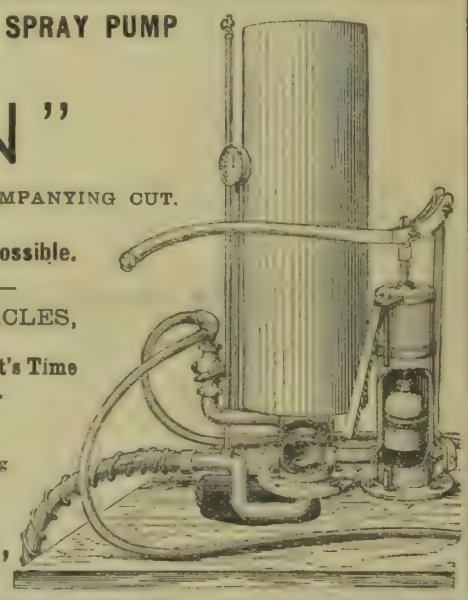
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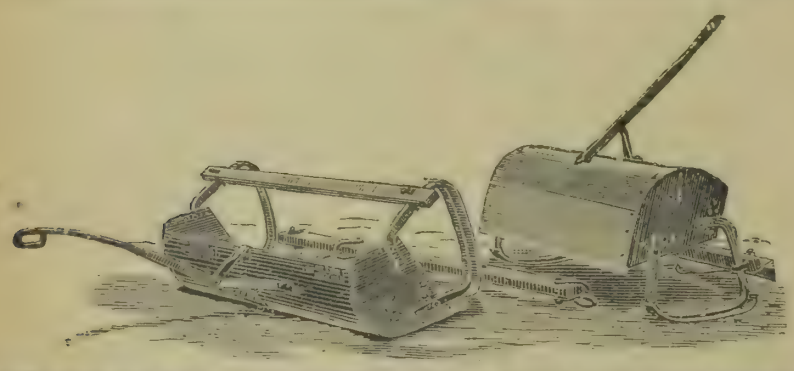
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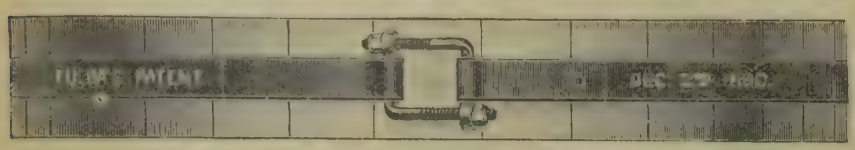
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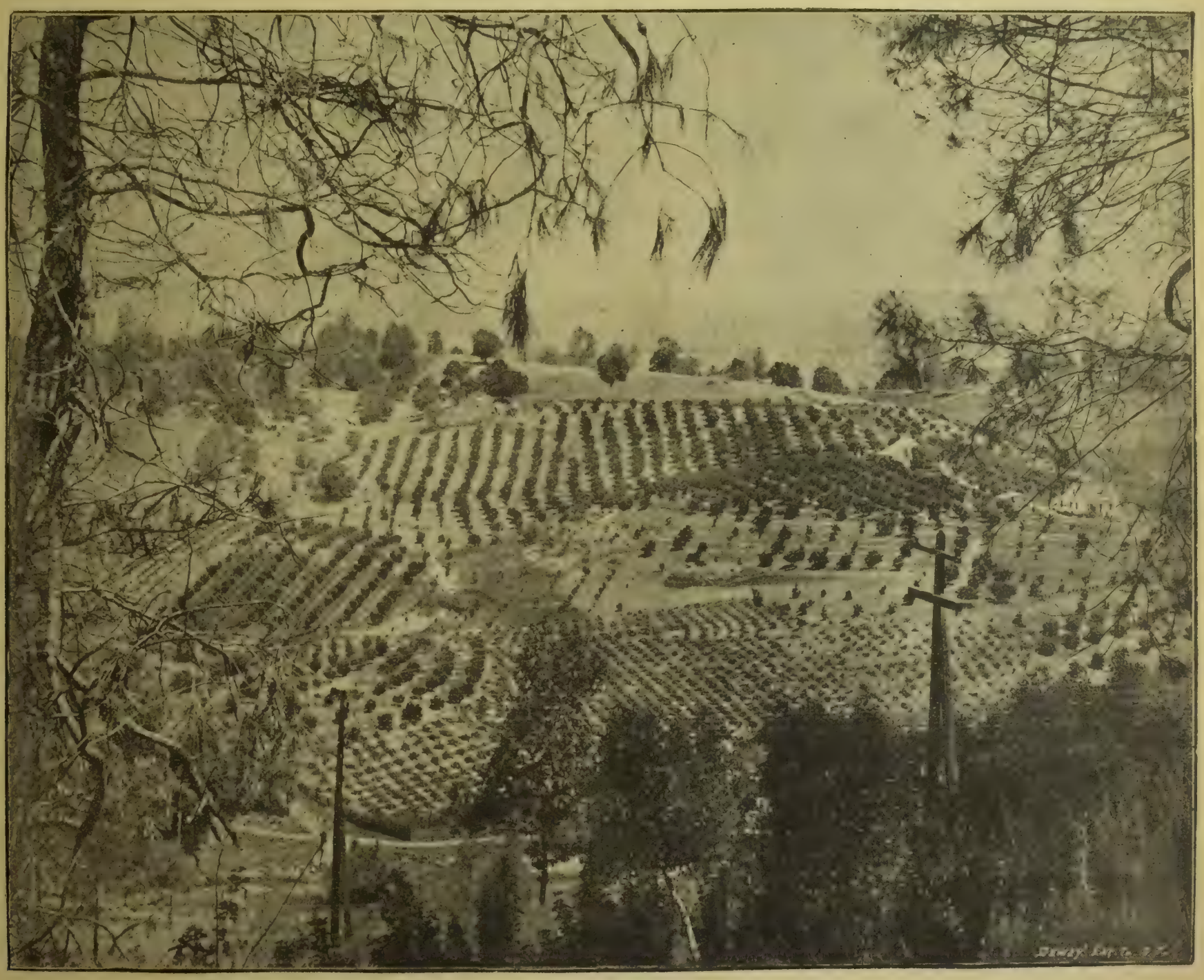
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PACIFIC RURAL PRESS

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A REPRESENTATIVE FOOTHILL SCENE—WARM SLOPES COVERED WITH PRODUCTIVE TREES AND VINES.

A Fruit Scene in the Foothills.

To emphasize the RURAL'S interest in the holding of the Citrus Fair next week at Auburn, the "gem of the foothills," we publish in this issue two large engravings representative of foothill development in the horticultural line. These views are from recent photographs by W. R. Nutting, and as photo-engravings they bear upon their face the evidence of actuality. Perhaps handsomer views could be had, for the foothill region is one of exceptional picturesqueness, but our selection was from an industrial point of view as befits an industrial journal. We wish to show what is being done in the foothills, that others upon uneven lands in suitable climate may emulate the gratifying progress which is shown forth.

Upon page 25 may be found a broad view of a warm hillside terraced for fruit planting, with the trees planted and the irrigating furrows drawn. We have been fortunate in securing a careful article descriptive of this terracing from a gentleman well known as a fruit grower and agricultural engineer, who himself supervised the work. This view and the accompanying description will be found suggestive to many of our readers.

Upon this page the view is a typical one of foothill orchard and vineyard-growing, the scene in this instance being in Placer county. The branches of the Digger pine thrown across the sky, the slopes of the distant hills, the natural growth of timber on the uncultivated portions, are all characteristic of the foothills as nature made them. Amid such environment lies the improved slopes of the foothill fruit planter, the rows irregularly disposed to suit the contour, the large and small trees of successive plantings, the grower's plain but comfortable habitation and outbuildings—all these are comprised in a glimpse of foothill development, such as the visitor can obtain from the car windows or from the buggy seat along the pleasant roadways in the foothills.

There is something about foothill situations which the valley orchardist does not enjoy. There is a characteristic quality in the fruit which men may argue about, and that we will not discuss. There is, however, in the foothills a warmth of soil unknown in the valleys; there is a play of colors in the landscape which the artist cannot approach without the charge of exaggeration, an inspiring breadth of view, an exhilarating tone in the air—all of which are characteristic of the foothills, captivating visitors and turning their thousands to investment and progress.

It is not the season to see the foothills in their beauty. A month or more hence, when the fruit trees bloom and the wild flowers show forth their hues, and thence onward, until fruits ripen, the foothill visitor revels in natural loveliness. But there will be visible at Auburn, next week, something which will appeal to the industrial mind more forcibly

(*Concluded on page 28.*)

THE APIARY.

Notes on Bee Culture.

EDITORS PRESS:—The honey crop of Ventura county averages $60,000 a season.

Sweet clover is one of Utah's best honey plants.

Of the various industries in Colorado this last season, none have made more rapid progress than bee culture.

By the color and aroma of honey, an experienced bee-keeper can tell the plant from which it was gathered.

Bee culture is one of the most fascinating pursuits known; added to this, it cultivates observation and study, and furnishes one of the purest sweets known.—*American Bee Journal.*

Mr. Parker Barrows of Eagle Valley, Oregon, finds that bees do remarkably well there, 200 pounds being the product of a single colony.

According to the *Nebraska Bee-Keeper*, August is the best month in the year for bee-keepers there—more honey and more swarms in that month than any other.

Fruit and bee culture should go together; every fruit-raiser and farmer should have a few stands. They aid greatly in the fertilization of all fruit bloom.

In handling bees the less mashed the better, the scent of the poison angers the others, and peaceable bees are made cross.

G. M. Doolittle of Baroolino, N. Y., reports in *American Bee Journal*, that for the last 20 years he has averaged $1000 per season with his bees. He did not report the number of colonies that he keeps, but I think he generally has between 50 and 200 colonies.

How is the California toyan or holly propagated? I have planted the seeds two or three times, but never succeeded in getting a solitary plant to grow. I have also tried transplanting, but did not succeed.

I should be pleased to learn how to make toyan seed germinate.

When bees are seen carrying out almost fully developed brood, it is a sign that starvation is threatening them, or that the moth worms are at work. Beginners many times suppose that their bees have a disease of some kind, at this wholesale carrying out of brood; but the above mentioned facts are the real cause.

Mr. W. M. Bomberger, in an essay read at the Iowa State Convention, states: "You never saw a lazy or stupid person succeed with bees. The bee fever may sometimes get into the system of a lazy person, but after the first serious attack it leaves him in a sevenfold worse state. The successful bee keeper is an industrious person; a mechanic, a botanist, a good salesman and rarely a scamp. He gets all these truths from the hive. He can even get his religion from it."

I once wrote and asked a Monterey Co. apiarist, if he considered greasewood much of a honey plant. He replied as follows:

"There are two plants called greasewood; neither of them being honey plants. One is a bitter, aromatic plant, like artemesia or wormwood, in odor and taste, but with finely cut leaves. It covers whole mountain sides here in Southern California. It is called "old man" and "sage brush" but it is no more sage than a hog is a sheep. Indians put it on cuts to stop bleeding; it grows in tufts or bunches; some grow three or four feet high. The other kind of greasewood grows more like a bush; has wide leaves, and resembles a kind of chaparral; Both are plentiful here. I never knew bees to work on either, but have known them to starve right near it."

Now is the time of the year for bee keepers to read up on bee culture; to find out all the best and most profitable methods of running an apiary; the best hive to use, and how it is constructed; transferring, and how it is done; how to raise queen bees, and how to introduce them; this is very valuable, every apiarist should understand queen-rearing, and have his apiary composed of populous colonies of desirable races of bees, to know how to make and use comb foundation; he should also study up and read about queen-excluding honey-boards, proper spacing of frames, best section boxes and section cases, dividing and artificial swarming, the production of comb and extracted honey, and many other items of vast importance. S. L. WATKINS

Grizzly Flat, Cal.

Beehives and Honey Sections.

EDITORS PRESS:—The Californians don't like to pay 30 cents for a section of honey, but prefer it to the 15c, 25c and 50c, and would like that 15c made a 10c size, which is hardly possible. The modern hives are all built for the 1 lb. ($4\frac{1}{4}$x$4\frac{1}{4}$x$1\frac{7}{8}$) section, which is the favorite size in the East. This makes a small square chunk of honey that the consumer pays 25c for in the East with reluctance. The 2 lb. section ($5\frac{1}{4}$x$6\frac{1}{4}$x2) is a size that is not adapted to any hive, while a size the double of it is not in the market. To accommodate my local California trade, I have made a 15c size ($4\frac{3}{8}$x$4\frac{3}{8}$x$1\frac{5}{8}$). This size gives a larger surface to the comb, and, with seven to the case, permits of a follower on the dove-tailed hive, which the old $1\frac{7}{8}$ size did not.

For my 25c size I have made my sections $6\frac{1}{4}$ high $5\frac{5}{8}$ long by $1\frac{5}{8}$ wide. Three of these go into a super lengthways and seven across, with room for follower. This size section has a larger surface than the old $5\frac{1}{4}$x$6\frac{1}{4}$x2 inch 2 lb. section that sells for 30c, and still it can be sold for 25c, as it is $\frac{3}{8}$ thinner.

The average Californian will buy 50c worth of honey just as quickly as he will the 1 lb. 15c piece of honey, and it is therefore policy to sell all you can in that shape. There is no section on the market that holds that amount, so I have had them made $6\frac{1}{4}$ inches high $8\frac{1}{4}$ long by $1\frac{5}{8}$ wide. These sections lay on the long side in the super—two lengthways and seven across. All of the sections are made to fit the improved dove-tail hive and each case has a follower, and wedges to key up the sections tight.

It has taken no small amount of calculating to get all the parts just right, and to any one that desires to make these "California sections," I would add: Don't write to me for measurements, but send to the Clipper Gap Beehive Factory, Clipper Gap, Cal., where mine are made and get a sample hive complete at a cost but little above what the rough lumber would cost you. As the outside measures of all the supers are the same, a case of 50c, 25c and 15c can all be put on one hive if desired, and changed to the 15c size when the season is near the close, or each size can be run on separate hives. E. H. SCHAEFFLE.

Mountain Bloom Apiary, Murphy's Cal., Dec. 29, 1891.

FRUIT MARKETING.

Fruit Production and a Market.

[C. C. THOMPSON of Pasadena before Pomological Society of Southern California.]

How shall we market our fruit? There is no industry on the Pacific Coast which is so great and important as the production of tree fruits, and the deciduous varieties seem to be the ones which interest the most, as the conditions are such that they can be grown in nearly all localities. Certain localities are better adapted to some varieties, possibly, than others; but let that be as it may, there is still room for vast amounts to be produced, and the future is going to demonstrate this fact, so that the question naturally arises: What are we going to do with it all? It seems to be a great question, but if properly handled can be worked out to the satisfaction of the producers. To do this, it will be necessary for the growers to sell more directly to the consumers.

As matters now stand, fruit goes through so many hands before it reaches the consumer that the price is so high that the consumption is very much lessened from what it should be; in fact, so high that but a few of the wealthier people can buy. When we travel through the country in the East, where we expect the largest consumption of our fruits, we find but a very few as compared to the total output. When we look into the matter, we find that the course which is pursued tends to lessen the use of our fruits rather than increase it. We may commence right at home and look at the character of the fruit that is kept on our fruit-stands. Much of it, but of course not all, is a class of inferior goods bought at a small price. Then, because it can be bought cheap and retailed at an exorbitant price, only a few can buy; consequently, it lays day after day until it is hardly fit for use. On the other hand, if people could get the same fruit fresh at a reasonable price and in a fresh condition, there would be a chance for the consumption to be largely increased. This application is not only true here, but in nearly all other places where our fruits are sold.

When I went East, a few years ago, in the city of Portland, Maine, I tried to buy some dried peaches, going to all the leading groceries but without success. I was told that if I should buy I would not do so a second time, as they were so bitter as to be unfit to eat—that they would taste as if they had been steeped in hop water. I do not know where they were in the habit of getting their goods, but I presume from some of the Eastern peach districts where they plant and grow the bitter kind. However, I bought a can of peaches, and sure enough they were very small and bitter, and of such a character as our canneries would not buy at all. Undoubtedly they were Eastern packed goods. That city is not the exception, for there are many places where they know but little about the superior quality of California fruit.

Do we believe that the present production is sufficient to glut the United States? If we do, we cannot have much courage to go forward and plant orchards, as we are now doing, for this country is only in its infancy in this as well as in many other things. We must go to work and make it a paying business. It seems to me there are many growers who put but little value on their fruit; growers will often sell at most any price offered, which at best is poor policy. It has a bad influence on the market. Unless we are growing fruit for what there is in it, we had better have no more than we can make use of in our homes.

The first thing to do is to value our fruits and then go to work to get the value out of them. While there are many ways to do this, they are all valuable to us and we had better recognize them. About the first thing for every one to do is to fix themselves for drying, and after the fruit is ready for market, we should have a well-organized fruit exchange. I see no reason why this course cannot be made profitable, at least no insurmountable obstacle. I am well aware that to handle dried fruits so far from an Eastern market, takes time and considerable money, and that there is quite a risk attending it. Therefore, those who buy our fruits must necessarily have a good margin and I know of no one who can take this risk better than those who produce the goods, for they have not the capital invested that the buyers have.

Then again, the plan of shipping green fruits and selling at auction in Chicago, as has been practiced in the northern part of the State, has been a source of considerable profit to the growers and should be encouraged here, as I see no particular reason why we have not equally as good facilities. If we were sending a few carloads each week from Southern California points, we would soon stimulate the market and strengthen prices. As it is, our canning establishments are very meagre as compared to even small production at the present time, and they are able to get sufficient supplies by buying only the very best. If we are to live and continue in the business as it is now, we might as well discontinue planting new orchards. This, however, we cannot afford to do. We must formulate some cooperative plan whereby we can handle our own business—do our own canning, drying, buying and selling. When such a scheme is broached, the first we hear is, "Oh, the producers cannot or will not stick together; that has been tried and proven a failure," Admitting this to be so, it does not prove that it necessarily must be the result always. While in some cases the business undertaken has not been carried on for a great length of time by the promoters of the enterprise, yet by being taken by other parties it has proven a great benefit to those who first started it, by opening up the way and making a market for their produce.

Cooperation on the part of the producers has worked a great benefit to them in many instances, and that is the greatest thing needed at the present time. Combine against those whom we supply with our productions! No; we don't mean this! While the producer is combined against by every institution under the sun, we have no protection; we have no voice in the matter at all. We take what is given us and we are not expected to say a word. Why? Because we are not expected to have anything more than an ordinary existence. The pleasures of life a producer is not expected to enjoy. "He ain't that kind of a fellow. No, he would not know what to do with it if he had it. He could not use it; he has no time for that. He must stay in the field and plow and cultivate from sun to sun; yes, from daylight until dark. That is good enough for him. We also combine against him; we are the fellows who can put on the style. We can enjoy the pleasures of life. We know how to do it."

Now, friends and producers, one and all, who is it that may enjoy life, too? It is the producer, the son of toil; for from his hand comes everything under the sun. Combine against those who stand ready to take our produce or the production of our hands! No; but we must study our interests! There must be some unity of action. We must look after our own business. There must be some organization among us. Let us have united action and then we will prosper.

We nearly all claim to be protectionists, but at the same time we do but very little toward protecting ourselves. We meet together year after year and talk over things pertaining to our business and neglect the very important one of how shall we organize ourselves that we may market our fruits to the best advantage?

A Foothill Peach Tree.

A peach tree is a very common sight in Placer county, but the one described in this article is *the* peach tree and should be classed as one of the seven wonders of the county. It is on the ranch of H. B. Gaylord, two and a quarter miles from Auburn. It is five years old and has borne four crops of fruit. In June, 1886, three trees were noticed in front of the residence, and just to see what they would do, were left to grow as they were. The winter of '86 and '87 they remained green all winter. In December, 1886, the largest one was taken to the Citrus Fair at Sacramento, not with a view of taking any premium, but just to show what Placer county climate and soil could do. This tree was $2\frac{1}{2}$ inches in diameter and six feet high. What became of it is not known. Of the other two, one had been budded to nectarines, the fruit of which took the first premium at the District Fair in Auburn, in 1890. The other still remains where it first sprouted. It is now 25 feet high and measures 2 feet and 3 inches in circumference at the ground. Twenty-one inches from the ground four branches start out, measuring respectively 16, 15, 13 and 9 inches in circumference. The following is the number of boxes of peaches taken from the tree and the amount received therefor: 1888, 17 boxes at 75 cents per box, $12.75; 1889, 26 boxes at 70 cents per box, $18 20; 1890, 23 boxes at $1 per box, $23; 1891, 40 boxes at 40 cents per box, $16. Total, 106 boxes, $69.95. The tree is a seedling from the Salway, but is a much finer flavored peach. When such trees can be raised from the seed, we can see no use of budding. As the name suggests, it is a Challenge tree, and we challenge any one to beat it.—*Auburn Republican.*

FARMERS' INSTITUTES.

The Institute Work in Wisconsin.

We have received a copy of Bulletin 5, Wisconsin Farm Institutes, which outlines the meetings of 1891 in that State. It is edited by W. H. Morrison, the able superintendent of Wisconsin Institutes. In it we find much relating to the progress of the Institute effort, and we shall reproduce a few paragraphs.

At one of the meetings, ex-Governor Hoard said: "Everywhere I go, every successful man in farming recognizes the great value, force and strength of these Farmers' Institutes, which shall take hold of the farmers and unite them in an intelligent study of that which maketh for peace and righteousness and a better reward of agricultural effort.

"Now, these things are in the line of intense common sense. I would not give a fig for any sense that is not common enough to be down where I live. We have watched and prayed and worked for these Institutes, that they might make the waste places of our beloved State to blossom as the rose, and they have helped to do it. They have done a vast amount of good, because they have brought us together, and when we come together, we warm and cheer each other, don't we? When men come together and honestly, patiently and intelligently think with one another concerning the things that interest them so much, they are bound to help one another. My friends, the Institute work of our State is a blessed work if we can keep it along this line.

"We want to hold right steadily in the conduct of the Institutes to the technical work of the farm. We don't want to dabble in politics, we don't want to mix up in religion, we don't want to mix up with anything on earth, but stick to this. Give to me a larger judgment of my duty as a farmer, and how to encompass the problems of my work, and then I will bless the Institutes. The judgment of men is enhanced and enlarged and benefited by rubbing together. You know the old-fashioned saying in Vermont when they go sleigh-riding and the boys and girls all tumble into the sleigh. 'Lay the brands close if you want a good fire.' You need that motto here in the Institute work; we need it in the State. There is no man that needs to range up alongside of his neighbor more than the farmer, and may God bless him in his efforts in that direction."

The Institutes and the University.

Prof. W. A. Henry, in speaking of the Departments of Agricultural Instruction at the University, said:

"The third feature of our unique system is the spread of agricultural knowledge throughout the whole community, through the medium of the Farmers' Institutes. The Institute is just as much a part of the University and the Agricultural Department as the Experiment Station, or the teaching of agricultural studies within the college walls. Every person who attends an Institute is a student of the University as much as though he had registered with us at Madison. The Institute system is based upon the idea that knowledge should be as free as air and water, and that our farmers are anxious and willing to avail themselves of everything that is useful and will help them to better follow their vocation. Many years ago the farmers began coming together each winter for the purpose of discussing agricultural questions and making themselves better farmers and better citizens. These gatherings were under the name of Grange meetings, Farmers' Clubs, meetings of various State organizations such as the State Agricultural Society, the State Dairymen's Association, etc. Each of these filled its mission and has done a great work, but the Institute, managed as it is from the University as a central point, gathers together all the great agricultural forces of the State into harmony, and carries more information and distributes it better than was ever before possible.

"When first started, there were those who expressed the opinion that, though popular for a time, the Farmers' Institutes would soon die out, and there are those within our borders today who still believe it short-lived. From the first I have affirmed the contrary, basing my reasons upon my knowledge of Wisconsin farmers and human nature in general, and I have seen no cause to change my opinion. When the horticulturist ceases to care for horticulture, when the horseman ceases to care for the horse, when the stockman's eyes grow dull as he listens to some practical paper on the care and management of our domestic animals; when men are so well posted in the growing of farm crops that no better methods can be employed and no larger yields obtained; when the owner of 160 acres of good Wisconsin soil is content to doze over the winter fire and care for nothing outside his boundary fences, then there will be no demand for the Farmers' Institutes in Wisconsin; but until such a time comes, the Institute has its place among our educational factors. My only fear is that interference may come from those who would rather farmers should not gather in meetings of this kind, and grow intelligent in the discussion of all things that work for and against them; or, perhaps trouble may come through the jealousy and enmity of a few who would ruin where they cannot rule."

HORTICULTURE.

Citrus Fair at Auburn.

The California State Citrus Fair for the counties outside of the Sixth Congressional District will be held at Auburn, Cal., during one week, commencing Jan. 11, 1892.

There will be awarded $2500 cash premiums. The Southern Pacific Company will return exhibits free of charge on presentation to the agent at Auburn of a certificate from the Superintendent of the Fair that the property has been on exhibition and has not changed hands. Wells, Fargo & Co. will also transport exhibits at special rates.

Premium List—Open to Producers Only.

CLASS 1—COUNTY EXHIBITS.—First premium, $250; second, $150; third, $100; fourth, $50.

CLASS 2—BUDDED ORANGES.—Largest and best exhibit budded oranges grown by exhibitor—First premium, $200; second, $100; third, $75; fourth, $50; fifth, $25.

CLASS 3—BUDDED ORANGES.—Best 12 budded oranges grown by exhibitor—First premium, $10; second, $9; third, $8; fourth, $7; fifth, $6; sixth, $5; seventh, $4; eighth, $3; ninth, $2; tenth, $1.

CLASS 4—SEEDLING ORANGES.—Best exhibit of seedling oranges by producer—First premium, $100; second, $75; third, $50; fourth, $25.

CLASS 5—SEEDLING ORANGES.—Best 12 seedlings shown by exhibitor—First premium, $10; second, $9; third, $8; fourth, $7; fifth, $6; sixth, $5; seventh, $4; eighth, $3; ninth, $2; tenth, $1.

CLASS 6.—Best two standard boxes budded oranges packed for market—First premium, $15; second, $10.

CLASS 7.—Best two standard boxes seedling oranges packed for market—First premium, $15; second, $10.

CLASS 8—LEMONS.—Best display of lemons—First premium, $50; second, $30; third, $20; fourth, $10.

CLASS 9—SHADDOCKS AND PUMALOS.—Best display of Shaddocks and Pumalos—First premium, $5; second, $3; third, $2.

CLASS 10—OLIVES.—Largest and best display of olives—First premium, $25; second, $15; third, $10.

CLASS 11—PICKLED OLIVES.—Best display of pickled olives—First premium, $20; second, $10.

CLASS 12—OLIVE OIL.—Best display of olive oil, First premium, $30; second. $25; third, $15; fourth, $10.

CLASS 13—PERSIMMONS.—Best exhibit of persimmons—First premium, $5; second, $3; third, $2.

CLASS 14—POMEGRANATES.—First premium, $5; second, $3; third, $2.

CLASS 15—RAISINS.—Best display of raisins—First premium, $100; second, $75; third, $50; fourth, $25.

CLASS 16—PRUNES.—Best display of dried prunes—First premium, $40; second, $25; third, $10.

CLASS 17—PRUNES.—Best dried prunes—First premium, $10; second, $5.

CLASS 18—FIGS.—Best display—First premium, $25; second, $20; third $15; fourth, $10.

CLASS 19—DRIED FRUITS.—Best general exhibit—First premium, $50; second, $30; third, $20; fourth, $10.

CLASS 20—PRESERVED AND CANNED.—Best exhibit by other than packers—First premium, $15; second, $10; third, $5.

CLASS 21—NUTS.—Best general exhibit—First premium, $25; second, $15; third, $10.

CLASS 22—NURSERY STOCK.—Best exhibit grown by exhibitor, to include seedling and other stock—First premium, $25; second, $10.

CLASS 23—APPLES.—Best exhibit of apples by producer—First premium, $25; second, $20; third, $15; fourth, $10.

CLASS 24.—PEARS.—Best exhibit of pears by producer—First premium, $10; second, $5; third, $3; fourth, $2.

CLASS 25.—Most artistic exhibit, $50.

Rules and Regulations.

1. All exhibits must be in position and readiness for examination by 12 o'clock noon, Tuesday, January 2d, and no premiums will be paid on any article on exhibition unless properly entered on the books of the General Superintendent before that time, and properly placed in position in the place assigned them for exhibition.

2. All exhibitors must obtain a card with number on from entry clerk to agree with exhibit. This card must be kept in a conspicuous place on or near the exhibit.

3. No article or exhibit entered for premium can be removed before the close of the fair without permission of the Superintendent.

4. Competitors must be producers.

3. Free cartage in Auburn for all exhibits.

Officers.

G. W. Hancock, Director; Wm. B. Gester, General Superintendent (to whom exhibits and correspondence should be addressed at Auburn). Advisory Committee—Fred C. Miles, D. W. Lubeck, W. B. Lardner.

Diseased Trees.

During the past week or two, State inspectors have seized and condemned a large number of diseased fruit trees, imported from the East, aggregating in value about $5000. The first of the recent seizures took place at Auburn, where a carload of disease-infected trees arrived. They were found to be infected with several diseases entirely new to California, and were condemned as a preventive against the spread of the contagion. The cost of the trees was about $2000.

A few days ago, 12 large cases of these Eastern trees arrived at Mountain Vineyard, where they were examined by one of the inspectors and found to contain the deadly curculio. This insect principally infects plum, prune and apricot trees. The entire 12 cases were condemned and seized, after being held in quarantine for a short time.

At San Jose, two carloads of trees were quarantined, and they have since been condemned. The cost of the trees seized at Mountain Vineyard and San Jose was about $3000. Several more seizures have also been made in the southern part of the State.

"I have received any number of protests from Eastern nurserymen," said Secretary Lelong of the State Board of Horticulture yesterday, "but I pay no attention to them. The introduction of these infected trees into California would imperil our fruit-growers' interests, and the county boards and inspectors are keeping a vigilant outlook for every carload that comes here. The Eastern men acknowledge that their trees are infected either with the 'yellows,' a disease of the Eastern peach, or with the curculio, but they claim that these diseases could not develop in this State, on account of the climate. This is an error, however, as experience has taught us, and we propose to continue to wage war against every lot of infected trees brought into this State."—*Chronicle.*

Humboldt Fruit Farms.

EDITORS PRESS:—A short time ago, several capitalists from Eureka came to Blocksburg and inspected the Casterlain ranch. The result of their trip was a joint-stock company with a capital of $32,000 purchased 320 acres of land, and operations have already begun, to convert this tract into an orchard. This winter the intention is to put out 40 acres prunes and five acres apples. I understand that Mr. Casterlain will place the balance of his ranch on the market, in 40 and 80 acre tracts.

There is a movement on foot in Blocksburg that will be of great benefit to this section, but I will reserve it for my next letter. The proposition to bond the county for roads is progressing. It is evident that there is a proportion of our people who don't want roads, and the way they take to confuse the issue (but few men have come out in print against roads) is to yell "railroad." In case the railroad appears, will it not make more travel for the wagon roads?

For one, I am of the opinion that it is in order for the obstructionists to rise and explain. When the time comes, they will fight a railroad worse than they do now good wagon roads; but with good wagon roads and new industries started, the "iron horse" will take care of himself.

What I will have to say may be uninteresting to your readers in a section where the people have traveled the road we are just getting ready to set out on. To those I will say, you can aid us by your own experience and advice, and let Humboldt profit by it, and I know of no better channel of reaching us than through the pages of the PRESS, as it has many readers in this county. I refer to the converting our grazing lands into fruit farms.

I will take, for example, the "Martin Ranch," and what I have to say will apply to any tract of land suitable to fruit-raising. This tract contains about 500 acres, and is at present leased for farming. It is well supplied with water by numerous springs, and, besides, there are two large creeks—one on either side, which can be brought on the land—in fact, one creek is at present used for irrigating.

This place is very level for hill land, and slopes gently toward the south and west, and the soil is well adapted to fruit culture.

One can see at a glance this farm is well adapted to any kind of crops, but nearly all of this class of land is well watered and has the other qualities that will force it to the front. One can form a company or partnership, or they can form a joint stock company, as they may choose.

The first thing is to get a practical man that understands the business to assume the management. At present, there are about 70 acres under cultivation, and they should plant at least 30 acres in fruit per year.

Expenses must be curtailed in every possible way. What I mean is, two dollars does not want to be expended when one could be made to do the work. My idea would be to lease the place as soon as the company gets possession, for, because you are using 30 acres for fruit, it is no reason why you should let 400 or 500 acres lie idle. And before the trees are planted, it is much better if the land could have been farmed a couple of years previously, so as to be in a high state of cultivation, so that the weeds would be destroyed, and in future it would take much less work to keep it in order.

Now, it will take considerable hay and grain, vegetables, etc., for the teams and the families working planting trees. I would try to have the renter furnish these instead of paying cash rent. Every year the orchards are encroaching on the grain-fields. Let it be so stated in the lease that an amount of land shall be broken up each year equal to the amount planted in fruit trees.

It will be easier to rent to advantage here, as a flour mill will be in operation within two miles and the market for produce would be assured.

In this way, you could have your land cultivated ready to plant your trees and your vegetables, potatoes, horse-feed, furnished you free of cost; so much for not allowing the outside land remaining idle. From the time the trees are planted until they bear, one could plant corn, beans, tomatoes, potatoes and different berry bushes. This should not be rented, as you want to know who is working among your young trees. ED. ROBERTSON.

Bridgeville, Cal.

Peach Culture in the Kern Delta.

A few weeks ago, we gave an interesting essay on the peach in the Sacramento valley, and we are glad now to present a view of the same grand fruit from the southern end of the great valley of California. We quote from the Bakersfield *Echo* as follows:

Kern county horticulturists have not yet definitely settled on what general variety of fruit to raise for market, and are by no means a unit in favor of any one kind. Even in the matter of peaches, our orchardists are not of one mind as to the best peach to depend on for a steady marketable peach. The soft peach, that depends on a local market (or at least short transportation) has its friends, who, of course, think it is the ne plus ultra on account of its tremendous size when grown on Kern county land (some claiming that a bushel of them will fill a barrel); and as it is very attractive and showy, has been propagated longer and more extensively than later varieties and crosses that have required years of careful training and experiment to bring them to their best. The limits of this article will not permit us to go into the details of each and every variety of the peach family, but for the general reader, we think it sufficient to here make mention of only the two general varieties—the soft peach represented by the Orange Cling, and the later and more solid shipping peach represented by the late George Cling. With the former variety, nearly every orchardist in the county has had some experience, and knows what our soil will do in perfecting that fruit. The wonderful size and beautiful perfection of this sort of peach have become such an old story with old residents that nowadays an Orange Cling weighing a pound avoirdupois is no curiosity whatever, and a man to carry off the palm must bring one to the front that can tip the beam at 24 ounces. It is difficult indeed for Eastern people who have never seen a peach that weighed over ten ounces to believe that a California peach tree could survive the birth and perfection of a 16-ounce peach, but our ordinary orchards perform the feat every summer, and never crack a smile. This fruit is very rich, juicy, well flavored, a rosy orange when ripe, and an orchard of this ripened fruit will rival the beauty of the famous orange orchards of Florida.

These two are set out as seedlings, about 20 feet apart each way, and the second year after setting out will average 650 pounds of marketable fruit per acre. The third year the fruit is much improved in quantity and quality, and the tree has nearly reached its prime, yielding about three times as much fruit as the year previous. About the sixth year the trees are up to their speed, yielding an average of 280 boxes (20 pounds per box) per acre, the selling price of which, actually received, was $40 to $45 per ton, or $125 per acre. The seventh year of the orchard showed 16,000 boxes on the original 20 acres, or 800 boxes per acre, which, at the prevailing market price (50 cents per box), yielded the owner a return of $400 per acre. But besides the ripe fruit shipped, the same orchard also furnished four tons of first quality dried peaches, which sold for 11 cents per pound, or $880 more to the credit of 20 acres of Kern land.

This year (1891) the orchards fairly outdid themselves, one 25-acre tract producing 24,000 boxes of first-class ripe peaches, and enough second quality fruit for 25 barrels of as fine peach brandy as a native Kentuckian could wish for.

With more and better railroad facilities, such as refrigerator cars and rapid transit, the Kern county soft peaches can be put on any of the markets of the country, and by their superior excellence as a table fruit, can dictate terms beside any other peach on earth.

The most perfect representative of our late peaches is the Late George Cling, a variety maturing in September, after all the other varieties are dead and buried, and as a general thing, has the market to itself. This variety of the peach family has had a remarkable history as to its propagation and ultimate perfection, this county finally answering all the requirements, and bringing the Late George to a greater degree of perfection than any other part of the United States, other parts of California not excepted. About seven years ago, a nurseryman by the name of Taylor, came to Kern county with a new kind of peach, almost in despair of ever finding soil and climate, both adapted to his pet variety of fruit, which he had brought with him. One or two of Bakersfield's citizens took hold of the experiment, resolved to give it a fair trial under the firm conviction that Kern county could perfect any fruit that a sensible man ought to raise. Without a single hitch anywhere, these began to thrive from the start, and the second year produced a few specimens of a fruit that was destined to be second to none as a money producer. Several counties of California had previously the same Late George Cling, but in every case, failure of some sort resulted. In some cases "curl leaf" attacked the trees; in others, the fruit positively refused to take on a healthy ripening color, but rather resembled a sickly, half-baked pancake; in still other cases the [illegible] passed into a decline, followed by a s[illegible] death. As a last resort, Kern county soil [illegible] climate were tried, and the results are given below.

In 1885, the first of these trees were set out near Bakersfield on the ordinary soil (river wash) on prepared ground, 20 feet apart, and from the very start their growth was steady and rapid. The third season the fruit showed what the climate would do toward its proper ripening, and the fourth year the crop was sold on the ground in September for $250 an acre.

In the table below may be seen the figures showing the actual results, accomplished in one of the Kern county orchards, of the Late George Cling variety. We could have used the higher figures reached by another orchard, but we choose rather to strike a happy medium and be somewhat conservative rather than quote the largest results. The following figures are on a basis of ten acres:

Cost of land at $75 an acre	$ 750
Preparing ground and setting out trees	400
First year's irrigation and cultivation	260
Second year's irrigation and cultivation	100
Third year's irrigation and cultivation	100
Fourth year's irrigation and cultivation	100
Cost of picking fruit	90
Total expense	$1,640
Fruit sold on the trees at $41.65 per ton, 60 tons	$2,500
After deducting all expense	1,640
Profit on ten acres, besides paying for land	$ 860
Profit on each acre	$ 86

In 1890, this same orchard, with the slight expense of cultivation and irrigation, yielded a cash return of $3600, or $360 an acre. In 1891, the same tract yielded over 96 tons of first-class marketable fruit.

Besides the market for ripe fruit in boxes, there still remains the constantly growing demand for dried fruit and canned peaches. These two articles are rapidly coming to the front, and then it will make no difference to an orchardist whether he ships a single box of ripe fruit or not, for he can either can or dry every peach raised on his trees. As an instance of this matter of dried peaches, one of our peach-growers dried 7000 pounds of peaches from a six-year-old orchard, which was not quite three per cent of the years crop, and sold the dried fruit at 11 cents per pound.

Kern county will produce any fruit in the peach line that the American palate may demand, and it has been repeatedly proven that they are brought to a greater degree of perfection here than elsewhere. Now the test question is: What is the best variety? We may answer, to the best of our observation and experience, as the managers of a State Fair in Georgia did when asked why the first prize was given to an exhibitor of a razor-backed hog: "A hog to take the cake in Georgia must be able to outrun a crow—that is, he must be the animal best adapted to the country." We verily believe that, for all purposes, the Late George Cling is the peach best adapted to Kern county.

Placer County Fruit Shipments.

In view of the holding of the Citrus Fair in Placer county, it is specially interesting to note the following statistics, just published in a pamphlet by the Placer county Board of Trade. During the two seasons of 1890 and 1891, the following shipments of green fruits from Placer county were made from the several stations noted:

	1890—lbs.	1891—lbs.
Newcastle	9,000,000	11,786,360
Penryn	1,500,000	4,905,438
Loomis	800,000	1,237,640
Colfax	800,000	537,000
Auburn	800,000	506,585
Totals	12,900,000	18,973,023

The Placer county shipments for 1890 were nearly one-fifth of the total fresh deciduous fruit shipments of the whole State, or nearly one-tenth of the total fresh-fruit shipments, both citrus and deciduous, from California during that period.

The Placer county shipments for 1891 show the enormous increase of 47 per cent over those of 1890.

THE BEAN BELT.—Ventura county claims the honor of being the most prolific bean-growing section in the world. The Los Alamos *Central* says that one ranch of 2200 acres has produced 1030 tons of Lima beans this year. It took 31,000 sacks to hold the crop, and they will fill about 103 cars, on the average of 10 tons to the car. This will make eight or nine solid trains of beans. But this is only from one ranch. The railroad company expects to handle 1500 carloads of beans on the Ventura division this year, which, at $22 per ton if shipped East, means $133,000 in their cash account.

WILL PROTECT HIS OWN BRAND.—It is announced from San Jose that J. E. Gordon has declined to fill an order from a big firm in France for $30,000 worth of dried prunes. His reason for refusing is that the firm wished the prunes shipped in bulk, so they could be packed and placed on the market under a French label. Mr. Gordon says he will sell no prunes in this way, but all the product disposed of by him must bear his own brand and show that they came from the Santa Clara valley.

A LUMBER COMBINE.—Reports are again current of the collection of the largest lumbering interests and outfits of this State and Southern Oregon into a combine with English capital.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST by addressing the publishers.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The Grange is a secret organization. It has a local, a county, a State and a National organization. It is strictly a farmers' fraternity. Inquire about it, study its Declaration of Purposes and its Constitution, and then join the nearest subordinate Grange. If there is none in your vicinity, send for documents and instructions to A. T. Dewey, 220 Market St., San Francisco, Cal.

It is Happy New Year, so bring out all your good resolutions.

If you were asked by a young man about to engage in farming, what line of farming he should pursue, how would you answer? The hop grower, the fruit grower, the wheat grower, the sheep raiser, the cattle man, the grape grower, the poultry man, the dairy man the swine raiser, the horseman, each would advise to engage in the other man's business, and yet none of them are quite willing to follow the advice given. Perhaps they agree with the adage, "'Tis better to bear the ills we have than flee to those we know not of." And after all, the life of the farmer compares most favorably with that of any other vocation. He generally enjoys good health; a good name; has plenty to eat; comfortable, but not stylish clothes, and a superabundance of employment. The farmer hardly knows what it is to be "out of a job." There are hundreds of young men who claim to want a "steady job." To all such, let me recommend "a farm of your own."

The new word is obtainable by those Granges square on the books. Ask and ye shall receive, seek and ye shall find—the *A. W.*

Look out for oleomargarine! A dealer in San Francisco has been arrested for selling bogus butter.

The following question has come to me: "Is there anything in the Master's Instructions, or in the Fourth Degree Ritual, or in the Digest, or in the Constitution and By-laws, or in the Declaration of Purposes, which is in any way or at any time to be held above a Fourth Degree member in good standing?" To which I answer: "I know of nothing except the A. W., and that is to be given under proper conditions and circumstances to the Fourth Degree members."

Question 2. What is the meaning of "Week's Notice" where it occurs in Art. 8, State Grange By-laws? Answer: "It means just seven days."

Question 3. What is the meaning of "Three black balls shall reject and one shall cause the application to lay over one week?" Answer to this is found on page 60, paragraph 23, known as Decision 69 of the National Grange. To be found in Digest of 1890.

Question 4. Shall the Master announce the result of all ballots and other votes of the Grange? Answer: Yes.

Question. How far ought the Master of a subordinate Grange go in maintaining order in the Grange? Answer: The Master is required to exercise the supreme authority with which he is invested in maintaining order in the Grange, and in enforcing obedience to the Constitution and laws of the Order. He must first know the laws, else he cannot enforce them.

The season of installations!

Hard times, these, on the poultry yard and larder.

Four hundred and twenty-nine Patrons received the seventh degree of the Order of Patrons of Husbandry, at Springfield, Ohio, at the last session of the National Grange. Who will say that the Grange is languishing? And who will dare say we do not have "Our Four Hundred"?

Bro. Past Master Flint makes a good hit when he says: "When you pay your store bill, insist on its being itemized to the most trivial article." This is correct. If our Worthy brother, who always hits the nail, will allow, we would add: "When you buy, keep an itemized account yourself, even if you pay the cash, but assuredly so if you buy on time." Better pay as you go—that is Grange doctrine.

The "Journal of Proceedings" of the 25th annual session of the National Grange, held at Springfield, Ohio, is at hand. In a short time a copy will be in the possession of every subordinate Grange in California. It is my wish that the Lecturer will at once inform himself of the work of the National Grange, then at each meeting of his subordinate Grange, read so much of the proceedings as will interest and instruct the membership. Don't be tedious; don't be too anxious to read too much at one meeting, but select such points and such reports as will most benefit your membership. Remember, the Grange is a National organization, and in the proceedings of the National Grange, you find a record of what is said and done for the entire organization. The broadest view of the fraternity is had from the National Grange. Try to get good from the thoughts recorded in this journal for your Grange and for yourself.

You have read the stories of the Mound-Builders. If history teaches aright, and there are many evidences—mostly circumstantial, it is true—that it does, they were a thoughtful and industrious people. There was much method in their labor. Nor were they devoid of some degree of architecture. That they were over-industrious is manifest from the great amount of work they did to accomplish the end they had in mind. It has often occurred to me that if the members of our Order would but put forth half the effort the original Mound-Builders expended, that we would have architectural monuments, beautiful and strong, in the name of subordinate Granges, far more useful, far more honorable and far more enduring than were the structures of the original Mound-Builders. Isn't it worth our while as an Order, isn't it worth your time and labor as a member of that Order, to build monuments in every county and town in our State, that will redound to our credit while we live, and to the benefit of humanity when we are gone? Let us, as an Order, whose entire membership are soil-tillers, begin the work of Grange—Mound-Building.

From State Lecturer.

[J. D. HUFFMAN, Lodi, Cal., L. S. G. of Cal.]

Sec'y State Grange—DEAR BRO.: I am feeling able to-day for the first time in three weeks to write you. For that space of time I have been confined to my bed with pneumonia, and this is now only the third day I have been up or you would have heard of me among the Granges somewhere ere this. I would suggest that the subject for discussion at the last meeting in January and the first meeting in February of the subordinate Granges be the "Free Delivery of the Mails in Country Districts," and forward a petition, if favorable to it, to the Legislative Committee of the National Grange, John Trimble, Washington, D. C. * * * Fraternally, J. D. HOFFMAN.

[Many will regret to hear of the Worthy Lecturer's illness. We wish him speedy restoration to good health and strength.—EDS. PRESS.]

We Should Pull Together.

EDITORS PRESS:—How many tillers of the soil realize the full meaning of the words, "In Union there is Strength?" I am reminded of these words by talking up the Grange a little among my neighboring fruit growers and asking the question, "What papers do you take?" and am surprised at the total indifference manifested by so many, both toward the Grange and in regard to their reading matter. They seem to be more interested in the latest divorce case or murder trial, or slogging match, than in the problem how to further the interests and improve the condition of the farmer; yet one and all growl at the small returns for their products, curse the commission merchant and transportation companies and swear a blue streak at Congress and the State Legislature, but do nothing to better their condition. If the farmers of this State could only realize their power united and would unite and pull together, what couldn't they accomplish? Suppose, for instance, every farmer in the State was a Granger, and it was understood by all political parties that the Grangers would scratch the name of every candidate for a legislative office known to be indifferent to the wants and needs of the farmer. Would not they think the second time before allowing the "boss" to put Pat O'Flaherty on the ticket because he could control the French vote, or Hans Pantosky because he had the American vote in his vest pocket. Yes, they would ask themselves, and very seriously, if the pesky Grangers would swallow Pat and Hans. Divil a bit av it. Then, knowing certain defeat was the doom of such men, they would name for the place plain John Black or William Brown, men known to be in sympathy with the farmer, because they know what every man should know, that when the farmer is doing well the whole country is prosperous.

Well now, why is it this is not done? Why, because the farmers do not pull together, and if any one suggests Grange to them as one of the remedies, or Farmers' Alliance as another, they say. "Oh, I've voted my regular party ticket straight all my life and can't go back on it now;" (without knowing why they do) and as a consequence are supporting a lot of foreign rabble that in their native land would be either in the poor house, or jail (where they properly belong) and who care and know less about the laws of, or about framing new laws for, our country, than any farmer's ten year old boy.

I can't understand why any farmer of ordinary sense or with any feeling of patriotism should allow this thing to go on when if we would remember that in union there is strength, and unite by all coming into the Grange, and read in addition to a daily paper some good agricultural paper, and insist that good men and women be elected to office; laws would then be made and the government conducted in the interest of the whole people, including the farmer; rates of transportation would be placed on a just basis; the railroads would not be having a surplus of two or three millions each year while the farmers were figuring out a loss; officers would work for their salaries and would themselves get the money for their labor, instead of the political boss; useless commissions would be abolished and the members of those retained would earn their pay and get it; taxes would be reasonable and we would live more on the principles of "live and let live.

A GROWLING GRANGER

Vacaville, Jan. 1st.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same

The Womans' Alliance.

The National Womans' Alliance was organized at Topeka, Kansas, Sept. 27, 1891. The objects of the association is to establish a bureau for the better education of women on social and political questions, and to develop a better state, mentally, morally and financially, with the full and unconditional use of the ballot. The following is their Declaration of Purposes:

In view of the great social, industrial and financial revolution now dawning upon the civilized world, and the universal demand of all classes of our American citizens for equal rights and privileges on every vocation of human life, we, the industrial women of America, declare our formation of this organization as follows, viz.:

1st. To study all questions relating to the structure of human society, in the full light of modern invention, discovery and thought.

2d. To carry out into practical life the precepts of the golden rule.

3d. To recognize the full political equality of the sexes.

4th. To aid in carrying out the principle of cooperation in every department of human life to its fullest extent.

5th. To secure the utmost harmony and unity of action among the sisterhood, in all sections of our country.

6th. To teach the principles of international arbitration, and, if possible, to prevent war.

7th. To discourage in every way possible the use of all alcoholic liquors as a beverage, or the habitual use of tobacco or other narcotics injurious to the human system.

In the Valley.

The Alliance meetings held at the different points during the present month throughout the county mainly have been very successful; but unfavorable weather interfered with some meetings, and at the Monson appointment there was no place to hold a meeting, as the schoolhouse had been shut against the Alliance. At several points in Mussel Slough district, large and attentive audiences were in attendance, and very flattering reports are received as to the results of the meetings.

At Tulare, last Saturday evening, the attendance was small, on account of the heavy rain, which prevented many who would otherwise have attended. Mr. Clapp, however, delivered a very able address, and handled the financial and other questions in a way that showed he knew what he was talking about and how to talk. He showed by indisputable argument that in the contraction of the currency, legislation had been influenced by, and in the interest of the speculators and "financiers" of the nation, to the detriment of the industrial class and the legitimate business interests of the whole country.

Jas. McClellan, our County Lecturer, followed Mr. Clapp with an able speech, which was clear, logical and to the point. Such plain and practical talks as this, if heard by the masses, would have the effect to put them to think for themselves, in which event the future is safe.—*Tulare Valley Citizen.*

Calaveras County Alliance.

EDITORS PRESS:—Our County Alliance met on January 2d at G. A. R. hall. Owing to the fact that State Lecturer J. S. Gilbert was to be with us, there was an enthusiastic lot of farmers gathering in Burson as early as eight o'clock, and by ten, the hour for meeting, the hall was filled with "hayseed." The following resolutions adopted will tend to show how each one felt on the Alliance question, each and every member voting for their adoption:

To officers and delegates of Calaveras County Alliance:

We, your Committee on Resolutions, do beg to report as follows:

Resolved, That we extend to Bro. Gilbert, State Lecturer, our sincere thanks for his attendance upon our County Alliance, his advice and instructions, and wish him success in his work.

Resolved, That this County Alliance do most heartily indorse the action of the California State People's Party Convention, and the platform as a whole.

Resolved, That this County Alliance appreciate the benefits derived from the State Business Agency, and consider that it should on no account be abandoned, even if funds have to be raised in some way to pay its expenses over and above the commission now charged.

After all business was transacted the Alliance adjourned, each member more fully resolved to work with all his might and to encourage others to join with us in this work.

A MEMBER.

Burson, January 2, 1892.

The Campaign of Education.

No period in the history of the country has witnessed such an upheaval of public sentiment as the great movement of the Farmers' Alliance. For many years the Patrons of Husbandry have educated a large class of the producers in the essential principles of political economy, but for some cause that is not necessary to mention it failed to stir up the foundations of the structure of political organizations as is seen at the present. Whether this movement shall continue to mold public sentiment and control the policy of government is for it to determine. The element of strength up to the present has been the justice of its demands, and so long as we shall continue on the line of "equal rights to all, special favors to none," it will continue to grow and spread its broad principles from center to circumference of this mighty country.

But will it continue in this line? Will the conservative element be able to control its movements and demands? or will it be side-tracked by its enemies, by being induced to leave the successful and tried ways, and sacrifice the vantage ground of just and equitable position on all the issues of the day? We judge the future by the past; knowing that history is apt to repeat itself, and that nothing but eternal vigilance is the price of liberty. We believe in our country and our countrymen. We believe that a large majority of the members of our Order have the good of the masses at heart, and will continue to so shape its sentiments as to continue to receive the commendation of all lovers of justice.—*Alliance Mint.*

THE CALIFORNIA FARMER is successor to the *Farmers' Alliance* and *California* in Los Angeles. Our friend and old subscriber to the RURAL PRESS H. C. Dillon, esq., remains as president of the publishing company, and Mr. Burton will be the editor and business manager, making a good strong team.

THE State Executive Committee will not meet again in San Francisco until Tuesday, April 12th.

A GREAT LOSS.—Rev. M. M. Bovard, D. D., president of the University of Southern California, and one of the best-known Methodist clergymen on the coast, died December 30th of a lingering illness.



TERRACING FOR FRUIT GROWING—AN INTERESTING PHASE IN THE DEVELOPMENT OF THE FOOTHILL REGION.

Terracing for Fruit Growing.

Written for the RURAL PRESS, by P. W. BUTLER, of Penryn.

There is a strip of country on the east and north of the San Joaquin and Sacramento valleys, that extends their entire length, known as the "thermal belt." It lies in the first foothill lands that rise out of the valleys and is only a few miles in width. There is less frost here than in the valleys; and above, the cold steadily increases until the summit of the Sierras is reached. In this region a great variety of fruit can be grown of superior quality.

Many of the hillsides, however, are too steep to be planted to orchards in the ordinary manner, but during the last few years some of them have been terraced and planted to oranges and early peaches with results that are highly satisfactory. Both the fruits require abundant water, but the land on which the trees are grown must have perfect drainage. They will then produce fruit large in size, and in great quantity, and it will ripen earlier than where less water can be used, as I have noticed for some years the finest fruit and the first to ripen was always from trees that stood near water ditches on hillsides. The ground thrown over in terracing gives depth of loosened soil that makes a rapid and healthy growth of tree and fruit, that it is thought fully compensates for the cost of the work. The terracing gives picturesque beauty to the country, of the highest order known to practical horticulture, thereby creating a value beyond intrinsic comparison. Newcastle, with an altitude of 1356 feet, is in a direct line 6 miles northeast from Rocklin—altitude 249 feet. Loomis and Penryn being between the two places, and all on the line of the Central Pacific Railroad, the land rising at the rate of over 100 feet to the mile. Sacramento can be seen from each of these towns and is distant from Rocklin 22 miles.

A ridge of land beginning at Newcastle runs west some two or three miles when it curves toward the south for several miles, abruptly terminating west of Rocklin, and very near the town. A large portion of the land lying north and west of Rocklin, Loomis and Penryn, between the top of the ridge and the railroad, belongs to the individual members of the Placer County Citrus Colony. The sides of this ridge are being terraced by their owners and planted to oranges, from plans made by me, and the work in part has been done under my supervision. In the spring of 1888 the work was begun on a spur of land projecting from the ridge, containing 10 acres. This lies west from Penryn two and a half miles, northwest from Loomis equally distant, and in plain view from either place. Near the base of this hill, and at the point of central approach, is a cottage house, neatly built of split granite, that is now being used as a club house, for the Colony Club. Beginning just below this house I built a zigzag avenue up the centre of the spur to the top, on a regular grade of twenty inches to the rod. This makes an easy carriage road, the steepness of the hill being overcome by the continuous curving. After the terraces were made I paved the gutters on the upper sides of the avenue, changing to the opposite side at each curve. Pipes were laid across the road as the gutter changed sides, four inch pipe being used on the upper turn, increasing to eight inch pipe at the lower crossing, as in a rainfall the water is greater in quantity at the base than at the top of the terraces. From the highest part of this spur that was to be planted I began the terraces on each side of the avenue, the first being only a few rods in length, increasing with each terrace until the base was reached. The terraces terminate at the side of the avenue and have a grade of two and a half inches to the rod for the running of water in irrigating. The terrace step was made level with a bank slope of 45 degrees, varying according to the steepness of the hillside. The width of the terraces as measured on the slope, was about 25 feet on an average, but only from 12 to 20 feet was the width of the level part. Sidehill plows were used in making the terraces, and they were run back and forth until the work was nearly done, when it was finished with shovels, some dirt having to be taken from high points to low places in wheelbarrows. Recent experience, however, has made me familiar with an implement called a "V" which, following the plow does the leveling much more cheaply. This implement should be made especially for this work, which I cannot describe in this article. The trees were planted 18 feet apart in the row, and near the edge of the terrace, that they might stand centrally over the greatest depth of loosened soil.

Orange trees in this section should be planted in March, that they may become well rooted before summer, when the heat is liable to check their growth if planted late. Since planting this orchard I have been nearly all the time in Southern California, and have frequently visited the orchards of Riverside, Pomona and Redlands, and I find the trees on these terraces are as large, as vigorous, as healthy, and as uniform in size, as any in the favored sections of the south, that are of the same age and were of the same size when planted.

Among the visitors to this orchard when first planted were some English gentlemen. They were so impressed with the picturesque beauty of the place, and the surrounding country, that they purchased land adjoining, and in the spring of 1890 began to terrace and plant the hillside south of the terrace planted in 1888. Continuing last spring, they now have nearly one mile in length of the hill slope terraced and planted, and many more acres are to be planted in the neighborhood during the coming season. These terraces are irrigated by several lines of pipes laid from the top running down the face of the hill to the bottom. The distance between these lines of pipe is 330 feet. The pipes are laid under the ground, with faucets attached and coming to the surface, just at the base of each bank. Each terrace can thus be supplied with water by the opening of a faucet, and the trees can be irrigated for a distance of 330 feet, when another line of pipe is reached, this continuing along the entire length of the orchard. Near the center of this planted tract is an avenue that runs diagonally over the face of the ridge to Clover Valley. I have made a paved gutter on the upper side of this avenue, into which runs all surplus water when irrigating, and all that may accumulate on the terraces from heavy rains. A deep furrow is plowed at the base of each terrace to conduct this water to the gutter.

Many Englishmen have already located here, some of whom are gentlemen of abundant means, who have brought their families, have built substantial houses, and have come to stay. Others have purchased land which they are having improved, and will come themselves as soon as they can arrange to leave their present callings. With their national thrift, they prefer to have their country homes where a good income can be derived from their investment, rather than have their country residences in some suburban town of San Francisco, where no income is ever expected, as in the Oakland or Santa Cruz highlands that overlook the towns, as the foothills here overlook the valley and the Capital City of Sacramento.

These terraces as they lie on the face of the curving ridge that encircles the sloping valley, are like "pictures hung on the wall" to travelers on the C. P. R. R. as they pass through the towns of Penryn, Loomis and Rocklin, and to the people who live in the vicinity they are a constant source of pleasure. When the face of this ridge from the Newcastle line to Rocklin becomes converted into terraced orange orchards, as the owners purpose doing in a few years; and when the trees attain good size, and come into bearing, they will present scenes of unique beauty unequaled by anything similar in the country.



His Work.

[Written for the RURAL PRESS by ISABEL DARLING.]

He had lingered long in that quiet place,
Where the shaded light from the window came
With caressing softness, and one warm ray
Of the outer brilliance stole in to lay
Close within the calmness a hint of flame,
Like the hidden fire in the steady gaze
That was seeking his from that pictured face.
Though the name of the artist he never knew,
A soft mist came over his restless eye.
"It is grand! It is great!" he said with a sigh.
"It is better than I can do."

Full across the stillness an organ spoke,
Swelling on and on in its solemn strength.
All the earth seemed ringing as heaven rings
With the glad, free joy that the spirit brings.
Till the distance shrank into space at length,
And the music quivered to silence; then
The regret came back to his heart again.
Through his voice again a deep sadness grew,
As the twilight shadows a summer sky.
"It is grand! It is great!" he said with a sigh.
"It is better than I can do."

Then a child with quiet and downcast look,
And uncertain steps, fluttered softly near.
From all beauty, from music alike shut in,
And shut out from knowledge of human sin,
No ambition brought him remorse or fear;
Not a power seemed his, but the power to feel.
Yet his mute, rebukingly sad appeal
Drew this soul that hoped and could learn regret,
Till it filled with tenderest pity, yet
By the power of spirit to *feel*, alone,
Could the helpful wish of his heart be known.
As all sight and sound he translated then,
He forgot the contests of other men.
Till they *felt* the way to each other's thought,
Till the deaf could speak, and the child had caught
The first hint of beauty it ever knew,
Brought within the sight of the inner eye.
It was grand! It was great! He forgot to sigh
To do better than other men do.

A Man's Complaint.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

I had a thousand friends, as all well knew,
Yet my one enemy alone was true
Unto his post, at last, when I took ill,
With little left worth naming in my will.

I'd caught a cold, and so I coughed and sneezed,
And, all in all, I felt like I'd been squeezed
Through a clothes-wringer—body, purse and lands,
And limp and helpless hung my empty hands.

I'd shot my Touser, thinking he was mad;
And then my old gray mare a mule colt had;
I'd sent a rake kind greeting, and I'd sent
My old-time friend, I'd sue him for back rent.

Business was slack and bills came in too fast,
And to cap all, a stealthy Arctic blast
My orchard struck just as the fruit had set;
That was the sorest part of my regret.

My lands had been my mainstay, and my trade
Had in its revenue no showing made
Compared with that of my wide blooming fields,
Which brought some thousands in their yearly yields.

Then, too, my fav'rite horse, Black Ben, had found
Strychnine somewhere, and lay dead on the ground
One morning, when I went to have a ride,
A little weak, but with my usual pride.

That was too much, and hence my old-time smile
Was put aside, so I might frown awhile,
I stormed and raged then at my friends and foes,
And gave an airing unto all my woes.

My storehouse had been burnt, my cat was lost,
And my broad lands lay blacken'd by the frost;
My friends, too, shunned me with a studied care,
But my old foe yet meets me everywhere.

Woman at the World's Fair.

The meeting of the Women's Press Association, held in this city on Monday of last week, showed a larger attendance than usual. In addition to several other papers of interest, Mrs. James R. Deane, of the Board of Managers of the World's Fair for California, who has recently returned from Chicago, gave a very interesting address on work done and to be done for and by women in connection with the coming Exposition. As this address partakes of an official character, and refers especially to what is expected of the women of California in this connection, it will no doubt be of much interest to the readers of the PRESS. We give it in full:

An Exposition that is generally known as a World's Fair is usually held by a nation with the primary object of exhibiting its own resources. Having the great advantage of holding the Exposition within its own limits, it opens it with real or apparent generosity to the competition of the world, this advantage always being in favor of the nation holding said Exposition. When I visited the Paris Exposition, I was astonished at its magnificence, its size and its importance. On our return to California, we were met by reporters who wished to interview one of our party on the feasibility of holding an Exposition in America. I confess I heard the proposition with misgivings. My reflections were that such a scheme would be no trifling undertaking, but a gigantic and stupendous affair, and I felt we could not even faintly hope to in any way equal the grand Exposition we had visited.

Since then, I have materially changed my views, and, ladies, I now feel assured that our Exposition in 1893 will far exceed and excel anything that has ever been attempted in the way of a World's Exposition.

I will now state a few facts that will bear out my assertion by comparison. The enclosed grounds of the Paris Exposition were just 96 acres in extent. Jackson Park and the Midway Pleasaunce combined—both of which will be occupied and covered with buildings—contain 760 acres. There were 73 acres under roof at the Paris Exposition, while the main buildings alone in Chicago will cover over 110 acres. The total cost of the Paris Exposition was $8,500,000; the cost of our Exposition will be fully $17,000,000—just twice the amount of that of Paris. That this is not overestimated you can readily perceive, when the cost of the buildings alone is over $11,000,000. Now, it will not only be in money expended or in quantity of ground used that we shall excel the Paris Exposition, but our superiority will be seen in the size and beauty of the buildings themselves.

The main building, known as the Manufacturers' building, is more than one-third of a mile long and one-eighth of a mile wide. This building consists of three arches—the main or center arch has a span carried by single girders 388 feet wide and rising 200 feet in the air. You could take the largest building in the Paris Exposition—that known as Machinery Hall—and place it under the center arch, and it would seem to be lost in the space. The width of this Machinery Hall was 363 feet, and, ladies, when I entered that hall I was much affected by its size and expansion. Its immensity seemed so profound and extensive that its space seemed almost illimitable. Judge, then, the effect which this building of the Chicago Exposition will have on those who enter and gaze awe-stricken on its space and perfection of finish.

I cannot well continue this comparison because the plan and scope of the Chicago Exposition are more extensive and greater than those of any other similar exhibition ever held. The Exposition will also include a great Electrical building, in which which will be housed the Electrical exhibits of the world. There was no building of this kind at the Paris Exposition. Then there will be another great department that was not exhibited at Paris. This will be known as the Department of Transportation. Under its roof will be exhibited every known vehicle used for transportation of human beings and merchandise—steam, horse, cable, and electrical cars, carriage, wagon, bicycle, tricycle, ships of war, merchantmen, canal boats and pleasure boats, also balloons and air ships. Another extensive structure will be the Agricultural building, attached to which will be the buildings of forest and forestry products, a Dairy building and Brewers' building. Another building which Paris had not, and which our Exposition will furnish, is that devoted to mines and mining machinery. Another great department, of which there were no exhibits at Paris, will be the exhibit of *live stock*. This exhibit alone covers 55 acres of ground. In addition to the necessary stalls for the animals, they purpose erecting a circular exhibition building for the daily showing of the animals in the center, while around, seats will be provided for the comfort and convenience of the spectators.

The Woman's Building.

Now another feature presents itself, one in which our greater interest is centered, and that is the "Woman's Building." The size of this structure is 400x200 feet. Its architect is a woman. The cheering and pleasant report that to a young California girl, a San Franciscan, had been awarded the prize for the life-size figures that will decorate the roof of the Woman's building certainly will do much to call forth the talent in that direction, which we know is only awaiting the opportunity of development. We trust that this award will arouse the laudable emulation among our young artists, in wood-carving, painting, sculpture and art needlework, etc., in providing decorations for the Woman's building.

My dear friends, you can have but a faint estimate of what is expected of California by the older States. I believe many of them credit us with having something like "Aladdin's lamp" or other of the genii that were so prompt in carrying out the wishes of their owners or masters. While so much is expected, I might say dreaded, by our colleagues, it is not a little mortifying to know that so little is being done. In nearly all of the Eastern and Central and Southern States the National Commissioners and the Lady Managers are made a part of the State Commission. In California we do not yet know who are to be on the State Commission other than the seven gentlemen who now constitute that honorable body. Again, in States where no appropriations have been made by the Legislatures, the Lady Managers have organized World's Fair Associations, have entered into communication with the different towns in their States and have succeeded in arousing an enthusiasm in woman's work that will be a prominent factor in the success of the exhibition. In States where appropriations have been made, a certain percentage has been devoted to the work of women, thus recognizing its importance and necessity in their State exhibit. When we reflect that this organization of a Board of Lady Managers is the first instance in the history of nations where women were called by the Government to take part in a grand undertaking such as this Columbian Exposition will be, and that our success, not only as exhibitors but as governors or directors in our department, will be but another acknowledgment of woman's executive ability; that, as a competitor, woman's work ranks with man's work, I am certain it will prove to all the other nations of the world that in America man and woman are on an equal plane as to intelligence and ability.

Another great point to be considered in connection with this World's Fair is that it has been an impetus in many States and will be, I trust, here in California for woman to enter into many employments that have been supposed to belong exclusively to men. I speak of this with especial regard to agricultural employments, even that of stock-raising. One of the most intelligent and active of the ladies on the Board of Lady Managers is the owner and manager of one of the finest stock yards in the Union. Again another lady, one of the Chicago Board, is fully competent by experience to act as pilot in the Great Lake system, by no means an easy task.

Now, dear friends, I fear I have already taxed your indulgent patience; but I must add my exhortation to one and all for our own dear State and the woman work therefrom, that not one in this intelligent audience could or can fail to interest the friends that have influence and power to further our work; I say it without arrogance, that so much is expected of California that it is absolutely necessary that the women of California should be alive to the importance of the occasion.

It is incumbent on us, the women of San Francisco, to make the effort that is needed to make our work a success, and where San Francisco leads, our sister cities and towns will readily fall into the ranks. The Woman's Building must have its quota from California women in the decoration, furnishing and finishing. The building, through the kindness of the Director-General and the Chief of Construction, is now fast approaching completion, without the necessary detail of finish. In this detail, the States will, I know, show much rivalry, and California must not be in the minority.

At the first meeting of the Board of Lady Managers, I was called upon to respond to what might be expected of California. I stated that California would be equaled by few, and excelled by none, in the exhibit of Woman's work. Now, dear friends, I hope you will see that I was not a vain boaster in making this statement. In this dear State, the garden spot of the world, is material sufficient and varied enough to make in itself a World's Fair Exhibition. I appeal to each and all of you to make this her especial work and arouse in all of your friends—woman friends—the true faculty that will be certain to make our work a success. If it be possible, the State commission will, I know, give a certain percentage of the State appropriation to be used for furthering this great department of our exhibit. That it will be judiciously expended is, of course, a foregone conclusion. Our neighbors of Oregon and Washington are doing good work, and are not nearly as afraid to compete with us as they were a few years ago. Two columns of granite go from Washington to the Woman's Building. Oregon sends woods for building as well as for ornament. Montana, Dakota, Wyoming, Idaho, Utah and Nevada all have earnest and energetic women, and while we know that none can excel California, if the effort be made, still, if nothing is undertaken, nothing will be accomplished. I thank you very much for giving me this opportunity to address you on this subject. If I have wearied you, attribute it to my zeal for this great work. The women of California have an enviable position in this Exposition, and you, I am certain, will be among those whose children will speak with pride when they speak of California's success in the World's Fair in 1893.

Chaff.

MRS. LUSHINGFON—Why, Henry, you've been drinking too much again! Mr. Lushington—No'm dear, you're mishtaken. Only reason why I can't walk sh'raight ish I got new pair shoes thish afternoon, an they're tight. I'm pert'ly shober.

As Sheridan was entering court one day, carrying his books and briefs in a green bag, according to the custom of the time, some of his brother barristers thinking to play a joke on him urged some boys to ask him if he had old clothes for sale in his green bag. "Oh, no!" instantly replied Sheridan, "they are all new suits."

FREDDY (carefully rubbing the bloom from his bunch of grapes)—Say Mr. Youngbee, do these grapes powder? Mr. Youngbee, (*fiance* of Freddy's auntie)—Why, no, my boy; what made you think of that? Freddy—Cause this rubs off just as the pink does from auntie's cheeks.

"I THINK we shall have to try again," remarked the photographer, as he critically examined the negative; "the expression is too stern and forbidding." "The negative is all right," said the customer, picking up his hat; "all I wanted was a protrait to send to my wife's aunt. She is thinking of visiting us this summer."

A Country Home in California.

[Written for the RURAL PRESS by CLARA S. BROWN.]

We all know that there are real homes, and homes in name only; that no amount of money can create a pleasant abiding place if the true spirit of domesticity is not there, and that the majority of dwellings are not so satisfying to their occupants as they might easily be made.

Country people, more than residents of cities, need to find the pleasures of life in their homes, for they cannot turn to the diversions that are daily offered their metropolitan friends. Yet, as a general thing, city houses are more carefully equipped with all that makes a home agreeable than a farmer's dwelling is. Too often the building which shelters a farmer's family is the last thing on the place to be considered, other than to make sure that it is rain-proof. This was especially so in the era from which California is now emerging, when immense grain fields and small, whitewashed shanties represented country life.

Now is the time of small holdings, highly cultivated, and adorned by a neat and often artistic cottage, which may easily be converted into an ideal home. It was my privilege to visit such a place not long ago, and as it shows what is within the bounds of possibility, even for people of very moderate means, and is the home of a contributor to the RURAL PRESS, I venture to attempt a description of it.

The family came to California ten years ago and bought thirteen acres of fruit land near what is now a good sized town. Every rod of it was straight way improved, and beside the rude little building then on the place pepper trees were planted. From time to time, as means afforded, rooms were added, until now the house is a two-story building shaped like a Greek cross. The pepper trees are enormous, and beneath their shade swing two inviting hammocks. Roses and vines cover the porches and cling to the sides of the house.

Near by is a large rose garden, full of choicest varieties. Beyond is soon to be a tennis court, that the indulgent father has spared the ground for. Peach, pear, apple, quince, walnut, orange and apricot trees, corn, pampkins, etc., cover the ranch, besides vegetables and berries, that the city housekeeper who buys out of a wagon covets. You see, it is pleasant outside. Come in with me and go the rounds of the rooms. It is not a plastered house; the walls were first covered with heavy sheathing paper, and over that a pretty pattern has been laid. We will walk into the parlor first.

Here is a cherry fireplace with redwood mantle made in the house by the carpenter. On each side of it are cupboards, wherein we see magazines filed away. In the niche at the right, shelves have been built and draped with felt, and they are filled with books. We see the best authors represented there, and some are this year's books. On the top shelf stands a great pot-pourri jar of Royal Worcester ware. Some of the roses that bloomed outside are preserved there. On the floor is a neat ingrain carpet. At the windows are light drapery curtains. In one corner stands a fine organ, another is occupied by a comfortable lounge and cushions. Rocking chairs are there of course, for what American house is without them?

Peeping into the bedroom which opens from the parlor, we see that it is furnished with a pretty set and has all the toilet conveniences. The large dining-room has corner cupboards and a side table of home manufacture. Here are more books—lots of them—on shelves covered by a cretonne curtain. A lounge gives the housewife a chance for rest in the intervals of her domestic duties. Over it is a wall-pocket containing newspapers and the five leading monthlies.

The sunniest corner is a literary nook, if I may so term it. At the pigeon-holed desk, in a big chair, the lady of the house writes her letters and prepares her articles for the press, for, like "Maid of All Work," she can get a good dinner and write a good poem or recount her experiences for the benefit of other women.

In the kitchen the thoughtful farmer has rigged up a hose connection with the pump outside, which saves many a lift and keeps the hot water tank on the stove full all the time.

"Mother's room" has a white-draped toilet table—more home work—and another shelf of books. It is furnished for comfort, and has, like all othe other bedrooms, pretty curtains, shams, etc.

The space under the stairs in the front hall is utilized for a closet and drawers, where bedding is packed away and piece-bags and other indispensables can be found when wanted.

The front chamber belongs to the young lady daughter, is her own special domain, and has been fitted up by her in blue and white. Odd pieces of furniture, yet harmonizing, were collected for this room. A common table and mirror is by draperies transformed into a thing of beauty. There is a large divan covered with chintz and an open stove. In one corner is a set of shelves for the young girls' own books and papers. So many knick-knacks and dainty belongings are scattered about the room that the daughters of rich parents like to visit it and declare that they have nothing equal to it. Sometimes, on a rainy day, the whole family is invited up here and entertained by the patter on the roof as they read or sew.

The little daughter is also the proud possessor of a room to herself. Grandpa gave her the pretty three-quarter bedstead, and all have lent a hand in the adornment of the room. She

has her book-case, too, and takes great care of it. Her dolls and playthings are here, and a blackboard with crayons hanging on the wall amuses her for many an hour, as she has a bent for drawing. Another room belongs to the young man of the house and is not slighted, as the quarters occupied by boys often are. He has dainty curtains and toilet draperies and all his pet possessions are gathered here.

An unfinished room is used for sewing, and has many things neatly piled away in it.

Do you need to be told that the members of this family have been taught to think and are well informed on the topics of the day? It is one of the happiest and most intellectual households that I know. There is such unity of purpose and mutual good will that the mother, who is quite an invalid, says she does not mind not being able to go into society, her own family is so interesting. She takes the cooking upon herself, not being able to do heavier work, and it is good to see how fully her efforts are appreciated. No compliments are so dear to to the housewife's heart as those given her by her own family, and in this home, praise is freely bestowed.

A visit to such a place confirms one's belief that life may be made even more enjoyable in the country than in the city, especially in the climate of California, where one may spend many happy and healthful hours out of doors each month in the year.

"La Marechale."

Gen. Booth, of the Salvation Army, has appointed his eldest daughter to succeed him at his death as the supreme commander of that great organization. His eldest son has long been "Chief of Staff," and according to English ideas would have been his father's natural successor; but Gen. Booth has made his choice among his large family of children (all of whom are in the Army) according to ability, not according to sex. The General gives his reasons very briefly. "Women are the best rulers," he says. "If you refer to the capacity shown on several occasions by Queen Victoria, you will agree with me that she acted while her advisers were seeking how to act. I am arranging that the work of saving human souls may go on after my death. All title deeds will be transferred to my daughter's name."

Mrs. Katherine Lente Stevenson tells in the *Union Signal* a pretty story of this eldest daughter, "La Marechale."

"Catherine Booth has been commander of the forces in France and Switzerland ever since she went into those countries. Arthur Clibborn was for years her chief of staff. To be associated with a woman of her mind and soul could mean but one thing to the man blessed by such comradeship; and in this instance the man was not only noble enough to love so great a woman, but was also noble enough to win her love. So discreetly, however, was the courtship carried on, that the Training Home and all the French officers were astonished beyond measure when the marriage was announced.

"When General Booth was approached in the matter, he felt a little delicacy—remnant of the old education—as to whether Colonel Clibborn would continue to serve under his own wife, and asked him if he would take command henceforth of the French forces.

"Colonel Clibborn drew himself up to his fullest height and said: 'General, I have been proud to serve under Catherine Booth through these years. Our marriage can in no way alter our positions. She is still La Marechale, and I am her chief of staff.'

"And on her marriage day, fearing lest her devoted people should miss the beloved name, he, at his own request, took her name while giving her his own. Thus they are Mr. and Mrs. Booth-Clibborn. Commissioner Tucker, who afterward married Miss Emma Booth, followed the example of his brother-in-law."

THE PRESERVATION OF BOOKS.—The paper on books which have survived for two or three centuries, is a very different article from the book paper of to-day. The paper upon which books were printed 300 years ago, was honestly made and durable. No strong chemicals were employed in its preparation. Neither wood, pulp nor clay entered into its composition. It was made by hand and of honest rags, mostly linen; cotton was little used in those days. It was made to last and it has lasted, and will continue to last until most of the book paper of the present day has crumbled to pieces by reason of its inherent decay, induced by the strong acids, the fiberless wood and dusty clay used in its manufacture. The most of the books of to-day, notwithstanding their strong and in every way, superior binding, will hardly hold together a century. Two hundred years hence a book printed during the present century will be something rare indeed. Both the printing and writing ink now used possess a far less enduring quality than that used 150 years ago.

A MINISTER was recently visiting an old woman in his parish. On the center of the table in the room in which they sat was a large, thick, family Bible with which was bound up the Apocrypha. The minister happened to say, "That's a very big Bible you've got, Mrs. Brown." "An' nae wonner it's big, sir," was the reply; "it's got an apothecary in the inside o't."

"Do you believe in fate, Pat?" "Sure an' hwat would we sthand on without 'em?"

YOUNG FOLKS' COLUMN.

The Dog Who Did, and the Boy Who Didn't.

EDITORS PRESS:—I have long been accustomed to write "pieces" for my little girl to recite in school. She liked so well to have something "bran new" for herself, something she was sure no other girl would have; and she often suggested the subject of my lines. Once she said she wanted something about a dog, "with lots of bow wow in it." Trying to please her, the following lines were evolved, and to our surprise, "took" wonderfully in the schoolroom. I have never had them printed, I thought them such a "ragged rhyme;" but they have proved so popular, I venture to send them to you. Some other mother may like to use them. A great deal depends on the way the lines are recited. The dog must get growlier and growlier, and the boy be very jovial and defiant, till the last, when the crying must be well simulated, knuckles in eyes. —A. C. T.

CHARACTER REPRESENTED. 1 Boy, 1 Dog.

Scene—A California Walnut Ranch, about 11 P. M., by Moonlight.

"Bow, wow, wow!"
Said the Dog.
"What's up now?"
Said the Dog.
"If you don't act right,
I'll bark and I'll bite.
"Bow, wow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy,
"You don't know,"
Said the Boy.
"I can throw stones,
Will break your bones."
"Ho, ho, ho!"
Said the Boy.

"Gr-row! Bow, wow!"
Said the Dog.
"I don't allow,"
Said the Dog,
"Any meddlers here;
So you'd better clear.
Gr-row! Bow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy.
"Is that so?"
Said the Boy.
"Just see this nice meat.
Come, don't you want to eat?
Ho, ho, ho!"
Said the Boy.

"Gr-r-ow, gr-ow, gr-ow!"
Said the Dog.
"I've made a vow,"
Said the Dog,
"Whenever I dine,
'Tis with friends of mine.
Gr-r-ow! wow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy.
"Let you know,"
Said the Boy.
"There nuts I'll get,
So don't you fret.
Ho, ho ho!"
Said the Boy.

"Gr-gr-row-gr-ow!"
Said the Dog.
"Out of this now!"
Said the Dog.
"I jump and I bite;
We have a big fight!"
Gr-gr-r-ow-gr-ow!"
Said the Dog.

"Boo-oo-oo!"
Said the Boy.
"Ouch! That'll do!"
Said the Boy.
"I'll go straight home,
And never more roam.
Boo-oo-oo!"
Said the Boy.

An Unbidden Guest.

Mr. Marks stood beside the beautiful Christmas tree to light the tapers, when into the parlor came King Hal, shaking his head angrily and uttering loud—

"Baa, baa, baa, baa."

The little ones screamed loudly. The tree was overturned.

"Donny, call King Hal. Some one has left the back gate open," said Mrs. Marks.

Donny called in a faint voice, "shee-e-e-py, shee-e-e-py."

King Hal heard the voice. He listened, then with a farewell "ba-a-a," rushed through the open doors into the kitchen to find his young master that he loved.

The quarrelsome sheep was penned in a small, strong pen.

"You've spoiled my good time. I don't love a cross lamb," said Donny sadly, when King Hal "ba-a-a-d" after him an affectionate "ba-a-a."

Mr. and Mrs. Marks were busy straightening the limbs of the battered tree.

"Donny," called Mrs. Marks, "did you bar King Hal's prison door tight?"

"Yes, mother," replied Donny.

"I'm sorry, son, but your lamb has grown so unruly that it isn't safe to allow him liberty. He was a pretty lamb, milk white and peaceable. He hasn't forgotten his master, for all he is so ugly an' savage with other people."

"It pays to treat even dumb animals kindly. Even contrary King Hal obeys Donny because he loves the master who is kind to him," said Mr. Marks.

In ten minutes the tree was righted and lighted and King Hal forgotten by every one save Donny.

In his small, strong pen King Hal dismally "ba'ad."

He was in prison upon a glad, bright day.

In a comfortable fold twenty peaceable, quiet sheep enjoyed pleasant quarters and an extra lick of salt.

A little before dinner was quite ready to serve, Donny, with three little boys, carried to King Hal a biscuit.

"I love him, poor, naughty sheep. If he was good he needn't be shut up; but he doesn't know that he is naughty," said Donny, weeping because King Hal must be imprisoned.—ELLA GUERNSEY.

Kitty's Bedspread.

If you have a friend, old or young, who keeps some special chair or cushion or warm corner for a pet kitten's use, give her a little washable embroidered bedspread—or should we say nest-spread—with which to protect and also decorate the cushion, and see how pleased she will be and how soon kitty will learn to know that it is her own property. At least she will if she is as intelligent as our kitty. We gave her a little scarlet nest-cloth about 21 inches square. She soon learned to know and claim it wherever it was. She was never allowed on a bed, and, after her first few attempts, had never offered to jump on one; but one day in her absence, her little scarlet cloth was accidentally mislaid—thrown on the foot of the white bed. Soon kitty came pattering in, tired and sleepy, went to her nest in the corner. Something was not right. She walked over it, turned 'round and 'round, and at last jumped down and considered the matter. Suddenly, her sleepy little eyes brightened as her glance rested on the bed. She gave one glad bound and there she was, curled up in a little ball right in the middle of her cloth, purring and singing, and in less than "two winks" was fast asleep—and who could disturb her? But what best proved her intelligence was that she always claimed the cloth wherever it was, on the bed or off, and never disturbed the bed unless it was there, much as she loved to cuddle down on it. So much for a "cat story."

A pretty spread for this purpose is made of blue denim, light side up, with blue hems turned over from the under side. At the edge of the hem is a row of feather stitching worked with scarlet zephyr, and "Only two winks for a cat nap" is outlined on the blue-gray center. One of dark-red flannel worked with light-gray would be pretty.—*Jewel Alstead.*

DOMESTIC ECONOMY.

Old Coats Made Useful.

[Written for the RURAL PRESS by CLARA S. BROWN.]

This cold weather makes one hunt up warm wraps. Does any one in the family need a new jacket? And is there an old coat hanging somewhere, outgrown or shiny on the back or a little moth-eaten? Why, then, you've only got to buy a pattern and do a little cleaning and fitting in order to evolve from that discarded coat a very respectable garment. I know, for I'm wearing a jacket produced in that way. It is of fine French diagonal, with trimmings of velvet, and really looks very nice. The coat from which it was made was worn so seldom that moths got into it and ate little holes that spoiled it for the owners's wear, but they were not in the smaller pieces that were cut to fit me. It is a job to rip up a coat, but patience will do it. Then the threads must be picked out and if the material is dirty, it should be washed in five cents' worth of soap bark, hung on the line without wringing and pressed while damp. The wrong side of the goods used in men's clothes is often pretty, and, if the coat is worn very shiny on the right side, it may be turned. Procure a stylish pattern, but not a fussy one, studying well what you have to do with before you buy it. There is such a diversity of jackets at the present time that you can surely find a pattern which can be cut from your material.

When the wrap is done nobody in the world will ever recognize "that old coat."

Sundries for the Farmer's Tea.

Those farmers' wives who do not care to see fried steak and boiled potatoes appear on their supper tables, know well that to provide a substantial yet dainty evening meal is something of a problem. Let me offer my sister housewives a few receipts for dishes that find favor in the sight of my farmer after his evening "chores" are done.

Those who make a practice of always having a ham in the house, will find it may be used to advantage in almost numberless ways. One of the simplest and best that I know of is—

Creamed Ham.—Cut cold boiled ham into very thin slices. Put a teaspoonful of butter and half a cupful of cream over the fire, and when very hot put in the ham. Dust with pepper, add the beaten yolk of one egg, and serve instantly.

Ham Croquettes.—The commonest error in making this dish is failure to chop the ham sufficiently fine. Take equal parts of cold boiled ham and rice and chop and *beat* together until it forms a perfectly smooth mass. Season highly with pepper and sage; add a raw egg and a few spoonfuls of cream. It should be as soft as you can conveniently handle. Then form into small oblong rolls, dust lightly with flour, and fry in deep lard.

Potatoes may be warmed over in many dainty ways, and housewives are too apt to restrict themselves to frying and stewing, as the only simple and available ones.

Potato Klosse.—Is a German dish, very good and easily made. Beat a sufficient quantity of boiled potatoes to a perfectly smooth pulp; add salt, pepper, a generous lump of butter, a little minced parsley, and one well-beaten egg. Give the mixture a good beating, and then drop, a tablespoonful at a time, into plenty of boiling fat. Drain carefully and serve very hot, garnished with parsley,

Escalloped potatoes.—Slice cold boiled potatoes and place in a buttered pieplate, seasoning with salt and pepper. Melt three tablespoonfuls of butter in half a cupful of rich milk, sprinkle part of it over the potatoes, put them in a hot oven, and baste every few minutes until you have used all the milk.

Potato Olives.—Are a little more elaborate, but repay one for the trouble of preparing. Pare the potatoes and cut them into the shape of olives; drop into boiling, salted water, and cook until tender, but quite unbroken. Drain them carefully, then dip each one into beaten egg, and roll in a mixture composed of fine bread crumbs, half the quantity of grated cheese, a little minced parsley, and salt and pepper. Fry in deep fat, drain, and serve hot as possible. A delicious dish with which to serve these potato olives is

Blanquette of Chicken.—Cut into bits the chicken left from yesterday's dinner. Make a very nice, white sauce, using plenty of butter, chicken stock, and, if you have it, cream; add also a teaspoonful of lemon juice. Now put in the chicken and let it boil gently for a few minutes. Season well, add the beaten yolk of one egg, cook just one minute longer, and serve.

These dishes will be found choice enough for "company" teas; but what is good enough for company is none too good for the daily fare of those nearer and dearer than any visitor could be.—LINA DALTON *in Country Gentleman.*

MOCK OYSTER SOUP.—Save the giblets of chickens, and turkey gizzards, livers, hearts, necks and feet. Skin the feet, by dipping in boiling water, when the outside will slip off readily. Put the giblets to boil in one quart of cold water, with one onion, and one carrot cut small. When very tender, take from the kettle, cut in pieces the size of a large oyster, add two tablespoonfuls of butter, one cup of sweet cream, salt and pepper to season, When ready to serve, add gradually, so that it may not curdle, one well-beaten egg. Do not let the soup boil after adding the latter. Stir well, and serve at once. This soup is delicious. Water, from time to time, should be added to the giblets, so that there will be a quart before adding the cream.

CHICKEN PIE.—Cut chicken in neat joints, wash, and stew until tender. When putting on to stew, add one-fourth of a pound of fat salt pork. When tender, take from the kettle, remove the bones, chop the pork, and return to the kettle. Add salt and pepper to season, stew half an hour; when cold pour into pie pans lined with crust; cover with perforated top crust, and bake until brown. A bowl of gravy should be reserved to serve with chicken pie. To this add a tablespoonful of flour, mixed until smooth in a little cold water, one beaten egg, pepper, and a tablespoonful of butter. Serve very hot, a spoonful over each piece of chicken pie.

SCALLOP TURNIP.—Cut yellow turnips in half-inch pieces, boil and drain. Place in an earthen baking-dish, season with dots of butter, salt and pepper, and cover with a thin layer of bread or cracker crumbs. Fill the dish in this manner, the last layer being crumbs. Over all pour a cup of sweet milk or cream. Bake until brown. Serve hot.

CABBAGE SALAD.—Shred half of a white cabbage fine, dress with two tablespoonfuls of melted butter, four of vinegar, salt, pepper, and one teaspoonful of made mustard. Served with slices of stale bread, put in the oven and served hot, and with cheese.

THE HUMAN BREATH will not remove mountains, but it has power sufficient to raise objects which have considerable weight. It will not scatter a regiment of soldiers, nor uproot trees as the fables sometimes tell us with pictorial illustrations. Yet it contains a surprising amount of leverage, which is evidenced by the loud report which a paper bag filled with the breath will produce when smashed between the hands. The following experiment demonstrates the elementary power of the human breath still more forcibly: Take a large bag of good, heavy paper, lay it on the table and cover the closed end of it with several books—is Webster Unabridged and a family Bible, for instance—then blow into the bag, filling or inflating it with air, and you will soon see that it will overthrow the books, *i. e.*, remove a small mountain.

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SAN FRANCISCO:
Saturday, January 9, 1892.

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[NEW THIS ISSUE.]

Vehicles—California Wagon & Carriage Co.
Spading Harrows—H. C. Shaw Plow Works.
Spray Pumps, Plows, Etc.—Allison, Neff & Co.
Plows—Oliver Chilled Plow Works.
Spiral Riveted Pipe—The Geo. F. Eberhard Co.
Sale of Brood Mares—Killip & Co.
Seeds—Sevin Vincent & Co.
Prune Trees, Figs, Etc.—P. W. Treat, Davisville.
Harrows—Keystone Mfg. Co., Sterling, Ill.
Spraying Machinery—R. S. Chapman.
Thoroughbred Jacks—L. U. Shippee, Stockton.
Imported Stallions—Theo. Skillman, Petaluma
Proposals for Tunnel—Edward M. Boggs, Banning.
Trees, Vines, Etc.—Ellwanger & Barry, Rochester, N. Y.
Ear-Marking Label—C. H. Dana, West Lebanon, N. H.
Hop and Vineyard Wire—California Wire Works.
Pecan Trees—Mrs. J. Hutchinson, Fillmore.
Pecan Trees—Texas Pecan & Seed Co., Fort Worth, Texas.
Agricultural Implements—John Calne, Stockton.

See Advertising Columns.

The Week.

We have had an occasional day or two which seemed to promise that the normal had floored the exceptional, and that warmth with alternating sunshine and rainfall, the usual traits of a California winter, had regained sway. We have had too much frost, and will market fewer oranges. We are also waiting for better growth of grass and for the earlier wild flowers. It is true that rain enough has fallen in most places to admit of field work, and perhaps that will do for a time. If rains were followed by warmth instead of chill, all would feel better, and they are waiting for it.

Congress is actively at work, and many measures of interest to this coast are being introduced. We expect to find room for outlines of this work in our next issue. This week, thought turns naturally to the great winter event in the upper half of the State—the Citrus Fair at Auburn, to which allusions are made in other columns. Everything indicates the full success of the Fair, and a gala time in the rich region which will give it shelter.

Announcement.

On the first day of the new year the proprietorship of the PACIFIC RURAL PRESS was transferred from the firm of Dewey & Co. to an incorporated company, which has assumed the title of the Dewey Publishing Co. In the firm by which the paper was established in 1871, and by which it has since been published continuously, Mr. A. T. Dewey and Mr. W. B. Ewer were equal partners. In the incorporated company, each of these gentlemen holds a one-third interest, and the other third is held by Mr. Alfred Holman, who, as general manager, assumes the active administration of the business. By way of introducing Mr. Holman to the patrons of the RURAL, it may be said that he comes from the editorship and general management of the chief newspaper of Washington—the *Post-Intelligencer* of Seattle—and that prior to his connection with that journal, he was for many years with the Portland *Oregonian*.

The patrons of the paper should know that the incorporation has no other purpose than mere business convenience. There will be no revolution in the character of the paper, though it is hoped very shortly to add to it some features that will commend themselves to the public. Of the designed improvements, it is perhaps as well not to make promises, but it is hoped that the efficiency of the paper will be increased and that it will continue to receive from the public the favor which has attended its course during the twenty-one years of its existence.

The firm of Dewey & Co., Patent Agents, composed of A. T. Dewey, W. B. Ewer and Geo. H. Strong, is not included in the incorporation and will continue to be conducted as heretofore under the name of Dewey & Co., Patent Agents.

DESSERT PRUNES.—The finest processed prunes of California production which we have seen up to this time are those of which Felix Gillet of Nevada City has sent us a sample. In fact, we never saw better from anywhere. They are of good size, handsome appearance, tender in skin and substance, and of most delicious flavor. They are peerless, so far as our knowledge goes, for eating out of hand as a dessert prune, and we should think that very large quantities of such prunes could be sold at remunerative prices, if handsomely packed and wisely marketed. While it is undoubtedly true that the great bulk of the California prune crop should be the sun-dried stewing prune for which the State has already achieved great fame, there is opportunity for the production also of dessert prunes to meet a different demand; and because the fruit growers have often declared so strongly in favor of the sun-dried as against the processed prune, it does not at all mean that those who can succeed in the latter product should be discouraged from proceeding in that direction. We are glad to see such splendid fruit of this kind from Mr. Gillet.

THE EASTERN EDITORS.—An unusually large and representative excursion of Eastern press people will visit California next week. The party is expected to reach Auburn Jan. 13th for breakfast, and San Francisco the evening of the same day. On Jan. 14th the association will begin its meetings in this city. It is expected to spend about a week in the State, visiting Los Angeles and southern points on the homeward journey. A cordial welcome will be tendered them everywhere.

The Barley Outlook.

EDITORS PRESS:—In your issue of Dec. 9th you give under grain reports a statement of amount of barley received from Washington and Oregon from July 1 to Dec. 6th. Can you give me the amount of barley received from the north from Dec. 1, 1890, to June 1, 1891, a statement I should very much like to get? There does not seem to be a likelihood of receiving any such quantity this year as last from that source. Last year the consumption of barley from December to June was nearly 1,300,000 ctls., in addition to the amount received from the north, and at high figures; and wheat being cheap, a large quantity of that cereal was used as a feed grain. This year, with wheat and corn high and scarce, with a prospect of larger exports of barley, with abundance of ships, lower freights and a scarcity of wheat, with large overland planting and renewed activity in railroad building in the new year, with close selection of brewing grades on account of the tariff on foreign barley, with diminished receipts from the north and no other feed grain as a substitute, the amount on hand does not seem excessive and prices ought to improve before long. With a carry over of 1,004,457 ctls. in June, 1890, the price a month or two later in midharvest was higher than to-day's prices, and at a time when corn and wheat were cheap. With seven months' consumption and exports to come out of present stock before new grain is received in quantity, and with no other feed grain to cheapen the price of barley, it is difficult to see why prices remain so low in comparison with last year at same time.

We have had less than an inch of rain for the season and drying winds have absorbed it all, so that no grass or volunteer has started. Should dry weather continue through the winter, most of the stock in the southern part of the State would be needed at home.—C. E. HOAR, *San Fernando, Los Angeles Co., Cal.*

The receipts of barley from up north (Oregon and Washington) aggregated in 1890, 52,717 centals, and in 1891, 213,442 centals. It is quite generally claimed that the receipts from up north will continue light throughout this season.

In examining the condition and influences on the market, it is well to compare the outward shipments for the past three years, which were in centals as follows:

	1889.	1890.	1891.
Great Britain.....	352,962	44,811	274,698
New York.....	295,424	90,536	166,567
Hawaiian Islands.....	138, 53	165,363	172 8 2
Australia.....	30,934	14,504	.....
Elsewhere.....	14,570	23,755	6,936
South America.....	.....	.....	115,205
Cape Verde Islands ..	.....	.....	82,152
Canary Islands...	.....	.....	69,550
Totals.....	832,943	339,174	837,390

Our correspondent's argument in favor of an advance in barley prices seems well established and agrees quite closely with statements made in our Annual Review, a year ago this month. Such a view seems also to be held by many, and the disposition to put in barley seems quite general, especially at this time at the South, where barley sowing is done earlier than at the North.

The Transcontinentals.

The modern "transcontinentals" bid fair to be as greatly deprecated as the old "continentals" are adored. It is rumored now that there are signs of schism in the transcontinental association of railroads which may shake the ill-starred combine to its foundations. The Northern Pacific objects to differential plums which the association puts in the Canadian Pacific pudding, and if the N. P. kicks forcibly enough, it may knock over the association. The California Traffic Association looks with complacent interest upon this quarrel of the members of the combine, which prevents competition in overland freighting, and is more apt to pour turpentine than oil upon the wounds of the contestants. Joy to competition, misery to combination—these things hold the keys to the prosperity of Pacific Coast producers.

This "transcontinental association" has a most aggravating way of dealing with applications from our producers for more decent overland rates. This dispatch is a case in point:

CHICAGO, January 5.—A meeting of the transcontinental roads was held to-day to consider a proposition to reduce the rate on oranges from California points. The recent frosts in Southern California so damaged the orange crop that shippers united in requesting the railroads to reduce the rate from the present basis of $1.25 to 90 cents per hundred pounds. One road objected to the reduction, and the request could not be granted, although all the other lines were willing to do so.

This is an old trick. So long as there is one kicker no fair proposition can go through. All the members of the association have to do is to talk sweetly and elevate the anticipations of the petitioners, but be sure that one small fellow will object and declare he won't play. If they take turns at the single blackball, they can all talk sweetly on all propositions nearly all the time. In this way the public is hoodwinked and imposed upon, and after having its opposition silenced by sweet words, finds at last that it gains nothing after all. It is time some "differentials" or other kind of internal strife knocked the thing to pieces. It is apparently impregnable from the outside—as things now are.

A Fruit Scene in the Foothills.

(*Continued from page 21.*)

than the natural beauties, and that is the unrivaled variety and excellence of the foothill productions. By attending such a fair, one can gain comprehensive and comparative knowledge, which could hardly be otherwise obtained so well, even by long and patient journeyings. The various prominent regions of Placer will participate, as will other foothill counties up and down the Sierra line. Valley and coast of the upper half of the State will also be represented. We trust that the people may show appreciation of the important event by a large attendance. Auburn is a very hospitable town. It has the advantage of large hotel power, which will insure comfortable accommodations. Let there be a grand assembly to participate in a splendid event.

FRADULENT FRUIT FAILURES.—It is reported that often swindlers start in just before the holidays, fit up and stock fruit stands, and obtain considerable fruit on time from the wholesalers, sell out what they can, sell out the stand for what they can get and disappear, or as the phrase goes, "skip out." When the collector for the wholesaler goes around he finds a new proprietor who knows nothing of him or his bill. This year three cases are mentioned. They bought in the aggregate $2500 worth of fruit and the sellers obtain nothing. One merchant takes rather a philosophical view of the matter, for he said to a *Chronicle* reporter: "These are premeditated tricks and generally occur at this time of the year, after large quantities of fruit, etc., have been bought for the holidays. There seems to be no law in these matters to protect the merchants, who have to pocket their losses while the fradulent fruit dealer gets away with the boodle."

QUERIES AND REPLIES.

Fruit on Hardpan Soils.

EDITORS PRESS:—What does experience prove about the use of land containing hardpan for planting orchards, providing the soil above the hardpan is good enough to give the young trees a good start? Is there any danger of damage to trees or crop when the trees grow older? If so, what remedy should be applied?—E. S. WILLIKES MACDONALD, *Aptos.*

This is a subject which has been quite fully discussed in our columns in past times. Experience proves that trees in such situations grow well for a certain time, and then often fail. The chief dangers are two: First, the danger of trees being overturned by high winds, if they have to extend their roots above a layer of hardpan, which is quite near the surface; second, the danger of drouth from the drying out of this thin surface layer of soil which the roots occupy, because being precluded from downward extension.

The remedy is breaking through the hardpan, providing the hardpan is thin and is underlaid by a stratum of pervious soil. This breaking up of hardpan is generally done with dynamite, a cartridge being exploded in a hole in the excavation made for each tree. It is also done on a small scale by boring through the hardpan with a post-hole augur or otherwise, but the powder-blasting is best and cheapest.

Be sure that your situation has hardpan underlaid by gravel, or at least a loose stratum. If you have a shallow soil underlaid by hardpan and tight clay below it, don't plant fruit at all. Our book on "California Fruits," in the chapter on "Preparing Land for Orchard and Vineyard," discusses this question fully.—EDS. PRESS.

Cement Artesian Piping.

EDITORS PRESS:—I have seen something in your paper of a new (to me) process of putting down wells, using cement instead of pipe. As I wish to have a well bored soon, I would be glad to obtain some information on the subject—whether the method can be used in sandy soil, whether it makes as good a well as where pipe is used, and what the cost? We have to go about 175 feet to get water. If some of your correspondents will give the desired information, they will greatly oblige.—W. L. JOHNSON, *Rochester, San Bernardino Co.*

If any readers have experimental knowledge on this subject, we should like to have it for publication.

Killing Stumps.

EDITORS PRESS:—I would like to inquire through the RURAL PRESS if there is any certain process, by applying substances to the stumps of blue gums, that will surely kill the roots the first year.—T. N. WARNER.

We know of none. Prescriptions which we have tried have failed. If any reader can speak from actual experience, we shall be glad to listen and try it for ourselves.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Saving Water.

One of the greatest objections urged against the organization of irrigation districts in some localities is the assertion that all the available sources of supply have been appropriated or utilized and that there is no water left that can be availed of for the irrigation of new areas. No greater mistake was ever made. It is entirely within bounds to say that of the flow of all the streams used for irrigation in the entire State not more than one-tenth of the aggregate finds its way upon the soil for the benefit of growing crops. In at least six months of the year no use whatever is made of the water, and during that period, which includes the winter and early spring, the flow of these streams is from ten to a hundred fold greater than in the season when irrigation is practiced. All this water runs to waste, and the capacity of a given stream for irrigating, is measured entirely by the minimum flow of the dryest season. Reasoning upon this basis and without regard to the immense amount of water running to waste during the winter, there is some foundation for the assertion that there is no further available supply.

But going a little further and taking up up the consideration of the possibility and feasibility of preserving a portion or all of the wasted water for use in the dry season, a field for enterprise is found that is practically unlimited. The storage reservoir is the solution of the difficulty, and until enough of these have been constructed to conserve the entire winter flow of all the streams and supply all the lands that require irrigation it is idle to claim that all the sources of supply have been monopolized.

Many who have not investigated the subject appear to believe that the construction of reservoirs involves a vast expenditure, and that water cannot be obtained in that manner except at an outlay that cannot be borne by ordinary farming lands. It seems to be generally believed that a reservoir must be something immense, involving large expenditure and a great amount of labor. Few have so far been undertaken in this State except on some such scale as the Bear Valley or Sweetwater enterprises. But it is a mistake to suppose that small reservoirs cannot be economically and readily constructed for the supply of small as well as large areas. In Colorado much more appears to have been done in this line than in this State, and what may be called individual reservoirs for the storage of winter water are being built all over that State. The cost of such structures need not be large. Thus, one is mentioned in a Colorado paper that has a simple earthen bank by which a reservoir covering ten acres of land to a depth of 10 to 16 feet was constructed at a cost of only $2000. The amount of water stored is sufficient, it is calculated, to supply 500 acres of land, or an average of only $4 an acre.

Another reservoir for irrigation on a large scale covers 800 acres and the entire cost was $20,000, while water enough for 30,000 acres is stored. This is a cost of less than 70 cents an acre; yet the water is derived from a stream that was supposed to have been entirely appropriated. A portion only of what had hitherto run to waste was thus saved at a small outlay and the large amount of 30,000 acres brought under cultivation.

These instances afford a hint of what may easily be done in California. There is no lack of reservoir sites in all the irrigated regions, nor is there any lack of water now going to waste that can be stored for future use. It is only a question of enterprise and time until all these sources shall be fully utilized.

Florida Converted.

That the gospel of irrigation is spreading is shown by the amount of space devoted to the subject by agricultural journals all over the country. Scarcely a number of this class of periodicals can be perused without finding therein more or less extended reference to the desirability of irrigation and to the results accomplished by this great aid to agriculture. The orange growers of Florida are falling into line with others who have for years prided themselves upon their immunity from the necessity of irrigating, but are now awakening to the fact that what was once regarded by many as an onerous burden is in reality the greatest boon. "Of late years," says a writer in the Florida *Agriculturist*, "owing to the drouths of 1889 and 1890, people all over the State have been turning their attention quite generally to the subject of irrigation. We have always prided ourselves in measuring biceps with our rival, California, 'that if our soil was a trifle light and did require a little fertilizer' our yearly outlay for manures was far below her inevitable irrigation tax. But though we need not mortify ourselves by admitting irrigation or fertilization as absolutely indispensable to us, we have believed that with artesian wells or surface water ponds and pumping engines an economical irrigating plant serves as a certain insurance policy to the owner of a valuable bearing grove which he may never have need of for years but which he can hardly afford to think of being without. While water can be most economically distributed in ditches so far as it will flow, distributing itself evenly and automatically with a minimum of evaporation, water-tight conduits are indespensable for conveying it any considerable distance from the source. One favorite method here with flowing wells, is to lay pipes the same size as the wells with hydrants 100 feet or so apart on all the elevations, knolls and ridges. A stream flowing along the summit of a low sand ridge will subirrigate in most soils from 20 to 30 feet on either side and with clay subsoil very much farther."

The writer then describes a machine invented in that State by which cement pipes are made and laid in the ground at a single operation, and which after "setting" will withstand a pressure of 20 pounds to the square inch, and in time one of 60 pounds. This pipe is much more durable than iron and when once laid it is claimed will last practically forever.

It is gratifying to find the example that has been set by California thus followed, and we gladly welcome Florida to the ranks of the irrigators. It is especially gratifying to note that they have seized at the outset, the most advanced ideas upon the subject, and by the use of pipes and hydrants are prepared to take every advantage of the economical use of water in the same manner that has been evolved in this State.

The Bear Valley Dam.

Another of the periodical and entirely uncalled-for attacks has been made upon the Bear Valley dam, and the charge has been published broadcast by telegraph that there was such imminent danger of a repetition of the Johnstown disaster that the authorities had been appealed to to protect the people living in the section alleged to be exposed to danger, says the *California Irrigationist*. To read the harrowing dispatches sent out by evidently subsidized correspondents, one would be justified in supposing that the dam was in a crumbling condition, already tottering to its ruin and threatening destruction to life and property.

The writer, happily, is personally familiar with all the facts in the case. He has visited the dam in company with expert engineers, has lived in the section supplied with water by it, has known its history intimately ever since Frank Brown made his first trip into the mountains to investigate the feasibility of its construction, and has not a cent's worth of interest one way or the other. All the interest the *Irrigationist* has in the matter is the common interest of love of fair play and hatred of underhand and lying methods. Hence we assume to speak from an entirely unprejudiced standpoint.

There are a few well-known facts about this matter which we propose to give all the emphasis possible.

The Bear Valley dam has stood for seven years, most of the time with the full volume of water behind it. It has been exposed to storm, ice and wind, and even earthquake, but it stands to-day just as firm as when the last stone was laid, and just as it will stand till the crack of doom.

Those who inspired the lying dispatch referred to in the foregoing, lay great stress upon the demand that the waste-weir be so arranged that falling or floating timber may pass readily through it. At least one of the men who inspired the attack knows of his own personal knowledge that in the channel, or neck of the lake above the dam, there are now and always have been, booms stretching from shore to shore, made of timbers securely fastened together, and attached to either bank, which make it absolutely impossible for any floating object, tree, or anything else to approach the dam nearer than several hundred yards. They know, too, that a sufficient number of men is kept at the dam, day and night, and always have been, to handle any floating objects that might injure the dam and to guard against any "spontaneous" explosions or other "accidents" that might bring about the flood that would unquestionably not be unwelcome to some. Everything of this sort is well guarded against.

But above all, and affording ample security to those timid souls whose fears have been played upon by designing persons, is the fact, the absolute fact, that if the dam were to give way, little or no danger could be caused in the valley of the Santa Ana or anywhere else. In the first place, a narrow, steep and tortuous canyon extends for 18 miles below the dam. Were the water in the lake unrestrained, it could not pass down that canyon, met at every turn, as it would be, by obstacles and obstructions, in volume sufficient to cause damage when the open plain was reached. Just at the mouth of the canyon, and as soon as the mountains are left, the river-bed or wash spreads out to a width of 1½ or 2 miles, with high banks and a sandy bed. When the water turned loose from the dam reaches this place, it would spread out over these miles of sand, and could not by any possibility be more than three or four feet deep, while the banks on either side are 15 to 40 feet high. How much damage could result?

But it is idle to say more, and it would be unnecessary to say anything at all, were it not that the dispatches sent out are certain to mislead those who are not well posted—that, in fact, being their apparent object. The people who are most familiar with the Bear valley dam are the ones who feel the greatest security in living below it, and they will corroborate every word we have said.

In the name of all that is decent and honest, these attacks upon an enterprise that has done more for Southern California than any other one influence, ought to be suppressed, and it is the duty of every honest newspaper to lend its aid in putting an end to aspersions that are as unfounded as they are contemptible.

How to Build a Dam.

The chief cause of failure in dams of all kinds is the faulty construction of the foundation, says the Denver *Field and Farm*. Just as a house will fall by reason of a weak foundation, which may be crushed under the weight of the walls, so a dam gives way by the gradual loosening of the foundation, caused by the flow of water through leaks. Earth dams above three feet high are sure to be washed away at some time, if they do not sink gradually by the certain percolation of water through the bottom. The weight of a bulk of water three times as large as a rock will move the rock bodily, as if it were wood, and the difference of specific gravity is overcome by the height of the water over the heavier obstacle. A very small torrent will roll large bowlders along its course with ease, and this enormous force of water must always be provided for in all hydraulic work. Dams should be made of timber or stone. For a safe and simple form of timber dam, the foundation should be rock or hardpan of gravel, and the mudsills on the lower tier should be bedded in broken rock, pounded down firmly with a 15-pound sledge. The sills are saddled, and the cross-ties laid upon them are notched to rest upon the saddles, and two-inch pins should be put through both of the logs. Where the foundation is shelving rock, 1½-inch iron pins should be put down into the rock at least a foot, to prevent sliding. But the sliding force is almost neutralized in this form of dam by the weight of water, which lies upon the sheeting. The tiers of timber are built up and saddled, and notched. A plank sheeting is put down to the solid foundation above the first sill, end is spiked with eight-penny spikes firmly. The sheeting is filled to the foundation as close as possible, and hydraulic cement concrete is bedded in front of it, to make a tight joint. No leaks will ever trouble a dam founded in this way. The rafters should be strong enough to bear any weight of water which the stream may carry doubled. If the highest flood known is five or ten feet above the usual level, it is easy to estimate the strength of the rafter required, and then double the number of them, putting them no more than two feet apart, if the sheeting is of one-inch board doubled. If any error is made, it is the cheapest to err upon the safe side, as the cost of more material will be much less than that of a new dam, and perhaps a mill that may go with it. An apron should be put in front of the dam, to receive the overflow; this throws the weight of the water on the face of the dam, and balances so much of the pressure on the upper sides. An earth dam may be made safe by sheet piling driven to rock or hardpan or clay, in the center of the excavation. A dam should never be built on surface soil, but the center should be placed on solid ground. As the earth is put in, it should be well packed by driving oxen or horses back and forth, or by ramming it well. This prevents settlement when the water is let in above it. The ends of an earth dam should be protected with sheet piling at least two feet higher than the overflow at the center, and the overflow should pass over solid plank flooring, spiked to timbers well bedded down on the top and both sides of the dam. This will prevent washing of the top. A masonry dam should be built on a foundation of concrete, laid on solid rock, over piles driven close together, and both sides protected by sheet piling. The piles should be left to protrude into the concrete foundation. Except for water works, there should be no outlet in the bottom of the dam; but the work should be of the most solid character. A waste channel for overflow should be made on the top large enough to carry off any possible flood, and the ends of the dam should be carried up with solid masonry as high as may ever be needed to prevent cutting out of the ends by the flood. A large dam should be constructed regardless of expense to secure safety in every direction, and the small details of construction are very often the most important parts of the work. Any person who might, under any circumstances, build a masonry dam in hollow shell form, and fill it with dirt, or leave earth banks on either side of the dam, should be confined in an asylum for imbecility. No doubt, considering the vast importance of securing unquestionable safety to the unsuspecting public whose lives may be endangered, all persons practicing as hydraulic engineers should be licensed only after exhaustive examination by competent men. If a veterinary surgeon or a physician—who could scarcely kill a hundred persons by the mistakes of a lifetime—must be properly licensed before he can practice, how much more should an engineer be, upon whose mistakes thousands of lives may impend? Every sensible man is convinced that a dam, like any other engineering work, must be built in accordance with the principles of construction. It is easy to figure exactly the force which a dam may ever be called upon to resist, and manage the construction in such a way as to provide an excess of strength and permanence, and we give it herewith.

Progress in Arizona.

Arizona has been facetiously referred to for years as the "land of the cactus and horned toad," but if the present ratio of irrigation progress is maintained, some other phrase will have to be selected to do justice to the situation. Canal enterprises are under way in many places, and thousands of acres of arid land are being reclaimed, having lain fallow since their original cultivators perished thousands of years ago.

At Gila Bend the Citrus canal has been finished and water was turned into it a week ago. The first day the water ran down 15 miles to a depth of 30 inches, and this without any dam in the river, says a local paper. The heading of the canal is in solid rock, and the canal passes through a tunnel 15 feet long, at the mouth of which the headgate is set. Owing to this and a solid cement wall below, the highest flood cannot affect the canal. The canal is eight feet wide on the bottom, with two feet fall to the mile. There are 6000 acres of the finest fruit land in Arizona reclaimed by the completion of this magnificent waterway. Most of the land is owned by members of the company who will plant the larger part of it to citrus fruits at once—in fact, they have men and teams at work now clearing and plowing the land.

Articles of incorporation of the Rio Verde Canal Company have been recorded at Phœnix. The company is the one that is having the route surveyed to take a canal out of the Verde, to irrigate a large body of land north of Phœnix. The authorized capital stock of the company is $3,000,000, divided into 30,000 shares of the par value of $100 each, of which 8000 shares is treasury stock, and will be issued only upon the affirmative concurring vote of at least two-thirds of the stock. The government of the corporation will be vested in a board of nine directors. The incorporators are: Frank L. Stetson, Martin Ring, Chas. F. Baker, William H. J. Pearce, M. J. Galpin, Chas. P. Silloway and Chas. A. Bicknell. The principal place of business of the company will be at the city of Phœnix.

The Yuma pumping and Irrigation Co. have kept a considerable force of men and teams at work for the past two months in clearing and preparing their extensive tracts of land for the next year's crop, says the *Times*. It is understood that 40 acres have been put in garden order and will be devoted wholly to vegetables, while several hundred acres are ready for the planting of trees and vines, already ordered. Pumping was suspended about two weeks ago, but is again to be resumed at once and kept up until the soil is put in proper condition for planting. It is reported that the company propose to add a number of new pumps to their plant, thereby increasing their facilities for effectual service.

Among the homestead locators on the Algodones grant, several have commenced substantial improvements. Edwin Mayes and R. S. Hatch have purchased a large-sized centrifugal pump in partnership for their ranches, and expect to have it in position within a month and be ready to irrigate at least 30 or 40 acres for next season's crop. Mr. Mayes has ordered an architect to draught plans for a neat and substantial brick residence.

One of the most important canal enterprises now being undertaken in Arizona is that proposed by the Santa Cruz Water Storage Company with headquarters at Tucson. The promoters of the enterprise are principally English capitalists, and it therefore has the advantage of ample financial resources, and is certain to be carried forward successfully. When the canal is completed, it will cover many thousand acres in Southern Arizona, and afford employment and homes for a populous and wealthy community.

Irrigation in Washington.

As a rule, we of the Pacific coast are accustomed to regard the states to the north of California as favored with such an abundant rainfall that there is no necessity for a resort to irrigation in those sections. Indeed, the popular idea of the rainfall of Oregon and Washington, is that if anything, it is a little superabundant. But this idea would appear to be erroneous, since extensive irrigation enterprises are now under way in both the States named. The most recent enterprise proposed is that of some Portland capitalists, who propose to divert water from the Walla Walla river for the irrigation of an extensive body of arid mesa lands near the town of Wallula, in Eastern Washington. These parties have filed a claim on 1000 cubic feet of water per second in the river mentioned and propose also to construct a masonry diverting dam 35 feet high. It is said they intend to commence operations at once and get the water on the land as soon as possible.

In the Yakima valley a novel question has arisen in relation to certain extensive irrigation enterprises now under way. There is in that valley a large Indian reservation through which flow streams whose waters have been used by white settlers outside the reservation for many years for irrigation. Recently an enterprise was put on foot for the reclamation of some 70,000 acres of arid land, but this has aroused the determined opposition of the Indian agent, and he has made complaint to the officials at Washington. The grounds of this complaint are novel. It appears that an old treaty gave the Indians the right to fish in the streams bordering on the reservation, and the agent

claims to believe that if any more water is diverted for irrigation the fishing privilage will become worthless. The water of two streams are involved; those of the Yakima river itself and those of the Ahtanum, a tributary of that stream. Along the latter are many white settlers who have used its water for years for irrigation without molestation, and it appears have been the means of putting thousands of dollars into the pockets of the reservation Indians in the shape of wages for labor performed on the irrigated farms.

Such eminent predecessors of the present Indian agent, as Father Wilbur and General Milroy, says the Portland *Oregonian*, in discussing this novel phase of irrigation failed to see any danger to the Indians' rights in this use of the creek water for irrigation, and the principle is the same as that involved in the diverting of a part of the Yakima river for the purpose of irrigating some 70,000 acres. In the opinion of the present agent, the settlers along the Ahtanum have no rights to the waters of that stream, and he says he has instructions to prosecute all who violate the treaty obligations; but while the appropriations of the water for irrigation purposes have practically left the main stream of the Ahtanum dry during the irrigation season, he recognizes that to enforce the strict letter of the treaty in this respect would ruin the farmers along the creek, and he has in consequence taken no action. In his opinion, the proper solution of the question would be the making of another treaty and the purchase by the Government of the water franchise from the Indians. As to the waters of the Yakima, and the appropriation by the irrigation company, the agent considers the question still more serious. He has sent plans of the dam and canal to the Commissioner, and as he is of the opinion that the canal would carry off practically all the water in the river, he has recommended that the company be restricted in this respect. From the tone of the local paper it is evident that the people, whose hopes are centered upon the great irrigation work in progress, do not believe the fishing rights and privileges of the Indians are in any such danger as assumed by their agent. It is possible that some of them suspect him of too great zeal, since they have never before been scared at the taking of water for irrigating. It has been going on for years, and now and then a fish, which perhaps the Creator and the Indian bureau intended for a siwash dinner, has actually turned his nose into the farmers' ditch, and gone flapping along the corn rows until caught and fried by the thrifty housewife. If the Indians are entitled to all the water of all the streams that border their reservations, in order that they may not be deprived of a single fish that might be sustained in full banks and caught from the siwash side of the river, then the enterprise of the white man in his neck of the woods should be pulled off at once. It is a question of much more than local importance, and should not be hastily settled by an ex parte construction of the old treaty. Common sense would lead one to think that no treaty was ever intended to interfere with the white man's plowing on one side of a stream, while the Indian fished on the other. The white man's side of the river has been idle and unproductive too long already.

It seems scarcely possible that there can be but one conclusion to this matter. It is not to be believed that the privilege of catching fish in a stream will prevent the utilization of its water for irrigation; to do so would violate every economic principle and would be an injustice to the white settlers of the Yakima valley that would not be tolerated.

Pumping Water.

W. S. Green, the Colusa county apostle of irrigation, publishes a statement over his signature that water can be furnished the Sacramento river lands cheaper than almost anywhere in the State by means of large pumps on on a barge. It will justify a pump that will throw 75,000 gallons a minute. 15,000 gallons can be thrown over the levee for 10 cents, and 20,000 can be thrown into such sloughs as Sycamore and Cheney for 10 cents, and thrown fast enough to prevent waste. Land a mile or more back can be watered cheaply. With such a plant on the river, land will be worth $20 an acre more money. Mr. Green is consulting with farmers who desire to irrigate with the view of setting operations on foot for putting in one or more pumping plants. It may be added that this is no experimental idea, but has been successfully tested in many places in the arid region.

A Novel Recommendation.

The Grand Jury of San Bernardino county, in its report filed a short time since, made a recommendation upon the subject of irrigation storage reservoirs which has the merit of novelty, whatever may be said of the legality of the action proposed. The recommendation is as follows: "A matter of great importance to this county, demanding immediate attention, is our storage-reservoir system. We therefore recommend that the Board of Supervisors pass an ordinance to the effect that the plan and specifications for all dams now in course of construction, or that may hereafter be constructed, in San Bernardino county, for the impounding of water in a quantity sufficient to be a menace to life and property, shall be submitted to the Board of Supervisors, who shall obtain for such plans and specifications the approval of one or more competent engineers."

Work in the Districts.

Next Wednesday the election will be held for the organization of the Glendora district, in Los Angeles county. The people interested seem practically unanimous and little opposition is expected.

Engineers J. D. Browne and assistants are at work again on the line of the Kern and Tulare district canal. They started in at the point of diversion from the river, and are making a very careful survey, says the Bakersfield *Echo*. Measurements are made every few feet and the data obtained from which the exact amount of earth to be moved can be estimated. Their progress was necessarily slow now, for they are working in the roughest country encountered along the whole route. When a few miles more are passed the open plains will be reached and then they can get along much more rapidly. One of the directors informed an *Echo* reporter, a few days ago, that the prospect for a sale of the district bonds was improving. Several Eastern institutions are considering the matter, and if the survey now being made shows conclusively that the canal can be built for the amount of the bonds, a sale is likely to follow in the near future. The directors rest easy on this contingency, feeling certain that their estimate of the cost was properly made. But should their expectations of a sale fail to materialize, they have other prospects. Construction companies have already offered to do the work and take the bonds for pay. Such an arrangement would amount to the same as a sale of the bonds, except that it would, to some extent, shut off competition for the work. But when the new estimate of cost is made and these builders have made their bid, it can easily be told whether their figures are too high.

The director referred to says that instead of being discouraged, they feel very sanguine that the work will soon be under headway. The confidence in these securities is all the while growing stronger, and no great length of time can elapse before there is a demand for them.

A visit to Perris reveals the fact that that colony is in a prosperous condition. Water from the Bear Valley system is flowing on the tract, says the San Bernardino *Times-Index*. Within the last three months, 25 new houses have been built, and within the last year and a half, the population has doubled. The Santa Fe is building a fine new depot at an expense of $5000. Plans have been completed for two or three new brick blocks. The contracts have been let for laying steel distributing pipe lines to carry water upon the entire district at a cost of $50,000. Within the last 30 days the land sales have footed up to upward of $250,000. A vast amount of land is being sown to barley and wheat and preparations are being made for extensive orchard planting this spring. Land is now being sold with water right in the irrigation district at from $40 to $100 per acre.

The irrigation districts already formed in San Diego county cover 150,000 acres of land, says the Escondido *Times*. Allowing 40 acres to the family that would accommodate 25,000 families, and estimating an average of four to a family, it means a population of 100,000, independent of towns. But it has been demonstrated that a family can make a living on ten acres, with water; hence the territory mentioned is capable of supporting a population of 400,000. Apply this to the Escondido valley, we would have fully 5000 population outside of the town, which would contain fully as many more, owing to its commanding position concerning a large outside tributary country.

It is believed that the Oakdale canal can be completed to a few miles west of Oakdale for $15,000, including dam and everything, says the Oakdale *Leader*. One firm in Oakdale has offered to advance $5000, and one or two other men living in the town have agreed to advance a proportionate share. Now, will those farmers who fought the district do as much? One man said on the street the other day that he had $1000 invested in the Oakdale canal, and he would rather lose it all than to see a district organized. If that be the case, the work last Monday resulted in a gain of several thousand dollars to the farmers, and it looks as if they could afford to render financial assistance to this great enterprise. Fifteen thousand dollars is required; probably $6000 can be raised in Oakdale. Will the farmers who represent 8000 acres of land raise the remaining $9000? Let us see if they will work as actively in the interest of the Oakdale canal, as they did against the district proposition.

The Dinuba *Dispatch* says: In disbursing the district moneys, it is a source of business satisfaction to know that nearly every dollar is spent in the district. It does not go to China or Italy, but is laid out right here in the district, where the money is raised. Since the formation of the district in August, 1888, $52,673 have been expended, viz.: Labor, $15,000; supplies, $2763; boarding the men, $1459; hay and grain, $5510; lumber, $3254; advertising and printing, $2057; law, $5533; per diem of directors and committee expenses, $3235; office supplies, $307; sundries, safe, office furniture, $3010; salaries, $7508; surveying, $2206; recording, abstracts, etc., $883.

The Alta district has bought a section of canal already built and needed by the district, paying for the same in bonds at par.

ENTOMOLOGICAL.

Aphis-Proof Apple Trees.

Readers of the RURAL have been often reminded of the Australian method of circumventing woolly aphis by growing trees on resistant stocks. Some of the stocks used in Australia have been brought to this State, but, so far as we know, no one has yet adopted the Australian method on a commercial scale. The following interesting allusion to the subject we find in the Adelaide *Garden and Field* for November, for which we are indebted to Mr. W. C. Grasley of Adelaide. It is from an essay on the apple by Mr. W. Kelly, Chairman of the Branch Council of the Bureau of Agriculture of that colony:

In this district several varieties of fruit-bearing trees can be grown to perfection, and perhaps none more so than the apple. Unfortunately an insect known as the woolly aphis infests it, and has its home here. That insect penetrates to the roots, and, lodging there, sucks the life sap of the tree. In its safe retreat, that insect defied the skill of the orchardist in his efforts to eradicate it, and the cultivation of the apple has suffered in consequence. It has, however, been discovered that there are two varieties of apples—the Winter Majetin and Northern Spy—which are blight proof. The insect will not touch these trees, and the knowledge of that fact enables the growers to cope somewhat successfully with that pest.

This is a matter of first importance to persons who intend to cultivate the apple, for unless the stocks are blight-proof, growers cannot expect to succeed. Respectable nurserymen and other practical growers now graft every variety of apple on blight-proof stocks. It was thought by some that by gathering the fruit of the Winter Majetin and Northern Spy when fully ripe, and sowing the seed, they would obtain blight-proof plants. The result, however, proved disappointing, inasmuch as a large proportion of the seedlings were not proof against blight. It could not be expected that they would, for seedling plants partake more or less of the character of their parents. If the blight-proof trees were grown in the orchard with other varieties of the apple, the pollen of one plant would be wafted by the wind or carried by bees or birds to the stigma of another. The seedlings would possess some of the constitutional qualities of both male and female plants, and in consequence of cross fertilization, could not possess blight-proof properties.

Root-grafting is the only effectual way of getting over the difficulty. That is done by grafting scions of the Winter Majetin or Northern Spy on portions of the root of the same trees. The roots are cut up into short pieces, taking care that each has a few small fibers. The grafted roots are planted in the nursery, and the following season are again grafted, but this time with scions of the variety of apple intended to form the tree—[and at least six inches above the surface of the soil.—SEC.] By this method of double grafting, not only the roots, but a portion of the stock are rendered blight proof. The following season the young trees are fit for planting where intended to remain.

There are many methods of grafting, but the principle is the same in all. With roots and young stocks split-grafting is the simplest and best, and is generally adopted. The joining is made by cutting and carefully fitting the bark of the graft to the bark of the stock. Between the bark and sapwood of trees there is always a layer of cellular tissue, which is called cambium, and it is in this layer that grafting and budding are generally effected. In fact, it is essential that the cambium layer of both stock and graft be placed in contact, and when that is done, the vital force of the cambium cells soon effects a union of the two. To prevent disarrangement, a tie of soft texture is bound round the graft to keep the lips of the wound together, and then soil is placed around and above the tie to exclude air and light.

Our Gift to Australia.

It has previously been noted in the RURAL that Prof. Riley arranged some months ago to send to the colonies something in exchange for the *Vedalia cardinalis*, the Australian insect which has proved of such incalculable value in this State. The following interesting notes we take from the Adelaide *Garden and Field* for November:

An attempt has been made to introduce from California the Raphidia (very useful predatory insects) into New Zealand, to act against the codlin moth, a pest which is causing severe loss in many districts of the colony. Mr. Koebele was kind enough to transmit 25 boxes of Raphidia to Mr. R. Allen Wight of Auckland to experiment with. They were all in the pupa stage, except one larva, which arrived alive and well; and although the results were not so good as might have been wished, the fact of the usefulness of Raphidia against the codlin moth was fully and satisfactorily proved. The Raphidia is an insect of the order Neuroptera, and it is one of the most active and voracious of that order, which is distinguished for these qualities. When this larva arrived, after its long fast, it was given a codlin moth larva, which it at once attacked with considerable fury and devoured, although it was nearly as large as itself, and as soon as it recovered from its gorged condition, it attacked and killed several more, evidently taking a pleasure in so doing. The insect was kept in confinement for some months, during which it destroyed considerable numbers of codlin moth larvæ, and also fed freely upon the woolly apple aphis; but it did not appear willing to tear open the cocoons of the moth larvæ to get at their contents.

Dreading the severity of the New Zealand winter for the insects conveyed from so warm a country as California, Mr. Wight sent a few of them to Mr. French of Melbourne to be acclimatized there, considering also that the unavoidable dangers of the hemispheric change would be better avoided in the Australian climate; and being obliged to leave home for a considerable time, he was compelled to turn those remaining out, to take their chance in a sheltered situation in the orchard, and nothing more has ever been seen of them, although it is not improbable that they may yet be in existence, and increasing. The larva of Raphidia is admirably formed to prey on that of the codlin moth. Its body is very flat, and it runs very quickly both forward and backward. It has a large and very flat head, fitted with a formidable pair of nippers, with which it seizes its prey, and the whole insect could not be better formed for the purpose of creeping under the scales of bark, and into those crevices where the moth larvæ secrete themselves when about to pupate. Of course it is impossible, with so little experience of one specimen, to say whether it would attack and devour the same prey upon which it lived in captivity if it had been at liberty, and had a choice of victims, and it certainly seemed willing to feed upon the aphides that were placed with it; but Mr. Koebele, who has watched its habits closely in California, says that it is by far the most useful insect among the many which attack the moth, and, in fact, the only very effectual one, and the propriety of its introduction wherever the codlin moth is, cannot be doubted.

METEOROLOGICAL.

Pacific Coast Weather for December.

The weather of the month commenced with a disturbance central, over British Columbia, the storm trough extending southward through Nevada into southeastern California, and with rain general as far south as the lower San Joaquin valley. Clearing weather prevailed on the 2d, but on the 3d a storm approached the upper California coast that moved northeastward, and gave general precipitation to the entire slope, including Southern California.

On the 4th, a high pressure area advanced over California and Oregon, and gave low temperatures to the interior for several days, frosts occurring at San Francisco, Sacramento and Needles, on the 5th, at San Francisco, San Diego and Los Angeles on the 6th, and at San Francisco and San Diego on the 7th.

On the evening of the 6th a disturbance was apparent on the upper coast that intensified as it moved eastward, resulting in rains and high winds from Northern California, Nevada, and Utah northward by the evening of the 8th. Clearing conditions prevailed on the 9th, and generally fair weather on the 10th and 11th; but on the latter date there was a fall in the air pressure over Southern California and a rising air pressure over the interior of the slope, with a depression manifesting itself on the upper coast and forcing the high area southward, which conditions resulted in violent north winds over Southern Nevada and extreme Eastern and Southern California on the 11th and 12th; the disturbance to the north passed eastward over the upper country and gave light rains as far south as Northern California, on the 13th.

On the evening of the 15th a storm approached the upper coast and by the 16th the rain area had spread southward over northern California. On the 18th a disturbance came in toward Washington and by the evening of the 19th there was a storm trough extending along the entire slope and general rains and snow falling in all sections. The evening of the 20th saw a disturbance central over Washington, and again on the 22nd, both storms giving rains or snows as far southward as extreme northern California, and the latter storm diverging southward gave scattering rains in the southern portion of northern California on 23rd and snows to Nevada and Utah. The coldest day, from eastern Washington and Oregon southward, was on the 25th when the temperature fell below zero in eastern Oregon and Nevada, and below the freezing point in nearly all portions of California except on the immediate coast. By the evening of the 25th a disturbance in the north attracted southerly winds giving warmer weather, and this storm proved to be the most severe of the season, the reduced air pressure at Port Angeles falling to 29.10 inches by 3 P. M. of 26th, causing general precipitation to fall in all portions of the slope by the evening of the 27th, and giving high winds to all but the lower California stations, the wind reaching a maximum velocity of 33 miles per hour at Fort Canby, Wash.

The 28th saw another storm entering the upper country, with precipitation as far south

as Southern California, and the development of a decided storm in Nevada, with high winds over the interior. The month closed with a disturbance on the upper coast and precipitation general north of Central California. There were therefore a total of 11 storms that advanced from the ocean and affected the weather of the Pacific States, not including the branch storms that developed from troughs extending southward into the interior.

The month can be classed as having been decidedly stormy and extreme in its conditions. The rains of the month were as follows: Olympia, 13.6; Portland, 11.4; Roseburg, 12.0; Spokane, 3.0; Walla Walla, 1.8; Baker City, 4.0; Red Bluff, 3.8; Sacramento, 3.3; San Francisco, 5.6; Fresno, 4.0; Keeler, 0.3; Los Angeles, 2.0; San Diego, 1.3; Carson City, 5.6; Winnemucca, 1.7; Helena, 0.4; Salt Lake, 2.2; Tucson, 0.2; and Yuma, no rain. This is a deficiency of 1.4 inches in the Sacramento valley, and from 0.9 to 1.5 in Southern California, but an excess of 1.7 at Fresno and 0.5 at San Francisco, compared to the December fall. In the western portions of Washington and Oregon there was a general excess of from over three to nearly six inches. There were five inches of snow on the ground at the close of the month at Spokane, 15 inches at Baker City, one inch at Red Bluff, from 4 to 36 inches in the mountains north of Red Bluff, from 43 to 108 inches on the summit of the Sierras in Eastern California, six inches at Carson City, four at Winnemucca, and three at Salt Lake City.

The month was from three to six degrees warmer than usual in the eastern portions of Washington and Oregon, and in western Montana, and nearly the normal in the western portions of Washington and Oregon. In California, Nevada, Arizona and Utah the mean temperature was from four to six degrees below the normal, being four degrees below throughout California, except on the coast where it was from one to two degrees below, and from four to six degrees below in the interior.

ROBERT E. KERHAM,
Chief of Division.

PLOWING BY NIGHT.—A plan has been adopted by the farmers of Colusa county to gain time by plowing at night, as a means of accelerating fall plowing. The plan is to use a steam plow which can be run day and night over the level farms at the rate of eight miles an hour. It has a traction engine, and tears up the ground in strips 21 feet wide, doing its work much more evenly and thoroughly than the old horse plows. The same appliances are used for combined harvesters and thrashers in the proper season. The engine is equipped with locomotive headlights for night work, and they throw a light in the path in front of the machine. Additional lights throw their rays on the plows, which are placed in a row obliquely from the direction of progress, enabling the machine to turn sharp corners. Ordinarily, an engineer, a fireman and a man to look after the plow can operate this labor-saving device, which plows about 160 acres a day, running continuously, at a cost of 12½ cents per acre, including wear and tear of machinery. Team-plowing could not be carried on for less than 75 cents an acre. The ability to work at night enables a farmer to rush his work when he is pressed for time. The main objection to running at night is the difficulty encountered in having two different crews to run the machine, one by day and the other by night. If anything goes wrong during the day, the night engineer usually falls heir to the difficulty, which the other frequently neglects and makes no effort to repair the damage.

JUNE BUTTER IN JANUARY.

The butter-maker whose butter at this season is equal in color and flavor to that of June is the one who gets the best prices.

The color can be gained easily by using Wells, Richardson & Co.'s Improved Butter Color, and as looks make a great difference in the way butter tastes to the consumer, the flavor will be all right if this color is used. Butter-makers should remember that no other make equals W., R. & Co.'s color in strength, natural shade, and freedom from taste and odor. Butter buyers and commission merchants recommend their patrons to use it, as they know it is always the same strength and shade, thus making butter in which it is used uniform in color the year round. If you are using a weak or inferior color, why not change to the best?

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

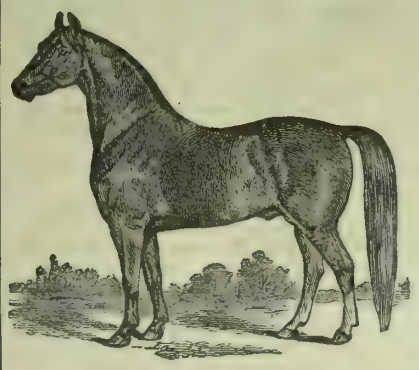
A UNIVERSITY CHAIR OF LABOR.—The first chair of labor ever instituted in Europe was decreed by the Paris Municipal Council, last July. Henry Reville has been named as professor.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

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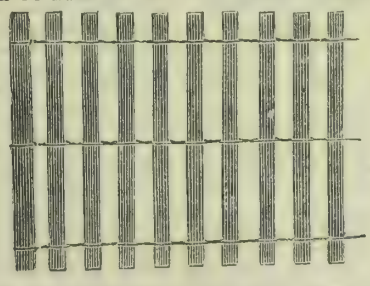
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The German Savings and Loan Society,
526 California Street.

FOR THE HALF YEAR ENDING DECEMBER 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits, payable on and after SATURDAY, January 2, 1892.

GEORGE TOURNY, Secretary.

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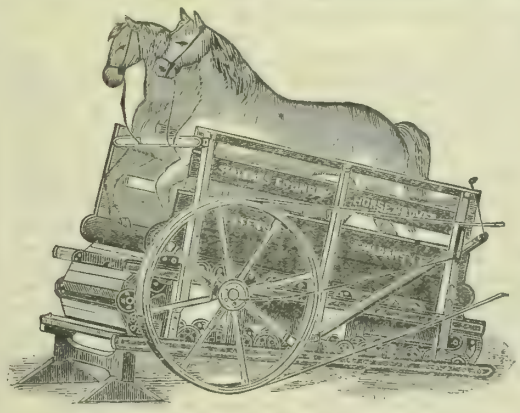
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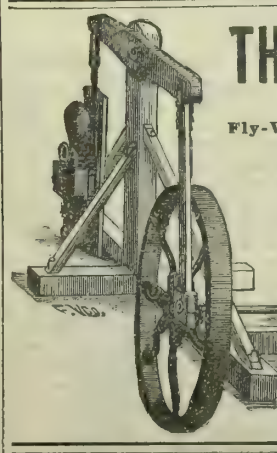
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IF you were told that there was a machine that would sow any garden seed, from beans down to celery, in either hills or rows, sow fertilizers, cover, roll down, and mark out the next row, all at one operation, what would you say?

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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

NURSERY SHIPMENTS.—Biggs *Argus:* One has only to call at the depot nowadays to note the importance of the nursery business in this section. Almost a continual string of wagons loaded with stock have been loading cars since Dec. 24th, and thousands of trees are being shipped right along. We took occasion to examine a carload of June buds, and we found every tree perfect in shape and not a poor root among them. One carload just shipped contained about 20,000 June buds. The nurserymen will make big returns this year.

SPLENDID ORANGES.—Biggs *Argus:* While at the residence of A. M. Pitts Saturday afternoon, our attention was called to the splendid crop of oranges now hanging on the trees in the dooryard. There are 19 trees in all, a number of them budded trees and just beginning to bear. These trees were well laden with large fruit, but the trees that attracted special attention were five or six large seedlings, whose branches were simply overloaded. In fact, we noticed that several limbs were broken from the excessive weight. On one tree, we judged that there must have been at least 1000 large oranges, and Mrs. Pitts informed us that several hundred had been picked from the same tree. We have seen no larger or more thrifty trees anywhere in California, nor have we tasted finer flavored oranges elsewhere than those grown by Mr. Pitts. The land surrounding Biggs will grow splendid oranges, and, a few years hence, will show hundreds of acres in orange trees.

Contra Costa.

FARM NOTES FROM THE RIVER ISLANDS.—Tyler Island Cor. Antioch *Ledger:* Contractor J. D. Wightman and his gang are busy at Voorman camp building the dairy-house and barns for a large butter-making company that has leased a tract of 2000 acres from H. Voorman on Tyler Island, which lies between Bouldin Island and Andrews Island. On the north and west it is bounded by Giorgiona slough, on the east by Snodgrass slough, and on the south by the North Mokelumne river. The island is virgin soil, never having been considered large enough to pay for reclaiming till taken hold of by its present owner, who is a San Francisco millionaire. Around the borders of the island is a strip of land about three chains wide that appears as though it was formed by the washing in and lodging of slickens. It abounds in trees of various varieties and a heavy undergrowth of blackberries. In summertime here can be found thousands of tons of wild berries. This strip is the higher part of the island, and by far the firmest, as the rest is old regulation peat, and grown up to tules of such height that a horseman is easily lost, and a man on foot can only get out by good luck. These are to be burned as soon as the rains have wet the peat soil sufficient to insure against its also being burned.

THOROUGH CULTIVATION.—Martinez *Gazette:* Alhambra valley has a State reputation for productiveness, but it is not only its rich soil and the warm thermal belt in which it is situated that causes such a generous yield, but because these great advantages are supplemented by a system of cultivation so thorough that all the moisture and nutrition in the ground goes directly to the support of the plant. The Alhambra orchards and vineyards, now under the charge of Mr. John Muir, afford a splendid example of what intelligent cultivation can accomplish. Four or five times during the season the ground is thoroughly cultivated until it becomes as fine and friable as possible. No moisture is lost by evaporation and the crops proclaim the generous attention they receive. The fruit and grapes are not only very superior in size and quality, but the yield is enormous. This season there has been shipped from the vineyards including those packed, 560 tons of grapes, all bringing the highest market prices. Of course many other vineyardists also understand and practice thorough cultivation, but we mention this in stance because we have the figures to illustrate so fully the profits resulting from the system.

Lassen.

LARGE HOGS.—Susanville *Mail:* S. G. Alexander of Antelope Valley butchered ten hogs lately, the combined weight of which was 1670 pounds, or an average of 167 pounds each. They were Poland China stock and less than eight months old, and there ought to be money in raising them.

Los Angeles.

WALNUT STATISTICS.—Downey *Champion:* Through the courtesy of their secretary, Mr. J. A. Montgomery, we are enabled to give the names of members of the Los Nietos and Ranchito Walnut-Growers' Association, number of sacks of walnuts each had, the weight, and also amount of money each received for the same. Their aggregate receipts were as follows: Walnuts, sacks, 6619, 702,649 pounds, $58 020.

TREE PLANTING.—*Progress:* Seth Richards will add 4000 more orange trees to his mammoth orchard at North Pomona. George Rnorer will plant 2000 lemon trees on the Sycamore tract, northeast of Pomona. H. Mosgrove of Los Angeles has given orders to begin preparations for planting 2200 orange trees on his land in the southeastern part of Pomona. E. T. Fenton, recently from Ann Arbor, Mich., is about to plant six acres to White Adriatic figs. John D. Cason has already bought 1000 lemon trees for planting. S. N. Androus will do much more orange planting next spring. It is thought that over 25 acres of olives will be planted here in March. J. E. Packard will do a lot more planting of lemon and orange trees this season. J. A. Packard will set out about 1800 more orange trees at his Lordsburg ranch. John Woy has contracted for 14,000 trees (mostly citrus) from J. A. Driffill, to be planted for Crawford Bros., east of Pomona. T. D. Holladay is going to plant 25 acres to oranges, walnuts and deciduous fruits, for a friend.

PROFIT IN LEMONS. — Pomona *Progress:* Duarte has a 15-year-old lemon tree that has yielded 24 boxes of lemons since January, 1891, and each box sold at an average price of $2.10. A few have brought $3.70 a box. The total cash earned by the tree in one year is put at $57. Lemon culture never had such consideration in horticultural journals as now. There is no question that the lemon will prove to be one of the best paying trees we have. The new methods of curing them are bringing California lemons up to the standard of the imported article, and the growers begin to understand the art of making lemons marketable. The fruit comes along at all seasons of the year, and people who are fortunate enough to possess a lemon orchard have realized that they have a bonanza.

Merced.

A LARGE AREA TO BE RECLAIMED.—Los Banos *Enterprise:* The prospects of the Sunset Irrigation District seem favorable. A survey has been commenced, and an assessment has been made on the stock. This canal will open to cultivation over 400,000 acres of productive land, which is at present worthless, except for sheep-grazing, on account of having no water. This canal will irrigate one of the largest districts in the state, and the capital stock will be $2,000,000.

Monterey.

SAN BENITO COLT STAKES.—Salinas City *Index:* The San Benito Agricultural Association has made arrangements for trotting colt stakes, open to Monterey and San Benito counties, as follows: Two-year-old stakes, for foals of 1891; trotting, two in three; to be decided in 1893. Entrance, $50; $10 upon nomination, $10 July 1, 1892, $10 July 1, 1893, $20 thirty days prior to race; added money, $100. Three-year-old stakes; trotting, three in five; to be decided in 1892. Entrance, $50; $10 upon nomination, $15 July 1, 1892, and $25 thirty days prior to race; added money, $100. The third payment of $100 is due January 1, 1892, on the futurity stakes for foals of 1890. All stakes divided into four moneys, and entries close January 15, 1892.

Orange.

COLD WEATHER AND FRUIT.—Santa Ana *Blade*, Dec. 30: A visit has been made to the various lemon and orange orchards in the vicinity of this city and Tustin and Orange. This valley for the past three or four days has been visited by an unprecedented cold snap of weather, and it was to ascertain whether any great amount of injury has been sustained, that inquiries were made. From all sources it was generally stated that although at two o'clock last Saturday morning the thermometer showed 26 degrees above zero, yet there was hope that the green fruit and young trees might pass the ordeal unscathed. As in the case where the ground is wet, or where water has been allowed to stand around the trees, no damage has been sustained in such places. The water takes up the ice and thus protects the tree and fruit.

Placer.

ACTIVE PLOWING.—Lincoln Cor. Newcastle *News:* Farmers are having a good season for plowing and seeding. A large acreage will be sown in western Placer.

Sacramento.

HOP NOTES.—*News:* Growers are beginning to prepare for the coming season. Those using temporary poles are hauling them from the field, and the yards generally are being cleared of old vines. Many fields will this year be provided with a permanent system of trellising, cedar poles and wire or twine being used. This, together with the many improvements already planned for new kilns, drying rooms and necessary conveniences, is indicative of the prosperous condition of the hop farmers and the faith they have in the future of the industry. In three or four weeks the active work in the yards will commence, and there will be no cessation until 1892 hops are in the bale. January will be taken advantage of by growers in making the necessary additions, improvements and changes in their buildings.

San Bernardino.

PREVENTING DAMAGE BY FROST.—Redlands *Facts:* The *Southern Californian* of Fallbrook, San Diego Co. describes a method in vogue in that section to prevent damage by frost in vineyards and orchards when the weather seems to be threatening. The plan commonly adopted is the construction of heaps of brushwood, say of prunings and surplus vine cuttings, at certain intervals around or within the vineyard area. To increase the density of the smoke, pieces of turf, green weeds and tar are added, when available, and by this means too, the consumption of brushwood is economized. The object is to disseminate the smoke as thoroughly as possible through the orchard or vineyard, and it is thought that its effect is both to prevent frost from setting and to save the vegetation from damage by too sudden contact with the sun's rays after the freeze.

OUR BIG FREEZE.—Redlands *Citrograph*, Jan. 2: The past two weeks have averaged about the coldest ever experienced in this section. The lowest thermometrical measurement was on Saturday morning last. Reports were promptly received here of temperatures ranging from 19 to 26 degrees from the different orange-growing localities. Redlands reports from 23 to 26 degrees, the lowest being on the low ground next the river, as was to be expected. Riverside reports the lowest, 19 degrees as the coldest and 26 degrees for the highest. The damage done to the growing crop will not be very heavy—not nearly so much as was at first feared. The crop will not be reduced more than 20 per cent, and it is hoped that this estimate is too high. * * * The losses in nursery stock are more serious. There are many places in Redlands and Highlands where the nursery stock escaped all injury; others lost heavily, some nurserymen placing their loss at a very high percentage. As is usual, the frost ran in belts or waves, with no apparent reasons to be deduced. This big freeze, as it will long be called, emphasizes the fact that there are even in Southern California, many places where orange-growing is hazardous and should be indulged in with caution. It also marks places that possess peculiar advantages by reason of exemption from killing frosts. Take it all in all, this spell of cold weather lends force to the fact that orange-growing is a marked success in this great valley. We have just passed through the heaviest freeze that has visited this section since white man's occupancy. No bearing trees have been killed. Very few have been frost-bitten enough to set them back, even. The young trees are slightly injured, and some seedbed stock is killed. The damage to the ripening crop is not so great as was done by the winds, and we will yet ship almost as big a crop as that of last year. The orange grower can take courage and go forward. Frost belts have again been defined, and they can be avoided. The situation is full of hope, and we look to see orange-planting in suitable localities go forward with renewed and increased vigor. The lesson of the frost will be heeded.

Santa Barbara.

BENEFITS OF DEEP PLOWING.—Santa Maria *Times:* Our land is not new any more. It is entirely subdued. It will not fire vegetation as it used to do. It needs stirring up to bring a good crop. We have very rich land here but it is just like it is everywhere else on earth; continued cropping without putting anything back wears it out. It might really be well to put on a little manure but still, the sign is hardly right to talk on that subject, and as we have only used from two to four inches of top soil, just break it up good and deep and it will produce just as well or better than ever before. Our farmers are not all 50 years behind the times, and those who are not, are making a success of their calling. Our beangrowers appreciate deep plowing. Those who have gone into summer crops and diversified farming have crawled out of the old ruts and it pays just as well to plow for wheat as for any other crop. There is one vital point which our beangrowers and other advocates of deep plowing have learned, and that is that deep plowing should be done early in the season, and as the summer advances, they cultivate shallower and shallower, thus attracting and holding the moisture close to the surface late in the season. Now that we have had a good rain and farming will commence in earnest, we would suggest to put the plows down, you cannot go too deep. It will make more wheat, more corn, more and better grain of every kind. It will make more beans, more fruit, more money. It will bring you more satisfaction, comfort and happiness than you will get out of a whole lifetime of the old style so-called "California scratching."

Santa Clara.

VINEYARD NOTES.—Capertino Cor. S. J. *Mercury:* Edward Le Queene is digging his vineyard up, he having planted the ground occupied by the vines to prunes. This is only one of many instances where vines are being dug out to give place to fruit trees. Among those who have become disgusted with the prevailing low prices for grapes and wine, I might mention John Stilling, who has planted olives among his vines; both Ed and Will Stilling, who have planted theirs to fruit; J. W. Stewart; the parties who purchased the Speddiog place, and several others. Taking these facts into consideration, that while the acreage has not been increased by 100 acres in the past three or four years several hundred acres have been uprooted, the wine product of this county will be materially reduced, and though C. J. Wetmore says this county has 4,000,000 gallons of wine this year the writer would like to lay a wager with him that the cellars do not contain 3,000,000 gallons of wine of this year's crop. So if his estimate of other counties is as reliable, why the sooner the office he fills is abolished the better. Again he puts this year's vintage at 14,600,000 gallons, while two well-known growers of this county who traveled through the wine-producing counties placed it at about 4,000,000 gallons less. If this decrease continues, which from present appearance it must for several years before it can recover even if an impetus was given to this industry in the near future, as it would necessitate some four years before the vines would give any return, it seems pretty evident that some of those palatial wine cellars of San Francisco will remain idle for the necessary wine to fill them, or else be turned to some other purpose, perhaps to the manufacture of bogus wine, and this is one thing that the Viticultural Commission should try to prevent.

Solano.

PRUNING IN ORDER.—Rockville Cor. Dixon *Tribune:* Pruning is now in full swing, and the orchards present a winter appearance. The weather has been very propitious for pruning operations so far, and as a sequence, work is in advance of previous years. Indications augur well for a good crop next year, and, according to reports, a higher figure will be realized for fruit next season.

Sonoma.

CHERRY CULTURE.—Petaluma Cor. S. F. *Call:* Henry W. Hammel, who has a fine ranch on the Garden Valley road, about seven miles northwest of Petaluma, has turned his attention quite extensively to cultivation of the cherry, recognizing the superior quality of his locality for the growth of this fruit. He says: "Acting upon this thought, three years ago I set out 20 acres of the Royal Ann or white cherry. Last year I planted 20 acres more, and this year I calculate to put out about 600 trees. What I consider as phenomenal is there are no 'short' or 'half' crops. Of course the yield some years will be larger than others, but every year produces well." Mr. Hammel contends that the cherry can be successfully cultivated in but few localities, and his particular section forms one of the prominent few.

Sutter.

A THRIFTY TREE.—Yuba City *Farmer:* An orange tree in the yard of J. K. P. Elwell in Yuba City has a full yield of large ripe oranges of this season's crop, and hanging among them are a number of oranges of the previous year in a good state of preservation. On the same tree is a lemon branch in full bearing, with ripe fruit and also beautiful blossoms. The tree presents a very striking appearance.

Tulare.

ORCHARD ITEMS.—Hanford *Sentinel:* Many corporations in which outside capital has taken stock have been formed, among which we may mention the Banner Vineyard Co., which has 320 acres of vineyard; the Grangeville Orchard and Vineyard Co., of 160 acres; the Sunset Vineyard Co., of 200 acres; the Gordon Vineyard Co., of 240 acres; the Del Monte Vineyard Co., of 171 acres; the Armona Orchard and Vineyard Co., 320 acres, and others, in all of which San Francisco capital is interested. There have been many large tracts of fine land set to fruit during the year, some of them in half-section pieces, but still the small tracts planted are of such a number as to popularize the small-holding idea. The plowing up of land heretofore devoted to pasturage and meadow has made hay and feed scarce, hence hay has been given a good market, and the alfalfa meadow has been made a source of profit for hay this year far in excess of any previous period, one average alfalfa field yielding $25 per acre net for hay and still a good pasture for the winter left. Many farmers who have planted young vineyards last winter have raised an abundant crop of corn between the rows. Others have planted beans and other crops, and in this manner the land has been made to pay the expenses of the first year to vines. The yield of the raisin vines this season was most abundant, old vines well cultivated yielding 90 to 100 pounds of green fruit to the vine, equal to 30 pounds of cured raisins.

MINERAL FRUIT KING CO.—Visalia *Delta:* It was stated in last week's *Delta* that the 660-acre ranch owned by Richard Chatten, has been sold to a syndicate of San Jose fruitgrowers, headed by Geo. A. Fleming. The purchasers of the ranch have organized the Mineral King Fruit Co., and have filed articles of incorporation in the County Clerk's office. The objects of the corporation are to do a general fruit business. Two hundred acres of the ranch will be planted to fruit trees this winter.

TOBACCO GROWING.—Visalia *Times:* George Birkenhauer says growing tobacco in California is an entirely different matter from what it is in the Eastern States. An experienced tobacco grower in Pennsylvania would have many things to unlearn before he could make a success in California. The seed can be secured at the Agricultural Department at Washington. About 6000 plants should be put out on an acre of ground. The seed should be sown in a hot bed about the first of February, and if the plants are large enough, should be transplanted in May. As to whether he thinks tobacco can be successfully grown in the Tulare valley, Mr. Birkenhauer says he is strong enough in the faith to put out 20 acres this year. He has orders for a large number of plants, that will be planted out by other people.

A LARGE ORCHARD.—Visalia *Times:* Richard Chatten closed the sale of his ranch, four miles east of town, consisting of 660 acres, to George A. Fleming, Charles Fleming, W. L. Woodrow, T. Wood, T. W. Hobson, T. S. Whipple, E. B. Lewis and C. K. Fleming. All these are prominent business men of San Jose. They will begin at once and plant 200 acres to fruit this spring, mostly prunes. What is known as the Jacobs fruit ranch, now owned by the Fleming Fruit Company of Chicago, adjoins the Chatten property, just purchased, on the east, and contains 440 acres. This ranch has 60 acres of six-year-old trees, consisting of peaches, apricots and pears, with a few acres of assorted varieties. There is also growing in the nursery on the ranch, olives, figs, navel

oranges, 39 kinds of apples, 24 kinds of pears, etc., making 150 different kinds of fruit, besides the finest collection of roses of the greatest variety. The old orchard on this ranch, planted by James Houston some 25 years ago, has been neglected for some years until recently. It is now bearing well, thus dispelling the idea that the orchards in this country are short lived. The Broder ranch, purchased about a year ago by George A. Fleming and others, contains 240 acres, and is already in fruit. The three ranches contain a total of 1340 acres, and will all be in fruit at an early day. The companies contemplate extensive improvements, in drying houses, fruit-packing houses, and probably a cannery. These will be constructed as rapidly as needed. In a conversation with George A. Fleming, he stated that they intend planting a great variety of peaches, so as to have fruit ripening at all times of the fruit season. He says trees here make as great a growth in three years as they do in five years in any other place he has seen. "In selecting soil for fruit purposes, tree soil is the best. Soil which produces the oak will produce any other tree. Plant anything that goes East, and you get the same freight rates as San Jose or Los Angeles. Southern California is shipping large quantities of vegetables East, for which the freight is very low. Cabbages, cauliflowers, asparagus, lettuce, onions, radishes, etc., would be a good paying winter crop here for shipment East."

SELMA APPLES.—*Enterprise:* Lately we had occasion to mention the fine specimens of Red Warrior apples grown by Prof. Sanders and the remarkable growth of wood from a March bud of the same variety of tree. On Dec. 30th, A. C. Eberhard, who lives one mile east of Selma, sold a wagonload of as fine apples as can be grown anywhere to A. F. Brown. The fruit is of large size, without a blemish of any kind and entirely free from that enemy to apple and pear culture in many localities, the codlin moth. Last month Mr. LaGrange brought a load of fine pearmains to town from his place north of Selma. The fruit was of superior excellence. Mr. Barieau has raised as fine apples on his place near town as are to be had anywhere, no matter where grown. These are noticeable instances among many that could be cited to prove that apples of fine quality can be grown here, and corrects the general impression that the climate of the valley is too tropical for best results in the growth of this fruit. The excellence of the fruit noted is no doubt largely due to the elevation of the valley and the abundance of water.

GOOD YIELD OF CORN.—Hanford *Sentinel:* S. F. Deardoff brought in specimen ears of corn raised on his "alkali salt grass sod" which he broke up and planted to raisin grapes last winter. The stand of vines is nearly perfect, and at the last cultivation last summer, he planted corn between the grape rows. The ears he brought in averaged 19 rows on each cob and 50 kernels to the row, making 950 kernels to the ear. Two ears had over 1000 kernels on, or an increase from the planting of ten hundred fold. There is no doubt but industrious application to corn raising in Lucerne would develop one of the best corn-producing sections in the United States.

Ventura.

MANIPULATION OF WALNUTS.—*Free Press:* A well-known walnut grower of this county was talking about walnuts the other day and went on to tell how the market was worked to the grower's detriment. "At the sale of the Los Neitos walnuts this fall," said he, "two buyers were in the field from Los Angeles. One of them represented a house which usually tries to get in on every product, and the other was a young man representing most of his own capital. The young man outbid the other on a forty car-load lot, by a fraction of a cent a pound, and he was given the walnuts. The other man, in order to teach those growers a lesson, went home and sent word East and to those in the business, not to buy walnuts as there was a big stock and prices would fall down. As a result the purchaser of the nuts could not dispose of his buy, and as he was unable to make the proper advance the Los Neitos growers are still in posession of their crop. Of course this is not a usual case, but it goes to show how unprincipled some commission men can get."

CROP STATISTICS.—Ventura *Free Press:* The following is the amount of grain raised in Ventura during the year 1891: Beans, 1800 carloads; barley, 450,000 ctls.; wheat, 50,000 ctls.; corn, 30,000 ctls.; potatoes, 300 carloads; walnuts, all varieties, 10 carloads; apricots, dried, 40 carloads; prunes, dried, 5 carloads.

Yolo.

WANTS COYOTES EXTERMINATED.—Woodland *Democrat:* At the annual meeting of the Yolo Co. Wool-Growers Association at Esparta, on December the 26th, G. W. Scott made some very interesting remarks. He pointed out the good the Association had accomplished, and predicted that the 280 coyotes which it has been instrumental in slaying, if left unmolested, would by this time have increased to one thousand. He said if they were not wholly exterminated, they would destroy chickens, turkeys, geese and hogs as well. He pointed out that sheep-raising is becoming a paying industry, and every year the percentage of lambs saved is growing larger. In conclusion, Mr. Scott urged the members to stand by the Association until the work of exterminating the coyotes is completed.

POULTRY YARD.

Capons in California

EDITORS PRESS:—I should think the finest capons in the world could be raised in California. From what I learn of the climate, I should judge that in a large portion of the State, chickens can be hatched successfully under hens most any month in the year. If this is so, it is especially desirable, as one could then have capons maturing at all months in the year, and thus be in a position to supply markets continually, which is not done now. At present, capons are only to be found in markets during the late winter and early spring months, but there is a demand for them the year around which should be supplied.

From the fact of my having sent so many caponizing instruments to California, I should judge the work was receiving considerable attention there, and that the practice was gradually being adopted. One man writes me from there that he caponized 500 cockerels last year with perfect success, and sold them at very profitable prices in San Francisco.

In performing the work, it is almost impossible to prevent having more or less slips; perhaps one bird in 10 or 15 would be about the way they would run. While the slips are not quite so valuable as the capons, and do not grow to quite so large a size, yet their size and value far exceeds that of the common chicken, and they find a quick sale. Capons in the climate of New England require from 10 to 12 months from date of hatch to develop their full weight and reach their best condition, but with the climate that is to be found in California, I should think that they would grow more rapidly, especially during the winter months, and be in condition for market by the time they were eight months old. It is the cold and damp weather that we have East that retards the growth of all our poultry, and this element does not exist in many parts of California. To those people who have never practiced caponizing, I would say that the operation is of the most simple nature, and, with the proper tools, can be performed by a boy ten years old. Of course it is like everything else, the more one does the faster he can do it, but so far as requiring any experience to do the work, it is entirely unnecessary, as the tools now made do it perfectly and only need to be guided. California certainly offers exceptionally fine opportunities to raise magnificent capons, and every one who keeps poultry there should caponize their birds, whether they intend them for market or home consumption.

GEORGE Q. DOW.

North Epping, N. H.

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DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 532 CALIFORnia St., corner Webb, branch, 1700 Market St., cor. Polk. For the half year ending with December 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on term deposits, and four and one-half (4½) per cent per annum on ordinary deposits, free of taxes, payable on and after SATURDAY, January 2, 1892. LOVELL WHITE, Cashier.

ANNUAL MEETING.

The regular Annual Meeting of the Stockholders of the Grangers' Bank of California, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 12th day of January, 1892, at one o'clock, P. M.

For Grangers' Bank of California,
ALBERT MONTPELLIER,
San Francisco, Dec. 14, 1891. Cashier and Manager.

WANTED Horticulturist. Practical Horticulturist of California experience can have steady employment on one of the largest fruit farms in San Diego County, consisting of Oranges, Lemons, Olives, Apricots and Grapes. Only competent, wide-awake parties need apply. Address, with references, E. M. FRANK, 215 California Street, San Francisco, or F. F. ADAMS, Fallbrook, Cal.

RAISIN GROWERS, ATTENTION!

POSITION WANTED AS FOREMAN ON A RAISIN farm, by a married man with five years experience in growing and packing raisins. Wife can take charge of packing department, being a first-class packer. Prefer taking position January 1, 1892, but can come at any time desired. Best of reference given as to capacity, honesty, etc. For particulars, address C. N., Box A this office.

"DEAD LOCK" GOPHER TRAPS are best. Price 25c apeice, or $8 per doz. delivered. I. F. WHITE & SON, Pomona, Cal.

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To An Article

Of acknowledged superiority in any capacity and under all conditions. The plow is a very important article on the farm, and those who select wisely will accept none but the Oliver Chilled Plow, as it has neither peer nor competitor

FOR ORCHARD AND VINEYARD WORK



THE OLIVER

Plows have reached a larger sale, have proved more popular and given better satisfaction than any other plows on the face of the globe.

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OLIVER CHILLED PLOW WORKS,

37 MARKET STREET, SAN FRANCISCO, CAL.

A FEW KNOCK-DOWNS

Stock-taking last week has turned up a good many bargains where we have too much goods of a kind, or too little to keep it on the regular list, or out of style and reduced to close them out.

Our stock must be kept all O. K., at whatever sacrifice. 1891 goods and overstock must give way to new stock.

Over 100,000 Blood's, Turney's, Warren's, or Baylis' best sewing needles at 2½ cents a paper, 40 for $1.00, all sizes except 6; also 4 to 8, 1 to 5, 5 to 10, and 3 to 9 mixed darners or yarn needles at same price.

Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price.

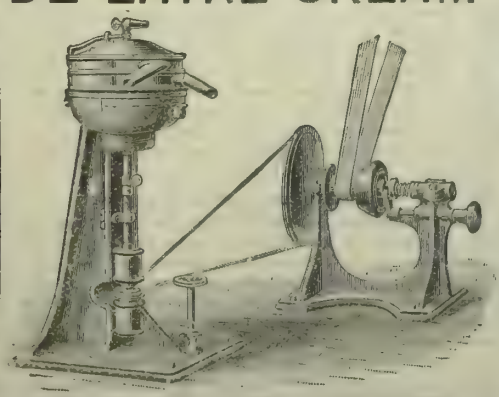
SWISS embroidery, 2, 2½, 3, 3½-inch edging, beautiful and costly, has sold at 25 to 50, now 12½ cents, and narrow ones at 5 cents. Fancy linen splash rs (samples) and other linens at 50 cents on the dollar. Button-hole twist, assorted (3 black), 25 in a box at 37 cents. Sewing silk, 100-yard spools, assorted (3 black), 65 cents dozen. Ladies' handkerchiefs, several 100 dozen at one-half price, fine goods.

10,000 articles we have not room to tell about. Order a few by mail or express if not ready for a large order by freight. Add for postage. Ask for complete list. Address

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Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or $2.40 a year (till further notice). DEWEY & CO., Publishers, 220 Market Street, San Francisco.

Redlands, San Bernardino Co

We give herewith a view of one of the prettiest hotels in Southern California. Its location for salubrity and view is not exceeded by any other hotel or private residence in all the State. The view therefore is more extensive, more picturesque and grander than we have ever seen from any other locality. It is finished and furnished after the best taste of modern art and style, and has recently been put in complete order and is now, we believe, open for visitors and permanent boarders. This hotel is most beautifully located, just out of the business center of Redlands, with which it is connected by a street railroad. There is no need of ascending to the roof to get a view; but, standing upon the balcony, which it will be seen from the finely executed view we give of the hotel, the observer may look westward 20 or 30 miles and see before him the most beautiful valley in California, gently falling away to the west, with a fringe of grand old mountains snow-covered a part of the year, and shutting in the valley from the north, while the southern edge is bordered with irregular, broken hills, beautiful in contour, throughout the same extent. The valley itself is beautifully studded here and there with pretty little cities and villages, surrounded with grove after grove of orange trees, which are just now changing their deep green to a beautiful golden color, and contrasting strangely with the snow-covered mountains on the right. Turning now to the north and east, the observer beholds Old San Bernardino and its companion giant, "Old Baldy," both at this time covered with their winter mantle of snow, and rising far above all surrounding heights. We know of no other place on the broad continent where a view can be obtained so mixed with grandeur and beauty, or capable of so thrilling the soul with such pleasant delights of semitropical scenery and mountain grandeur. The panorama is one which it is worth a journey across the continent to behold and rest the eyes upon for even the briefest period.

The Town of Redlands

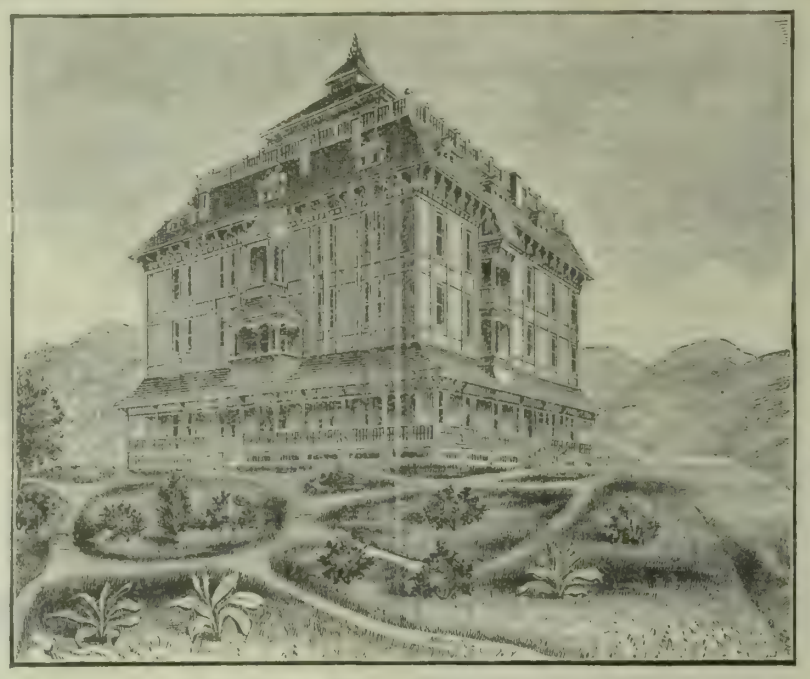
Is located at the foot of a range of mountains, upon an extensive mesa, reaching out into a gradually descending plain, which extends to the basin of the Santa Ana river. Its elevation and surroundings are such as to render it much more free from frost than perhaps any other locality in the State. Probably no other town in the southern portion of the State can show an equal amount of prosperity. It is, perhaps, the only one which has never gone back from the boom times of three or four years ago. Like all others of the orange-growing localities in Southern California, it felt the boom and profited by it. But when the boom came to an end in other localities, Redlands kept right along with its steady legitimate growth and improvements, and has continued to do so until the present day. There are several reasons for this result. First, it has the best, largest and most unobjectionable water facilities in the State. It derives its water from

The Bear Valley Reservoir,

Which is fed directly from the snow upon the mountains by which it is surrounded. Before the dam was built, the site of the reservoir and its feeders were practically dry in the summer. Hence no riparian rights were either invaded or threatened. On the contrary, all the water, which is stored up in that reservoir during the winter, is gradually drawn off in the summer, and by its seepage from the many thousands of acres which it serves to irrigate, its helps keep up a fuller supply of water in the rivers below it, and is therefore a blessing even to those who are not directly benefited by it. Were the water with which the Bear valley reservoir is filled not restrained and held at that point for convenient use, nearly every gallon would find its way to the sea in the early summer, before irrigation becomes necessary and thus be lost for all utility. This reservoir is, we believe, the largest artificial irrigator on the continent.

A Senseless Excitement

Appears to be studiously kept up for some reason or other, nobody knows why, in regard to the safety of this dam, and appeals are periodically made against the danger to be apprehended from its breaking away. The writer is personally familiar with the locality, and with all the particulars connected with the construction of the dam. He has also conversed freely not only with Mr. F. E. Brown, under whose direction it was constructed, but also with other engineers who have visited it, and who are familiar with all its details. The dam has now stood firmly for seven years, with nearly a full volume of water behind it. It has also been exposed to storm, ice and even earthquake, without manifesting the least sign of weakness; and to prevent any possibility of accident, competent men are kept day and night within a few feet of it, ready and fully prepared to guard against any possible danger from floating objects which might injure it, and to reduce its volume of water promptly, should there appear to be any necessity for so doing. These parties are also in telegraphic communication with all the settlements below, the nearest of which is some 25 miles or more distant. This distance, the extremely rocky nature and sinuosity of the natural channel it would have to take, with all the other precautions constantly attended to, ought to put a stop to such unnecessary attacks and efforts to keep



TERRACINA HOTEL, REDLANDS, CAL.

people in dread of what is really an impossible occurrence. This body of water is the bottom fact which has made it possible to convert Redlands and most of the country around it from a brown and cheerless desert to one of the most beautiful and fertile spots in all California. But to return to the town for which this notice is more especially intended, and which, also is far out of the way any body of water could possibly take from the source indicated, we may remark that

The Growth of Redlands Has Been Really Phenomenal.

And it has been accomplished without any, or at least but very little, of the noise and bluster that has been required to build up most other towns in California. Not only Redlands itself, but the country and neighboring towns around it, have been built up by the steady energy, determination, push, influence and money of a few of its leading citizens. Of course even such energy and enterprise would have failed had not the location, soil and water employed been utilized as chief factors in the enterprise. Never has Redlands realized greater improvements or made more rapid strides in everything which combines to make a town or city than it has during the past six months of comparative rest in most localities in the State. During the past summer, 14 brick blocks have been built there, containing 28 large rooms for stores; in addition to which, no less than 138 residences have been built, ranging in value from five to twenty thousand dollars each. The total value of these improvements has been set down at from $475,000 to $500,000. And still, with all this activity in building, we have a letter before us from a friend who desires to locate in Redlands, who assures us that he has thus far been unable to find a house into which he can move his belongings. The average of new land improved keeps equal pace with the improvements above noted. During the past year of 1891, no less than 1300 acres have been set out with orange trees. The year before, 1200 were improved, and the year previous to that, 1889, numbered 1300 trees. The total acreage improved up to the present time is set down as 45,000 acres! These figures have been communicated to us by a private and reliable correspondent but a few days since.

Schools, Churches, Hotels and Other Public and Semipublic Buildings

Keep equal pace with all mention of progress. Three banks have already been established and note a good run of business. The two papers published in Redlands—*The Citrograph* and *The Facts*, will not suffer in appearance or in management with any similar papers in the State. The *Orange Belt*, for circulation at Allesandro, is also published in Redlands, but, we presume, will soon make a move to its own proper locality. That place, as well as Redlands, and which was founded chiefly by Redlands people, appears to be growing too fast for the carpenters and builders to keep up. The town is also

Well Supplied With Railways.

Both the Southern Pacific and the Santa Fe roads have for some time been running several trains into or through the town every day. The place is, of course, connected with the outside world by telegraph by both the Western Union and the Postal telegraph lines. A telephone company also supplies the city with excellent local service. There is a large number of important business corporations which make Redlands their headquarters. We have hitherto neglected to say that Redlands is and has been, for over a year, an incorporated city. A list of various branches of business carried on in the city, which lies before us, numbers 181. The population of the city numbers 5000, with an expectancy of double that number inside of five years from this date. The city contains many beautiful and costly residences, and more of that class are constantly being built. Much attention is paid to beautifying the city with shade and ornamental trees, both along the streets and about the dwellings. The people who constitute this beautiful and phenomenal city are of the most desirable class, and no town of its size in this or any other State can boast of better society. Although we have more than filled the space which can properly be allotted to this notice, the subject is very far from being exhausted.

GOOD HEALTH.

A "Home" for Cancer Patients.

In view of the alarming increase in this city of the dreadful malady known as cancer, and the want of adequate facilities for the proper care and protection of those who come here for treatment, several of our philanthropic citizens, many ladies among them, have for some time been looking about for a place and also for means for the establishment of a "Home," where those thus afflicted might find shelter and proper home comforts, while under treatment for cure, or while suffering the tortures which are inseparable from the more advanced condition of this malady, under which no treatment can save, but merely ameliorate sufferings which can end only in death. Such a home is especially needed in this city, which is the natural and most convenient resort for treatment of those on this coast who are afflicted with this malady.

Those interested in this humane work have finally met with the fullest success at the hands and through the favor of a most worthy and active association of benevolent ladies known as the "King's Daughters." This association has recently been placed in possession of the building owned by the city and occupied by the Old People's Home up to the time that, through the benevolence of Mrs. Charles Crocker, that association came into possession of their new quarters on Pine street.

The "King's Daughters" have refitted and refurnished this building, and made of it a most homelike and comfortable dwelling-place for invalids, for which purpose the city allowed them the use of the premises.

On looking around for inmates for their new Home, their inquiries naturally led them to consider the condition and needs of the large and increasing number of those unfortunates who are afflicted with the generally supposed incurable malady of cancer. Pursuing their inquiry in this direction, they soon became acquainted with the fact that that class of invalids were greatly in need of just such a place, as they had to offer. They moreover were made well cognizant of a further fact of which they only previously had dim knowledge—that cancer patients were being successfully treated in this city, and restored to health without the use of either plaster or the knife, or any other treatment which entailed pain or suffering beyond that which was inherent in the malady itself.

After full inquiry and consultation, it was determined to devote a portion of their rooms to patients undergoing such treatment, and to install the practitioner, Mrs. C. A. Cook of 224 Post street, who is the discoverer and dispenser of that benign treatment, in charge of such patients.

Within one week after the rooms were ready, five patients, each with a nice cosy room, were enjoying the accommodations offered, and the treatment, all of whom are now doing well, with every prospect of an early and complete cure. Several other rooms will soon be occupied by the same class of invalids.

It Is One of the Most Remarkable Facts Connected with medical practice, that, of all other maladies, this one alone is regarded by the profession as absolutely incurable. Such an opinion has been held by them so long that it has become chronic, and seems to be an inborn idea with the profession, and quite as ineradicable from the minds of a majority of physicians as is the malady itself from the bodies of their patients by their mode of treatment.

If the work so well begun by the good "King's Daughters" should result in eradicating this nonprogressive and false idea from the minds of our conservators of health, they will have accomplished a work which will entitle them to a monument higher and more beautiful than any such structure ever yet erected; for it will any such structure ever yet erected; for it will lead to the saving of more lives from terrible deaths than have been sacrificed by all the great military heroes in whose memory the chief of all the great monuments of earth have been erected.

The "King's Daughters" constitutes one of the leading benevolent associations in the country, and is doing an immense amount of good. They number over 1000 in this State and fully 30,000 in the Union. They have State and National organizations, by which the work of each society is known to all the others. Through this organization, the work of this society will in time be made known throughout the Union, and the good news, which will soon be made evident in this city, that cancer is curable, will in time reach the stricken victims everywhere and lead to a movement which will eventually place the San Francisco treatment within the easy reach of every city and town in the Union—and the world as well.

Yes, the Remedy Is a Secret One,

And so was Koch's; yet the "regulars" from all over the world rushed to Berlin to get the secret remedy, learn its mode of application, and take it to their homes for trial. No matter if it was a failure. The principle involved was all the same. A medical *man* of high standing was the discoverer. In the present case the discoverer is a *woman* of humble practice. But what of the secrecy. All that is asked for is a medical investigation to prove either that the remedy is what is claimed for it or that it is a swindle. The doctor invites the test. If no competent medical authority in this city will take up the glove, is it not fair to suppose that they dare not do so? If they dare not do it, can any but a sinister motive be the hindrance? If the faculty refuse to investigate, the work which has now begun will soon speak for itself and settle the matter to the satisfaction of all reasonable persons.

But, further, with regard to the secrecy of the remedy, our healer may lack science, nay, she may be even selfish, if you please, holding the knowledge of a remedy for private gain, when the scientific professional would give the same to the world. Such things are a minor consideration and should have no weight whatever when the lives of thousands are at stake. The facts, which are within the reach of every one, are that scores of cancer sufferers in this city are constantly receiving *permanent* relief by purely constitutional treatment, without the use of the knife or caustics. The most of these cases have been pronounced unmistakable cancer by leading physicians and surgeons, and many have submitted to previous surgical operations, without any beneficial result. This assertion is made with due regard to its import, and proof will be presented to any one interested, by the writer, whose initials are well known in this city. With these facts in view, which are well known to hundreds of our citizens, it would seem that the theories and antiquated ethics of the doctors are entirely unworthy of consideration. W. B. E.

Lectures at the Stanford University.

Professor John Henry Comstock will give a special course of instruction, by means of lectures and laboratory work, in the study of insects at the University, beginning January 4, 1892, and continuing three months.

This course will be free and open to any person interested in the subject who will do the work required, whether a member of the University or not.

In addition to this general course, the week beginning February 15th will be devoted to a series of popular lectures on the insects injurious to fruit in California, and to other matters important to the fruit growers of the State.

At the same time a series of lectures on fruit-growing will be given by Mr. Emory E. Smith of San Francisco, Secretary of the State Floral Society and a Director of the State Horticultural Society.

All persons interested are cordially invited to be present at these lectures.

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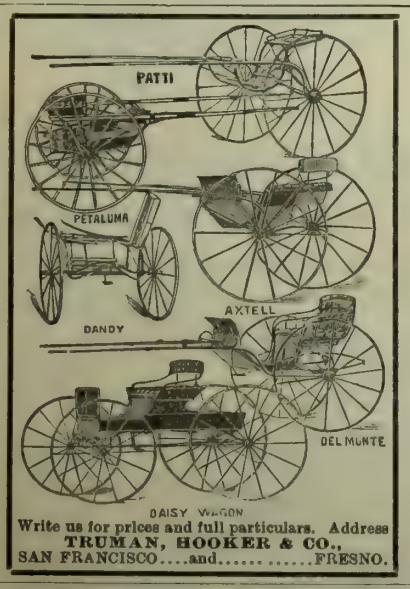
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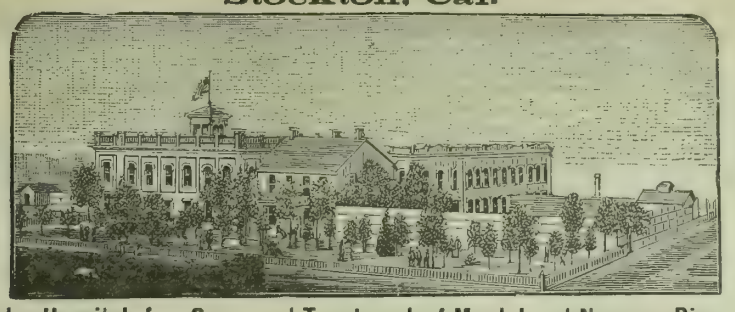


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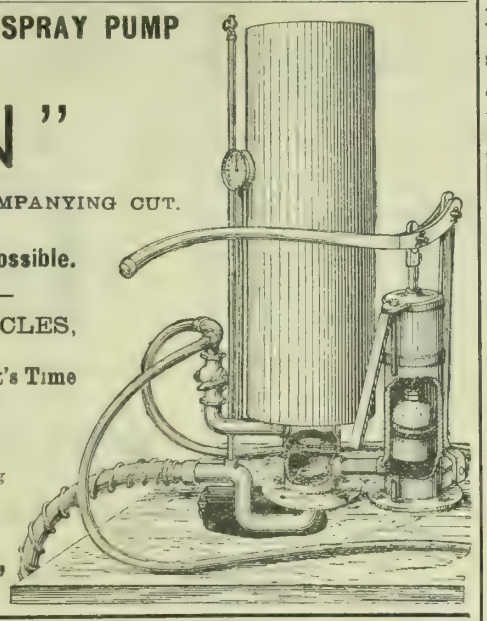
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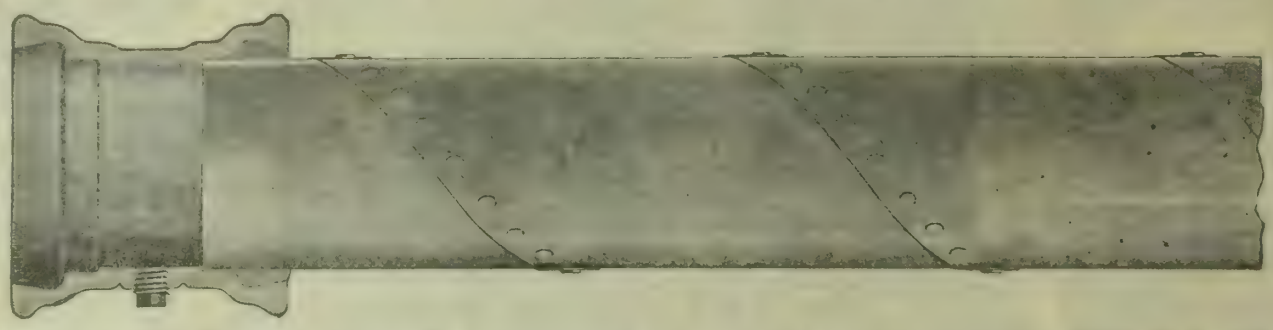
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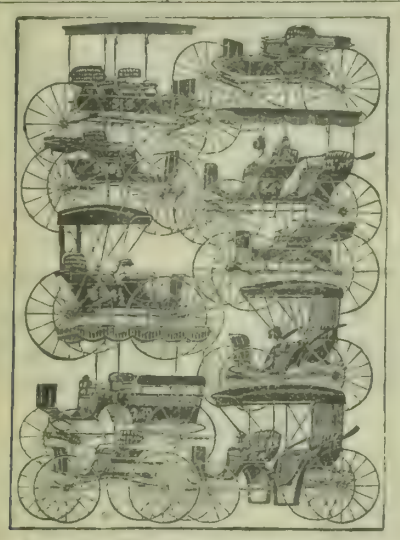
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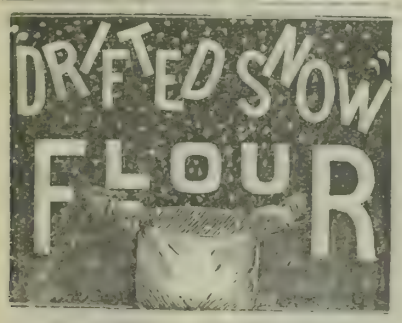
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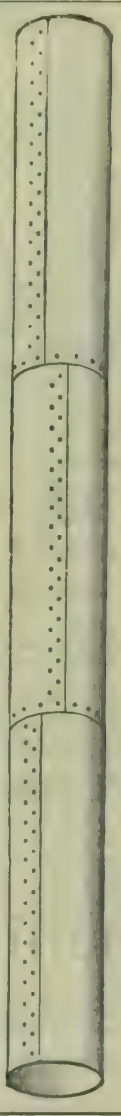
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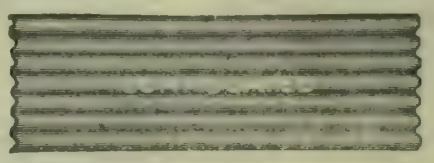
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THE VINEYARD.

The Queen Isabella Grape.

EDITORS PRESS:—Referring to the article on this grape in the issue of your paper of the 2d inst., I would beg to make a few remarks.

That the Pierce Grape is a sport of the Isabella there can be no doubt, and when you state that "you believe some parties went so far as to claim other origin for the variety than that described," you are not mistaken, for I have done so myself, but I can prove that I am entitled to such a claim.

In 1878 I moved on to the vineyard "Fontenay Vineyard," where I have resided ever since. Shortly after taking possession, a friend of mine, living at the time in Santa Clara, called my attention to the famous Isabella grape as grown by Mr. Pierce. I suggested that he procure me some cuttings, but being met with the remark that Mr. Pierce would dispose of none, the matter dropped.

The following year, while my men were picking ordinary Isabellas for market, I noticed some extra fine ones. I immediately hunted up the matter and found the vine. It was trained on a trellis some three feet from the ground, and branched off at about 18 inches, the cane on one side bearing the ordinary Isabella, while the other bore the fancy ones. The vine at the time was at least 10 or 12 years old. I sent a box of my grapes to my friend, who pronounced them fully equal to Mr. Pierce's. I also took a sample bunch to Mr. C. A. Wetmore, at the time Chief Vitioultural Officer, who suggested that I should call them the Queen Isabella, the name which they have borne ever since.

I have tried reproduction by cuttings and by grafts, as have also many of my friends and neighbors to whom I gave cuttings, and in every case have we succeeded in reproducing the Queen. A year or two later, I discovered no less than three other vines, each one of which had a "sport" producing the same Queen Isabella. There can be no question about their being "sports," for in each case they branch off some distance (at least one foot) from the ground.

Mr. Albert Montpellier, manager of the Grangers' Bank, can testify to this fact, for, several years ago, while paying me a visit, I showed him the original vine, loaded at the time with the finest fruit. He was so struck with the sight that he asked me for some cuttings; and in order that there should be no mistake, he took from his pocket a new cambric handkerchief, and tearing it into strips, he marked the cane which bore the fancy or "Queen Isabella." He also took a bunch of these grapes, which he had photographed and lithographed, and then preserved it in alcohol, and he no doubt has it to this day.

I do not pretend that the "Pierce" grape did not originate with Mr. Pierce, but I do claim that it also originated with me; and I see no necessity for giving the identical grape more than one name, and the one in question being beyond a doubt an Isabella, "Queen Isabella" or Isabella Regia seems to me the more appropriate.

My grapes have been selling in the San Francisco market for several years at from 7½ to 15 cents per pound, when other varieties were selling at from 1 to 3 cents.

HENRY MEL.

Glenwood, Santa Cruz Co.

[We are pleased to have this statement from so well known a vine grower. It shows the existence of another Isabella sport, and there may be, of course, an indefinite number of such sports. The State Horticultural Society has shown some disposition to look into this matter, and we trust it will do so during the next ripening season.

As we understand Mr. Mel's position, he does claim that his grape is identical with Mr. Pierce's, not that the question of origin is at all involved; that both are independent sports from Isabella and are like each other. Now, are there others?—EDS. PRESS.]

A Plan to Improve the Sacramento.

SACRAMENTO, Jan. 5.—Before the Board of Supervisors to-day, a letter from John Doherty, a civil engineer of Oakland, was read, in which it was stated that the building of the levee past Washington, on the Yolo side of the river, will cause this city to be flooded. Doherty lived here ten years and says he knows what he is talking about. The writer observes that the Supervisors should call the attention of farmers and miners to the fact that, until the Sacramento river is made navigable, they have no basis on which to found an argument. The river being nearly level, with only a fall of six feet between Sacramento and San Francisco, no locks would be required, and no levees should be built close to the banks of the river. It should be cleaned out to an even grade and the material spread on the low ground. Sacramento would then become a mart of commerce and would enter on a career of prosperity. A few ships in the Sacramento would start new life, and San Francisco would be the greatest produce market on the coast. The letter continues to the effect that the Boards of Supervisors of the counties having interest in the navigation of the river should take whatever steps are necessary to secure the appropriation necessary to improve it.

THE FIELD.

Farmers, Plant Alfalfa!

EDITORS PRESS:—We read every few days the great yield and profit of growing alfalfa, yet how few farmers have enough for chickens and pigs to feed on. Why this is, is one of the puzzling questions that I cannot satisfactorily answer. It grows without irrigation on all bottom lands, and will produce well on most all kinds of land with irrigation. Every farmer with common intelligence that has been in this State two years that reads newspapers must know something about this ancient plant. Not planting alfalfa cannot be on account of expense, for all you have to do is to plow deep and make mellow and sow about 20 or 25 lbs. to the acre, with or without other crops, and harrow lightly. The seed is usually worth from six to ten cents per lb.

I have seen a fine stand from seed sown in October before the rains set in. I usually plant in January or February. Some claim the frost will kill the tender plant, and will not plant until April or May. It depends a good deal on what kind of land it is desired to plant on. If low bottom land that holds moisture late, it can be planted in June and make a good stand. I have been handling alfalfa since 1858, and I have not satisfied myself that frost kills it, except in rare cases.

We have become so accustomed to alfalfa up and down the Sacramento, American and Cosumnes rivers that we would hardly know how to do without it. Most all cattle and dairy men use it, and especially for family cows in the city. Alfalfa hay is seldom below six dollars per ton; usual price seven to eight, and now it is worth from twelve to thirteen.

On account of break in levees a great acreage was drowned out last year, and now they are bringing it in from Nevada by the carload. Teams that are not worked too hard will do well on alfalfa without grain.

By getting a good stand, that is, plants close together, the hay will be finer and much better. If the plants or crowns are far apart, the stocks will be large and coarse as willow sticks.

It takes the best kind of judgment to cure alfalfa in good shape. It requires close watching to see when it is ready to rake, bunch and stack. To do this too soon makes musty hay, undesirable and distasteful to stock. Waiting too long makes it too dry, the leaves fall from the stocks and much is wasted.

Alfalfa can be cut three or four times, according to location and intention of grower. We usually cut twice and then save the third cutting for seed, which is worth more than all the hay. The straw or chaff from thrashing is almost as good as the hay to feed to stock, cattle or horses.

When the plant first comes up in the spring, it is very watery and rank, and stock are not as fond of it as in May, June and July, when it is very fattening.

I have never measured the field from which I thrashed the seed, but should say it would yield from 300 to 500 pounds to the acre.

How inviting it looks to ride in the country when all other grass has dried up, and see a few acres of alfalfa with its green contrasted with the dry stubble fields. Every farmer that can get water from ditch or windmill, should have a few acres, to look upon as an oasis when everything about him has dried up.

When my eldest brother was out here to make me a visit in 1871, it was rather a dry year and being from the New England States he was not used to such a long spell without rain. I had a ten acre alfalfa field, and when it got too dry and dusty for him he would take his cane and walk down to the field and from top of the levee take a long look, and renew his faith and hope in California climate and soil.

On his return he would say "well, Daniel, if everything fails you, and you lose hope, just go down and look at your alfalfa field."

It is said that hay is the most valuable crop grown. A large wheat farmer told me the other day, that if he had not plowed a furrow and let all his land volunteer and cut for hay, he would have made $10,000 more than he did make by plowing and growing wheat.

Farmers that have no alfalfa, try my suggestions and if they prove good, send me a pound of gilt edged Jersey butter and a dozen of Light Brahma hen fruit. If false, send me your compliments and say I did not know what I was writing about.

Sacramento. D. FLINT

MILL FOR MARTINEZ.—It is announced the vast milling and warehousing interests of Carquinez straits are to be increased by the removal of Horace Davis & Co.'s Golden Gate Mills to a site which has been donated by the village of Martinez. We hope it is true. The dreary waste of tules in front of Martinez has always seemed to us an undesirable environment for the town and to have it covered with a milling plant will be a great help to the region in many ways.

SUTTER COUNTY WILL BE THERE.—The Supervisors of Sutter county have appropriated $100 toward making an exhibit at the State Citrus Fair in Auburn, next week. It is proposed to make as good a general display as time will permit.

Transplanting Old Orange Trees.

Many people of limited experience in orange culture seem to think that an orange tree cannot be moved with any degree of safety after it has reached a bearing age.

This is an erroneous idea, as men can be found in most any community who have tried the experiment and met with very satisfactory results.

Two years ago I had some experience in this line, and met with such good success that I should not hesitate to move trees of most any reasonable size and age when convenience or necessity require their removal from one place to another. I moved nearly fifty orange trees, ranging from five to ten years old, some of them fully fifteen feet in height and six inches in diameter at the trunk; most of them had been bearing for several years. During a warm spell in May, I cut them back to about six feet in height, or where I could reach conveniently with saw and shears. The lateral branches were also cut back so as to leave a somewhat symmetrical head, although mostly composed of bare stubs; this also gave me a good chance to remove all the dead branches that had accumulated about the center of the tree, where the dense foliage had shut out the light and air. These trees were removed for two good reasons. In the first place they were scattered among deciduous trees where they caused considerable unnecessary labor to care for them when the deciduous trees were dormant; and more than that they were needed to fill some blank spaces in another orange grove of about the same age, After getting them all cut back and removing the brush, I proceeded to dig the holes for their new home. These holes were made from five to six feet across and about three feet deep, and a furrow plowed along the side in readiness for the water when it was needed. The work of pruning and digging holes occupied several days, and by this time the trees had somewhat recovered from their severe shock and were in better shape to stand the root cutting which must necessarily follow.

To accomplish this a circular trench was dug around the root of the tree, about three feet from the trunk, and the roots, whether large or small, were severed with saw or shears, as fast as they were uncovered, When a sufficient quantity of earth had been removed the tree would careen to one side so that the tap root could be cut, and the tree would be ready to move. Our Lugonia soil is a sandy loam, which long experience has proved to be admirably adapted to the culture of citrus fruits, and from its nature would not adhere to the roots of the trees, which were still as heavy as two men cared to lift from the hole and place on a sled which was drawn up to receive them. After covering the roots with a blanket to protect them from sun and wind, they were drawn to the holes prepared for them, and let down carefully to the proper depth, which we consider a little lower than they originally stood. They were then moved into line with the other trees, and the holes filled about two-thirds full of dirt and a stream of water turned in to settle the earth firmly about the roots.

Two or three days after this the holes were filled nearly full of earth, the water turned in again, and with occasional irrigations and cultivations they soon began to put forth sprouts, and produce canes several feet in length the first season. The next season some of them produced a few fine specimens of oranges.

The proportion of loss was very small, as but three or four out of the whole number failed to grow, and I am satisfied that trees thus handled, and properly cared for afterward, will commence to bear again in two years, and in several years more will so far regain their size as to differ but little, if any, from the surrounding trees.—C. H. LATHROP *in Orange Belt.*

PALO ALTO HORSE SALE.—An advertisement in another column announces the sale of some Palo Alto horses—brood mares of distinguished ancestry and honorable associations. Good long notice is given, as the sale will not occur until Feb. 24. Catalogues are now ready at Killip & Co.'s, and should be carefully studied over. This may be a chance to get good blood at very favorable figures.

WE wish to direct the special attention of horsemen and those interested in the breeding of draft and carriage stallions to the ad. of Theo. Skillman, the well-known importer, which appears in this issue of the RURAL. Mr. Skillman celebrated the advent of the new year by placing on exhibition and for sale at his stables in Petaluma a new and meritorious importation of stallions—the pick of Europe. None better have ever been seen in the State.

Jacks and Jennys.

In the light of history and experience for ages, the most reliable beast of burden has been the mule. The closer relations which are being fostered between the United States and the South American Republics are giving an impetus to the breeding of jacks, jennys and mules. Quite a number of our most enterprising ranchers and farmers have seized upon the advantages of this enterprise, and have quite extensive breeding establishments for jacks and jennys. The largest of these on the Pacific Coast is owned by L. U. Shippee, Esq., of Stockton, Cal. His first importation was of the most royal blood that can be found in Kentucky. He has added to it from time to time from the most fashionable strains until he has a herd that is equal to any in the United States. He has recently bred some jacks that weighed over 1300 pounds and were over 15 hands high, for which he received a long price. His herd having now increased to over 50, he has concluded to put upon the market a few, and therefore would at once open negotiations with any one who wishes to purchase any of this royal blood in jacks and jennys. His advertisement appears in this issue of the RURAL PRESS.

PECANS.—We acknowledge receipt of a fine sample of pecan nuts from Herbert Post, manager of the Texas Pecan & Seed Co. of Fort Worth, Texas. The nuts are the famous "Texas Thin Shell Pecan," and are very large and delicious. Mr. Post reports a very fine crop of seed pecan nuts this year, and his sample shows it. An advertisement will be found in another column.

WHEN IN TULARE patronize E. D. CASTLE'S livery and feed stables.

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BEST CHANCE NOW OFFERED.

All in the Wonderful Artesian Belt or New Tulare Irrigation District.

Within one mile (southwesterly) of Tulare City limits, 160 acres. Will be sold as a whole or in five-acre homestead (or villa) lots.

Seven miles southwest of Tulare, 480 acres, principally good for grain, alfalfa, vineyard, fruit, nuts, etc.

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Will sell as a whole or in lots to suit. Title perfect. All surrounded and subdivided with wire fence. Residence has a garden, shrubbery and plenty of shade trees attached to it. Terms, one-fourth cash and balance in easy payments to suit purchasers.

Also, 160 acres less than two miles south of the 480 acres, of equally good but unimproved land, bound also to be greatly advanced in price.

Examine this land and improvements and be ready to bid it off at a bargain.

Auction in Tulare City, Saturday, Feb. 27, 1892. Place and hour of sale to be announced later.

Write or call on E. M. DEWEY, Tulare City, or A. T. DEWEY, No. 12 Front St., S. F.



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IN 15 MINUTES.



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Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

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COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

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M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

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ANDREW SMITH, Redwood City, Cal.; see adv't.

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WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

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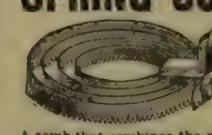
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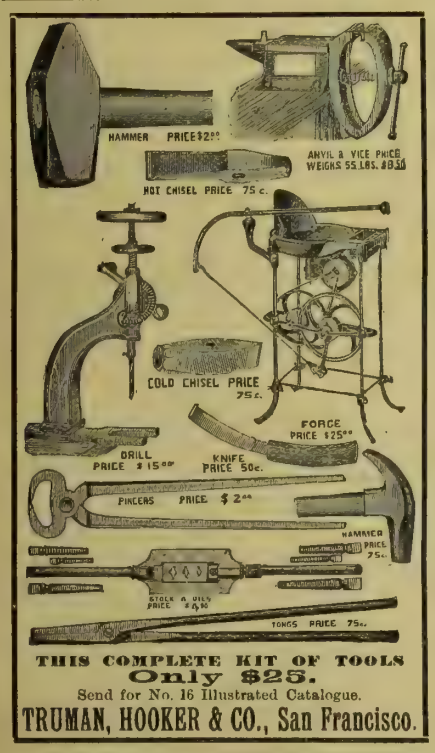
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4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
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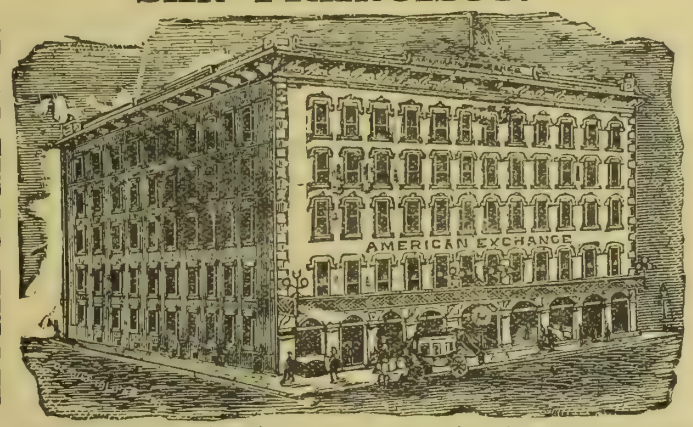
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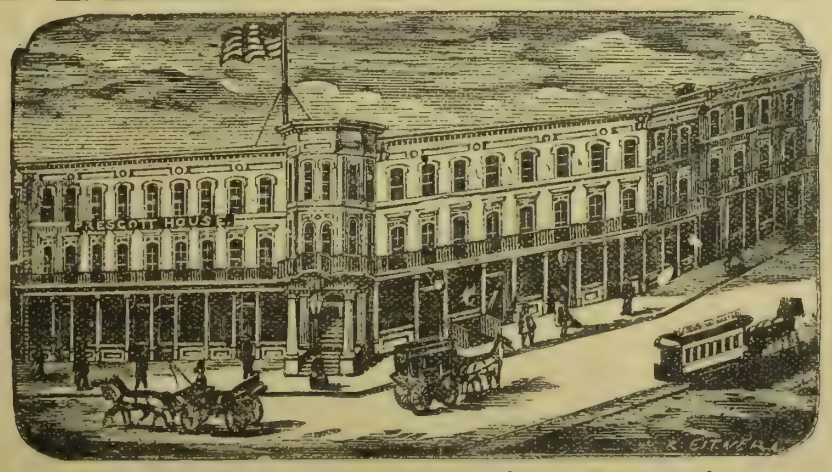
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ORANGE CULTURE A practical treatise by T. A. GAREY giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy by DEWEY & CO., Publishers, S. F.

S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 6, 1892.

We have fairly entered the new year, yet it may take at least a fortnight before business resumes its normal condition. Money is in good supply, with the rate of interest favoring first-class borrowers. Rains and cloudy weather are working to the interest of farmers who are pushing outdoor work. Eastern and foreign wheat markets shaded off slightly, but toward the close the tone is stronger. The following is to-day's cablegram:

LIVERPOOL, Jan. 6.—Wheat—Firm. California spot lots, 8s 6¼d; off coast, 43s; just shipped, 43s 3d; nearly due, 43s 3d; cargoes off coast, quiet; on passage, steadier; Mark Lane wheat, quiet; French country markets, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May
Thursday		8s7½ d	8s7½ d	8s7 d	8s7 d	8s8½ d
Friday						
Saturday		8s7 d		8 6 d	8s6 d	8s6 d
Monday		8s6½ d	8s5½ d	8s6 d	8s6½ d	8s7½ d
Tuesday		8s6 d	8s5 d	8s5½ d	8s5 d	8s5 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s	43s	43s	Steadier.
Friday				
Saturday	43s3d	43s3d	43s3d	Rather firmer.
Monday	43s3d	43s3d	43s3d	Steadily held.
Tuesday	43s	43s3d	43s3d	Inactive.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Jan.	F.b	March.	April.	May.
Thursday	176	178	180	....	178½
Friday					
Saturday	174⅞	176⅞	178½	....	176
Monday	173⅞	175½	177½	176½	176½
Tuesday	174s	176¼	178	177¼	177⅛

NEW YORK, Jan. 6.—Wheat—$1.05 for January, $1.06 for February, 1.07¼ for March, $1.07½ for April, $1.07 for May and $1.05¼ for June.

CHICAGO, Jan. 6.—Wheat—95½ for May.

Foreign Grain Review.

LONDON, Jan. 4.—*Mark Lane Express*: English wheat is selling at a decline since Christmas. Foreign wheat sold slowly. December, on the average, was firm. To-day, English wheats were firm. Foreign wheat showed no improvement. Barleys are steady, with steady and improved retail demand. Oats, firm. Indian corn in favor of buyers.

Foreign Hop Market.

Mark Lane Express, Dec. 21: There are only a few growths of 1891 hops left in the hands of planters, and for these the bids are gradually increasing. The principal trade in the Borough is between merchants and brewers, and owing to the shortening of supplies values are very firm, with a tendency to increased price. Old hops are in better demand and there is a slight improvement in values. Holders, however, are not very willing to sell, the present prices being considered too low. Continental hops are too dear on the other side to admit of much exportation to this country, but there is a good deal of inquiry here for medium and moderately priced sorts. New York State and California hops are in more demand, and the prices for these are gradually advancing.

Eastern Wool Markets.

NEW YORK, Jan. 1.—*Bradstreet's* says: The wool markets are quiet, as is generally the case during the closing week of the year. Manufacturers are not buying heavily unless large concessions are made in their favor. Values, are on the whole, steady and firm. The year closed with prices generally on a much firmer basis than did 1890. The indications point to a more active market during the first few months of 1892. Fleeces are still quiet, with very little business reported in them. Texas wools are moving well compared with the demand for other grades. A large sale is reported in California wool, but aside from this nothing of importance has been done. There is a good, steady demand for Territories. Cheviot manufacturers are free buyers of pulled wools. Stocks are much lighter than they were a year ago. Australian wools have sold better. Wools from the new clip are now on the market, and lots from the last London sales are coming forward. The new wools are not as fine as those of the last clip, being more burry and tender. Carpet wools are inactive.

BOSTON.—Dec. 31.—The *American Wool and Cotton Reporter*, in its annual review of the wool market, shows the stocks of wool unsold in the principal markets of the United States, including Boston, New York, Philadelphia, Chicago, San Francisco, St. Louis, Galveston, Troy, Hartford, Providence, San Antonio and Milwaukee, as follows. Total, 79,314,233 pounds; same time last year, 65,920,822. Adding to the foregoing figures the estimated amounts in other markets and concealed supplies, and wool in pullers' hands, they will make the total supply 106,414,233 pounds, against 92,861,682 pounds one year ago—an increase of 13,552,351 pounds. The prices for domestic wool during the year on an average, have declined about 2c per lb., and Australian and other foreign wools, fully 1c. During the greater part of the year, an unusually large amount of foreign wool, notably Australian, has been sold in the American markets, which displaced an equal amount of domestic fleeces, which were for a long period, conspicuously inactive and accumulating in quantity.

NEW YORK, Jan. 3.—Wool has no noted change in values; the trade for 1891 did not pan out in large profits. It was the lowest quoted year on record. Quick turns of stock at times made fair money, but holders who persistently waited for "the next deal" are not in the best of spirits. Still, the outlook is favorable. Stocks are not heavy, and as there are indications that manufacturers' wants will be steady, there is not the usual pressure to sell which is usual at this period. The surplus Australian stock of Boston largely belongs to mills that have been experimenting, and successfully, too, upon a production of high grade cloth. The Boston *Wool Trade Record* makes an estimate of 2@4c falling off, compared with Jan. 1, 1891. The sales add up $150,800,000, against $151,600,000. Last year's stock of domestic amounted to 29,500,000 lbs, against 24,700,000 lbs. The stock of Australian was 1,904,000 lbs, 677,500 lbs more than on Jan. 1, 1891.

Dried Fruits.

NEW YORK, Jan. 3.—Unpeeled peaches are weak; sacks, prime to choice, 6@7c. These should obtain a motion as the season advances, as there seems to be no stock of competing Southern.

Prunes are quiet and easy; five sizes sacks, 7c. The recent rates for special sizes are now extreme, even in grocery lots.

Not much new business in raisins, but the holiday Week's consumption may soon develop some replenishing demand. It is well asserted that New England towns and smaller Eastern points have sold their first purchases down low. Two-crown bags, 3¾@4c; three-crown, 4½@4¾c; boxes, loose, are quoted at $1@1.10, with sales. For layers there is no demand.

Apricots are slow and cheap. Choice sacks bring 8c; common, 6½c; boxes, 9½@10. No old lots of importance are in the way.

CHICAGO, Jan. 6—The market for California dried fruits is brightening up after the holiday slowness, so that a moderate business is already reported. Prunes are in good demand. Good clean full 2 and 3 Crown raisins in bags are in steady demand. Dried grapes remain slow of sale. The trade in apricots is very good, sack lots preferred. There is said to be a sharp demand for fancy peaches.

Hops.

NEW YORK, Jan. 3.—Hops seldom show such buoyancy at the close of the year. Cables are all strong; the home demand is liberal, though largely confined to the interior at this moment, with 20 cents paid for 1000 only prime. The prospects are generally bright for the new year. State, common to choice is quoted at 18@22½c; Pacific, 18@23c, high grades closing strong; California olds, 5@7c. The exports for the week were 3100 bales.

NEW YORK, Jan. 6.—The aggregate amount of hops drawn from all foreign sources by England leaves no burdensome supply there, and the chances are that many more bales will be wanted from America before the end of the season, unless Germany does more in the future than up to date. There have been exported this season to date nearly 40,000 bales from New York and 8000 bales from other ports, which are far above the average of preceding years.

Miscellaneous.

NEW YORK, Jan. 3.—Honey is firm, at 7@7¼c.

Lima Beans—Spot, $1.75@1.80 per bushel. The quality, size and cleanly condition of this crop is helpful to sales.

Local Markets.

WHEAT

	Buyer Season. H.	L.	Buyer 1892. H.	L.	Seller 1892 H.	L.
Thursday	187½	186⅜	....	....	....	....
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	186⅜	185⅝	....	....	155	154⅜
Tuesday	186⅜	186⅜	....	....	....	....

BARLEY

	Buyer Season. H.	L.	Seller Season H.	L.	Buyer 1892 H.	L.
Thursday	114⅜	114	....	....	107	107
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	114⅜	113⅞	....	....	111	110⅜
Tuesday	115½	114⅜	109½	108	....	....

BAGS—The market shows more strength, with holders asking 7 to 7¼ cents for June-July delivery.

BARLEY—The market, which has held weak and dull, shows a stronger tone at the close. In futures, trading shows a fair degree of activity. The following are to-day's reported Call Board sales:

Morning Session: January—100 tons, $1.11. Buyer season—100 tons, $1.15½; 100 tons, $1.15 ₩ ctl.

BUTTER—The spot supply is light, yet the market does not respond much. Improving pastures and strong probabilities of increasing receipts of butter at an early day keep buyers offish. There has been and continues to be a large consumption of oleomargarine and butterine.

CHEESE—The market is weak, notwithstanding receipts are light.

EGGS—Receipts are increasing, and as the holiday consumption is over, dealers look for a gradual sinking in prices to set in toward the last of this month.

FLOUR—The market is barely steady at unchanged quotations.

WHEAT—The sample market has held to steady prices. Dealers and others report a slow demand from buyers, with holders showing no disposition to let go at concessions. In futures, trading has been light. The following are to-day's Call Board sales:

Morning Session: Buyer season—200 tons, $1.87; 300, $1.87½; 100, $1.87 ₩ ctl.

Market Information.

Predictions of Big Crops Up North.

Palouse (Wash.) *Gazette*: The Palouse hills are moistened so thoroughly that big crops next year are as certain as the rising of the sun. Heavy rains have been falling the last few weeks everywhere from Texas Ferry to Tekoa and from Alki to Uniontown. Old settlers say that there hasn't been so much moisture for half a dozen years, and never such good prospects for crops this early in the season. In the western part of the county, about Endicott and Pampa, the moisture goes down 18 or 20 inches, while in the eastern half, from Diamond to the Idaho line, the soil is damp 25 or 30 inches from the surface. When spring opened last year, the total rainfall of the winter was not more than two-thirds of what it has been this fall up to the present time, and yet crops were good, except in a few localities. When it is known that the greatest fall usually comes during the months of January, February and March, an opinion may be formed of the condition in which the ground will be next spring.

Stocks of Grain.

Geo. A. Abel, official inspector of the Produce Exchange Call Board, reports the following stocks of grain, etc., in the city Call Board warehouse:

Tons.	Dec. 1.	Dec. 31.
Wheat	6,016	4,827
Barley	17,486	17,955
Oats	5,378	5,032
Corn	2,166	3,350
Bran	678	1,210

At the close of December, 1890, the stocks were as follows: Wheat, 6464tons; barley, 9332; oats, 1510; corn, 3210; bran, 30.

The receipts in December, 1891, were 107,766 tons wheat, 5817 barley, 2178 oats, 2968 corn and 3158 bran.

The stock of wheat, Dec. 31, 1891, in all Call Board warehouses, was as follows:

	Tons.
San Francisco	4,827
Stockton	51,154
Port Costa	94,105
Total	153,086

Cereals.

Advices from all parts of the State report active outdoor work. It is very generally claimed that there will be an increased acreage seeded to all kinds of grain, particularly wheat and barley. Some counties report that while the land has not been wet to any great depth, yet it is sufficient to meet all present requirements. With favorable spring weather there will be a very large crop outturn this year. Oregon and Washington advices report that the weather so far could not have been improved.

Wheat, in the sample market, continues lifeless. This inactivity is due largely to holders not pressing their grain on the market, and also to shippers wishing to clean up before entering in on new business. The quick dispatch given to vessels has seldom if ever before been equaled. It is now claimed that with a continuance in the present rate of loading vessels, the supply in this State will be cleaned up before three months pass by. It now looks as if we will enter the crop season of 1892-93 with a smaller carry over than at any time within the history of the grain trade of this State.

Eastern mail advices report that the outward movement of wheat was never before equaled. Wheat is going out at the rate of 5,000,000 or 6,000,000 bushels a week. For the week ending with Dec. 19th, the eastbound shipments from Chicago aggregated 120,000 tons, against 80 000 tons for the corresponding week in 1890. The enormous volume of the grain movement is further indicated by the fact that at last advices no less than 125 miles of track at Chicago were filled with loaded cars, and that the Burlington road alone had 2200 cars waiting to discharge.

Barley in the sample market has held fairly steady, with a stronger closing reported. The consumption in this State continues very heavy, notwithstanding a reported falling off in the demand from dairy and range stock feeders. It now looks as if we will have a small stock to carry over into the season of 1892-93. Receipts from up north continue light.

Oats do not appear to be pressing the market so hard, and with a relaxation in shipments from up north to this port, there ought to be a rally in prices. The demand for feeding is said to be fairly steady.

Corn is essentially unchanged. Receipts and demand are about on a par.

Buckwheat is firm, but rye is weak and heavy under a light call.

Feedstuff

For ground feed the market is essentially unchanged for feedmeal, and also ground barley, but for bran and middlings the demand shows signs of shading off.

Light receipts of hay and light supplies to draw from cause a fairly firm market at unchanged quotations. The demand for feeding range stock is easing up, but for work animals and stock fattening for market, the inquiry is about as heretofore reported.

Live Stock.

Mutton sheep are marked up. Offerings are light. Bullocks are fairly steady. With improving pastures there will be less disposition to sell at present prices. Calves are firmer. Hogs move off at steady prices.

Fruit.

Pears are going out. Quotations are more or less nominal.

Grapes are hardly worth quoting, owing to poor supplies and an almost nominal demand.

Receipts of apples from northern counties and up north continue quite free, but the consumptive demand, which is increasing and enlarging, cleans up the market for the more choice tart good-keepers. Choice to extra choice apples from Humboldt, Siskiyou, Oregon and Washington meet with a quick market at $1.50@$2.00 for full-sized boxes. Of course the poorer kinds and defective sell for less money.

Persimmons meet with a steady demand at 50c.@$1.00 a box.

In citrus fruits the market shows continued weakness, due largely to many forced consignments of wind-blown. After this rush is over it is quite reasonable to conclude that better prices will obtain, particularly when shipments eastward can be made at a profit, which will be soon after Florida's large crop is disposed of. Limes and lemons are a shade easier.

Raisins are fairly steady. It now looks as if the Eastern market will soon begin to show more life. So far as we can learn raisins have gone quite generally into consumption, and that stocks in all distribution centers are light. Many look for a fairly active spring call, which will clean up supplies and permit our entering the new crop this season with almost bare markets.

In dried fruits there is absolutely nothing new to report. Dealers continue to express confidence in the future. This belief is grounded on confirmed advices of large distributions throughout the East and also on this Coast, which have caused low stocks. With orders to replenish stocks for the spring trade, it is thought that the surplus now on this Coast will be cleaned up. Choice to fancy dried fruits of all kinds are said to be more strongly held, with an advance asked for some lines.

Vegetables.

The market continues poorly supplied with garden truck. Rains and favorable weather are favorable for gardening purposes. Unless we have unusually cold weather in this month, the season for truck farm stuff will open early.

Freer receipts of onions and a sluggish demand have caused onions to shade off.

Potatoes show a slightly stronger tone for the better keepers. Receipts are only fair, while the demand appears to be increasing. The quantity of wormy and otherwise defective potatoes put on the market was never before equaled.

Miscellaneous.

From reliable advices up to Jan. 6, the following summary tonnage movement is compiled:

	1892.	1891.	In port. 1892.	In port. 1891.
San Francisco	280,093	231,241	*119,255	*62,580
San Diego	20,174	14,085	3,319	19,223
San Pedro	7,544	7,478	1,453	
Oregon	49,515	31,716	40,312	
Puget Sound	21,880	28,010	....	....
Totals	579,206	362,530	164,339	81,803

*Engaged for wheat, 1892, 83,982 1891, 53,262

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Dec. 28, are as follows:

	1891.	1890.
Wheat, ctls	7,812,619	5,286 788
Flour, bbls	523.741	542,000
Barley, ctls	764,703	166,376

Poultry is generally higher, owing to light receipts.

Hops are in light supply. To meet their requirements both brewers and shippers are forced to pay more money.

Wool is well cleaned up. It now looks as if better prices will rule soon. This will be enlarged on in our annual review, to be published this month.

Honey is dull.

Grass seeds are in good demand at firm prices.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 6, 1891.

BEANS AND PEAS.			FLOUR.			
Bayo, ctl	1 75	@ 2 10	Extra, City Mills	5 40	@ 5 50	
Butter	2 20	@ 2 65	Do Country Mills	5 25	@ 5 50	
Pea	2 35	@ 2 65	Superfine	3 40	@ 3 65	
Red	1 90	@ 2 05	NUTS—JOBBING.			
Pink	1 75	@ 2 05	Walnuts, Cal. lb	7	@ —	
Small White	2 25	@ 2 55	Do Choice	8	@ 9½	
Large White	2 10	@ 2 45	Do paper shell	9	@ —	
Lima	1 65	@ 2 25	Do Chili	7½	@ 9	
Fld Peas, blk eye	1 50	@ 1 75	Almonds, sft shl.	11½	@ —	
Do green	1 90	@ 2 10	Paper shell	13	@ —	
Do Eastern do	2 60	@ 2 80	Hard Shell	6	@ 7½	
Do Nlee	1 35	@ 1 45	Brazil,	6½	@ 8	
Split	4	@ —	Pecans small	12	@ 14	
BUTTER.			Do large	15	@ 17½	
Cal. Poor to fair, lb	15	@ 30	Peanuts	3½	@ 5	
Do good to choice	32½	@ —	Filberts	11½	@ 14	
Do Giltedged	35	@ —	Hickory	7	@ 8	
Do Creamery rolls	35	@ —	Chestnuts	11½	@ 16	
Do do Giltedge	36	@ —	ONIONS.			
Eastern	18	@ 30	Silver Skin	50	@ 1 00	
Cal. pickled	25	@ 23½	POTATOES.			
CHEESE.			Early Rose, ctl	30	@ 50	
Cal. choice mild	13	@ —	Peerless	35	@ 65	
Do fair to good	11	@ —	Burbank Seedling	40	@ 65	
Do gilt edged	14	@ —	Do do Salinas	90	@ 1 15	
Young America	12	@ 15	Sweet's	2 00	@ 3 00	
EGGS.			Garnet Chiles	40	@ —	
Cal. ranch, doz	35	@ —	River Reds	30	@ 45	
Do do selected	40	@ —	POULTRY AND GAME.			
Do store	25	@ —	Hens, doz	6 00	@ 9 00	
Eastern	25	@ 35	Roosters, old	6 00	@ 7 50	
FEED			Do young	6 50	@ 9 50	
Bran, ton	16 50	@18 50	Broilers, small	4 50	@ —	
Feedmeal	26 00	@ —	Do large	5 50	@ —	
Gr'd Barley	24 00	@27 00	Fryers	6 50	@ —	
Middlings	20 00	@22 00	Ducks	6 00	@ 9 50	
Oil Cake Meal	25 00	@27 00	Geese, pair	1 75	@ 2 50	
Manhattan Food ₩ cwt	7 50		Turkeys, Gob'r	12	@ 14	
HAY.			Turkeys, Hens	13	@ 16	
Wheat, per ton	14 00	@ —	Do Dressed	15	@ 18	
Do choice	15 50	@ —	Manhattan Egg Food ₩ cwt	11 50	@ —	
Wheat and Oats	13 00	@ —	PROVISIONS			
Wild Oats	12 00	@ —	Cal. Bacon, h'vy, lb	9½	@ —	
Cultivated do	12 50	@ —	Medium	11	@ —	
Barley	11 00	@ —	Light	12½	@ —	
Alfalfa	10 00	@ —	Lard	9	@ 11	
Clover	12 00	@ —	Cal. Sm'k'd Beef	11½	@ —	
Straw bale	50	@ 60	Hams, Cal salt'd	10	@ —	
GRAIN ETC			do Eastern	12½	@ —	
Barley, feed, ctl	1 07½	@ —	HIDES.			
Do Choice	1 12½	@ —	Alfalfa	7	@ 8	
Do Brewing	1 12½	@ —	Clover, Red	10	@ —	
Do do Choice	1 15	@ —	White	17½	@ —	
Do do Giltedge	1 20	@ —	Flaxseed	2 50	@ 2 80	
Do Chevalier	1 90	@ 1 45	Hemp	3½	@ 4½	
Do do Giltedge	1 48½	@ 1 52½	Mustard, yellow	2 80	@ 3 00	
Buckwheat	2 00	@ 2 25	do Brown	3 00	@ 3 25	
Corn, White	1 35	@ —	WOOL.			
Yellow, large	1 26½	@ 1 31½	SPRING, 1891			
Do small	1 33½	@ 1 38½	Humb't & Men'cino	20	@ —	
Oats, milling	1 45	@ —	Sac'to valley	16	@ —	
Feed, choice	1 42½	@ —	Free Mountain	19	@ —	
Do good	1 35	@ —	S Joaquin valley	13	@ —	
Do fair	1 30	@ —	do mountain	15	@ —	
Surprise	1 50	@ —	Cala'v & F'th'll	16	@ —	
Black Cal	1 60	@ 1 95	Oregon Eastern	14	@ —	
Do Oregon	1 45	@ 1 60	do valley	21	@ —	
Gray	1 32½	@ 1 41½	So'n Coast, def	11	@ —	
Rye	1 60	@ —	So'n Coast, free	13½	@ —	
Wheat, milling.			FALL, 1891.			
Gilt edged	1 85	@ —	San Joaquin	9	@ 11	
Do Choice	1 83½	@ —	Mountain	10	@ 15	
Do fair to good	1 80	@ —	Humb't & Men'cino	14	@ 18	
Shipping, cho'ce	1 80	@ —	HONEY.			
Do good	1 78½	@ —	WhiteComb, 2-lb	10	@ 13	
Do fair	1 75	@ —	do do 1-lb frame	12	@ 14	
Common	1 71½	@ —	White extract'd	6½	@ 7	
Sonora	1 71½	@ 1 80	Amber do	5½	@ 6½	
HOPS.			Beeswax, lb	22½	@ —	
1891 Choice to Ex.	21	@ 22				
Fair to Good	16½	@ —				

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 6, 1891

Limes, Mex	5 50	@ 6 50	Do extra choice	1 50	@ 2 00	
Do Cal	75	@ 1 00	Do Lady Apples	75	@ 1 25	
Lemons, box	1 25	@ 3 50	Grapes	40	@ 1 00	
Do Sicily	5 50	@ 7 00	Pears, box	50	@ 1 25	
Oranges, Winter small box	50	@ 1 00	Beets, sk	—	@ 1 00	
Do Seedlings			Carrots, sk	50	@ —	
Riverside	1 75	@ 2 25	Okra, dry, lb	15	@ —	
Los Angeles	1 25	@ 1 75	Parsnips, ctl	—	@ 1 25	
Do Navels—			Peppers, dry, lb	12	@ 20	
Los Angeles	1 75	@ 2 75	Turnips, ctl	50	@ —	
Riverside	2 00	@ 3 50	Cabbage, 100 lbs	60	@ 70	
Duarte	2 00	@ 3 50	Garlic, lb	3	@ 4½	
Apples, box	40	@ 75	Squash, Mrft, tn	7 00	@ 9 00	
Do choice	1 00	@ 1 25	Pumpkins, ton	7 00	@	

Live Stock.

HOGS.			Third quality	4	@ —	
Light, ₩ lb, cents	4½	@ —	Bulls and thin Cows	2	@ 3	
Heavy	4	@ —	VEAL.			
Feeders	5¼	@ 5¼	Range, heavy	4½	@ 5	
Stock Hogs	3	@ —	" " light	6	@ 8	
BEEF.			Dairy	7	@ 8	
Stall fed	6½	@ —	MUTTON.			
Grass fed, extra	6	@ —	Wethers	9	@ 9½	
First quality	5½	@ —	Ewes	8½	@ 9	
Second quality	4½	@ —	Lamb, yearling	9	@ —	
			Do Fall	12½	@13	

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING DEC. 29, 1891.

466,146.—BOW FOR STRINGED MUSICAL INSTRUMENTS—Ayres & Schroeder, Whipple, Barracks A. T.

466,214.—INSTRUMENT FOR MEASURING THE UNITS OF WORK DONE BY MACHINES—H. C. Behr, S. F.

466,014.—NUT LOCK—Brasnahan, Richardson & Fritschi, Suisun, Cal.

466,075.—WRAPPING MACHINE—W. A. Brown, S. F.

466,063.—ELECTRIC ANNUNCIATOR—F. C. Colville, Oakland, Cal.

465,974.—LOCK—H. Elliott, Los Angeles, Cal.

466,231.—VALVE FOR HYDRAULIC ELEVATORS—C. I. Hall, S. F.

465,861.—FIRE EXTINGUISHER.—C. D. Harsin, Stockton, Cal.

465,929—STEAM BOILER—A. Heberer, Alameda, Cal.

466,237.—MOTIVE ENGINE—J. L. Henderson, Alameda, Cal.

466,073.—TRUCK—Hunt & Ball, Winters, Cal.

466,074.—MEMORIAL BURIAL TABLET—J. W. Hunt, Kirby, Or.

466,170.—METALLIC PACKING — Kilborn & Young, Oakland, Cal.

465,987.—CAR COUPLING—John C. Look, San Jose, Cal.

465,878.—DUMPING TRAP—C. D. Page, Tacoma, Wash.

466,256—VINEYARD BRUSH BURNER—Jas. Porteous, Fresno, Cal.

465,979.—ORE CONCENTRATOR—G. E. Woodbury, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

IMPROVEMENTS IN SUGAR MANUFACTURE.—**It is said that recent improvements that have been made in the manufacture of sugar from the sorghum plant deprives the sugar of an objectionable flavor which it has previously had. It is also claimed that by the new process the yield is materially increased. The new process is thus, in part, described: "Alcohol is mixed with the sorghum syrup, and after treatment the former is recovered by redistillation, so that there is no appreciable loss. In the use of five barrels of alcohol, only a quart or so was lost. The sugar is nearly white, and it is strong in saccharine qualities—above 90 degrees."**

THE SELF-PURIFICATION OF RIVERS.—**Professor von Pettenkofer has been studying the Iser River, which flows through Munich, carrying the city's sewage. He says that five miles below the city there is not a trace of the pollution which finds its way into the river. Some observers have thought that the self-purification of rivers is due to deposition of sediment. Dr. von Pettenkofer, however, maintains that the real agent at work in purifying the Iser river is the oxygen of the air which is absorbed by or dissolved in the water.**

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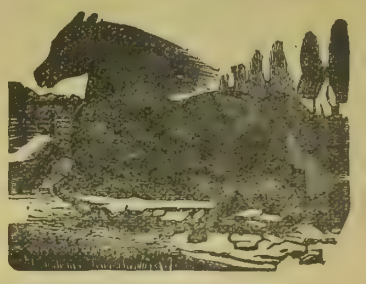
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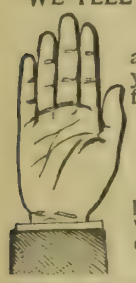
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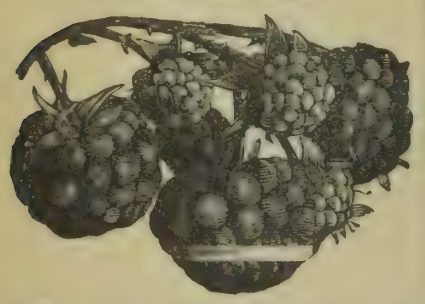
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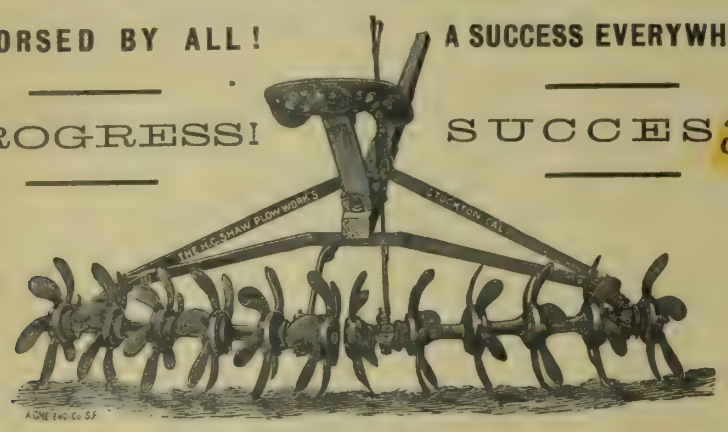
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TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

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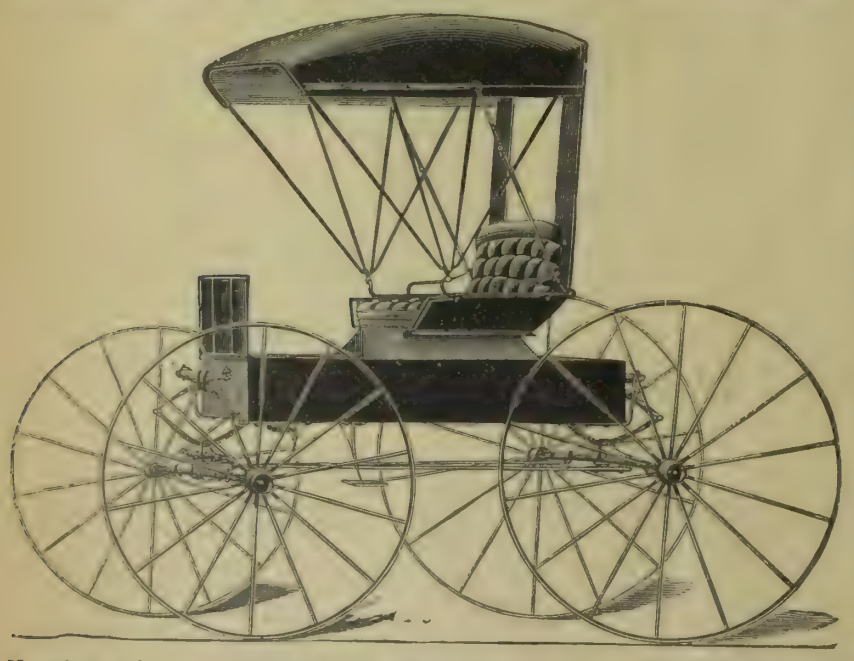
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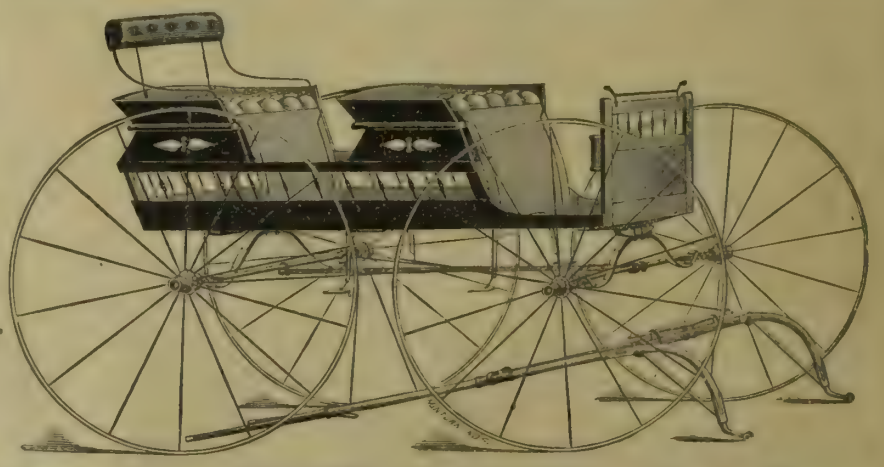
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PACIFIC RURAL PRESS

Vol. XLIII.—No. 3. SAN FRANCISCO, SATURDAY, JANUARY 16, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

A Great Aqueduct for Irrigation.

We are doing many original things in irrigation engineering in California. Some of our reservoir dams are, we understand, the greatest of their kind in the world and involve novel principles and methods of construction. Some of our flumes, which conduct water both for mining and irrigation, are peerless for ingenuity in location and ways of building and support. Still, for grand irrigation works California doffs her hat to India and the California irrigating purse shrinks when compared with the British Government treasure-houses which have been freely opened to bring water upon the arid wastes of Southern Asia. It is fortunate that we have hitherto been able to make such commendable progress in irrigation with a comparatively small expenditure of money, and that the development of such respectable areas of our lands have not been forced to wait upon the Government for a large investment of public money. It is fortunate, too, that a much greater expansion of our irrigated area is still within the reach of private capitalists and co-operative effort among private land owners. It may be in the years to come when the improvement of the greater arid regions of the interior shall be reclaimed by irrigation that public works rivalling those of India may be a necessity, but meantime we go along with our little dams and ditches and pipe lines and produce results per acre which the Government, with its vast expenditure in India, cannot approach.

Still great public works for irrigation are of much interest to our people, and for this reason we present in this issue engravings and text description of one of the largest irrigation works of its kind in the world which has been but recently completed. We are indebted for the facts to *Engineering*, an English journal.

The structure is known as the Nadrai aqueduct. The lower Ganges canal, whose water this aqueduct carries over the Kali Naddi, was designed as an extension of the irrigation scheme of the Upper Ganges canal, conceived and constructed by Sir Proby Cantley about the time of the mutiny, and was opened in the year 1876. In the year 1888–89, the Lower Ganges canal had 564 miles of main line and 2050 miles of minor distributaries, and irrigated 519,022 acres of crops. From this it will be seen how important a line of irrigation this canal constitutes, and how urgent the reconstruction of the aqueduct was. The new aqueduct replaces one of much smaller size, viz., five spans of 35 feet, which was damaged by a high flood in October, 1884, and completely destroyed by another high flood in July, 1885.

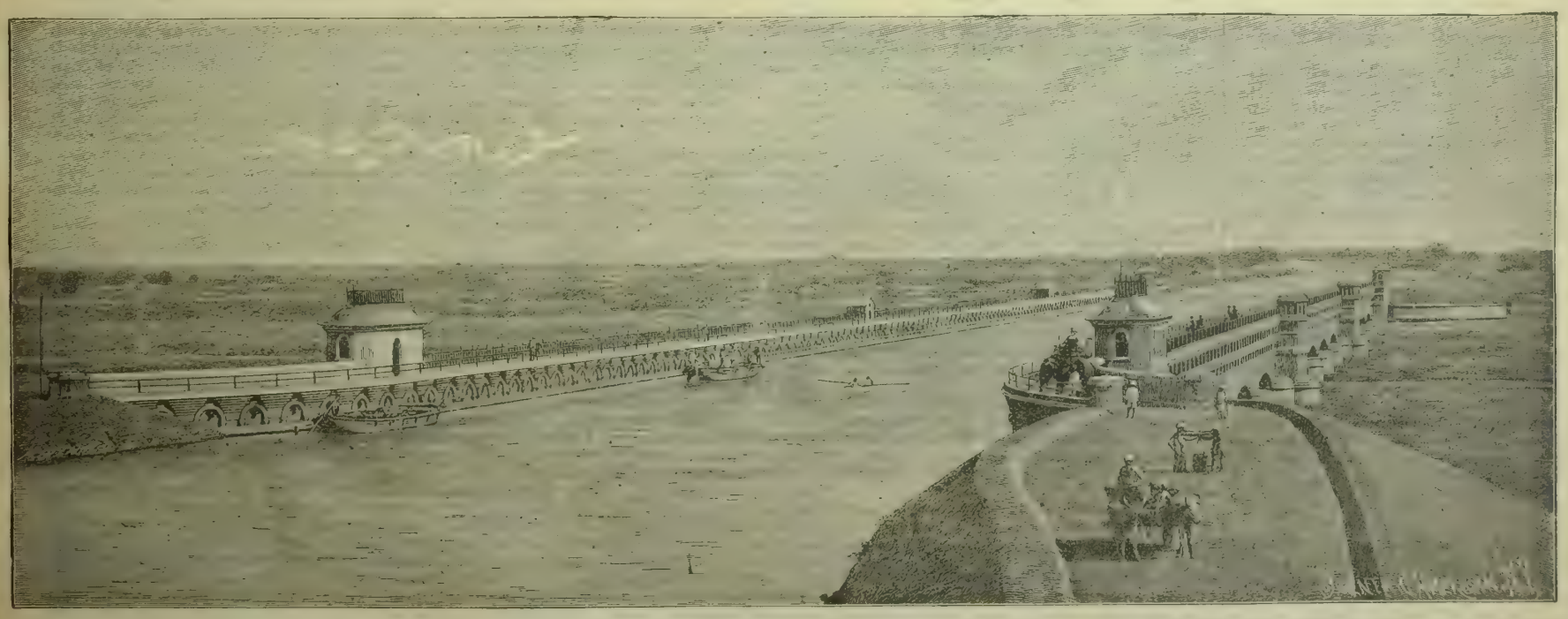
The Kali Naddi, for the greater part of the year, is a very insignificant stream some 50 feet in width only, but on the date mentioned, it was swollen into a river a mile wide and in places 25 feet deep.

In addition to the construction of the Nadrai aqueduct, all the railway and road bridges below it were also destroyed, and many villages swept away.

The proportion of the foundation to the superstructure of the new Nadrai aqueduct can be gathered from the fact that three-fourths of the expenditure of money and time were consumed by what is now hidden below ground.



THE NADRAI AQUEDUCT—PANORAMIC VIEW OF THE DOWNSTREAM SIDE.



A GOVERNMENT IRRIGATION WORK IN INDIA—THE NADRAI AQUEDUCT—PERSPECTIVE VIEW LOOKING UP THE CANAL.

The foundations consist of 268 circular brick cylinders or wells, as they are always called in India, all sunk 55 feet below the river bed. There are 15 bays of 60 feet, divided into three groups of five each by abutment piers. The abutment piers consist of a double row of 12-feet wells, spaced two feet apart, and the ordinary piers of a single row of 20-feet wells similarly spaced.

The wells are all sunk through a stratum of stiff yellow clay, averaging 15 feet thick, into a substratum of pure sand. The wells are all hearted with hydraulic lime concrete filled in

(*Concluded on page 49.*)

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.

The Paternal Plan of Colonization.

TO THE EDITOR:—Pioneer life is generally surrounded by hardships. These are especially onerous when removed from friends and embarking in a new industry upon high-priced land. These circumstances generally surround those now starting in the fruit business. To reduce them to the minimum, the plan has been inaugurated of planting large tracts under expert superintendence. Colonists pay installments as needed for cultivation, remain at present occupation, and complete payments and assume possession when trees come into full bearing. Sometimes, the paternal plan is carried still further by encouraging more substantial building by supplying bricks at cost. Sometimes, promoters bond the land on long time from the owner, contract for planting, arrange with colonists to pay installments to meet current expense, pay for land from proceeds of crop, then turn over tract to shareholders in subdivisions already agreed upon. Sometimes, they arrange for payment of land in easy installments, and the promoter collects his charges for cultivation from proceeds of first crop.

Several plans of this nature are in very successful operation at Madera, Fresno Co., and seem particularly attractive to Eastern investors. It is pretty certain that a large orchard can be brought to bearing under some such plan at half what it will cost individuals to care for a like area in ten acre tracts. Then, if proper selection and management is secured, nine of every ten colonists will have a better orchard than they would have raised themselves.

Dangers.

The man who spends the savings of years for a future home should have them as secure as a good savings bank. To make this certain, the financial standing of the promoters should be beyond question, and their judgment in choice of land, location and fruits should be thoroughly endorsed. Granted that these points are solid, and no plan of settlement of a new fruit region can offer similar advantages. Colonists can afford to pay rates that allow large margins to promoters. In San Joaquin valley are many tracts suitable for such enterprises where land and water can be had for $50 to $100 per acre, with annual cost of maintenance of ditch added unless in Wright Irrigation District. Then we buy subject to a first mortgage for water of $5 to $50 per acre, owing to nature of land and system of irrigation. Cost of rooted vines vary from $5 to $15 per acre; of trees from $10 to $30. These estimates would not include extremely close planting and famine prices such as ruled for prune trees last spring. Mr. Hatch contracted for the most thorough system of cultivation at about $10 per year, but his land was very mellow and he did not irrigate. This adds greatly to growth of weeds and cost of cultivation.

Of these firms now advertising one charges $90 per acre in four installments, for cultivation for first three years, and deducts $200 per acre from net proceeds of crops for land. Another charges $75 for three years cultivation, and $125 per acre for land. Cultivation and interest on land payable in semiannual installments. Interest six per cent. Land to be paid for in five annual installments, the first payable in advance.

A Point for Land Holders Contemplating Subdivision.

Many hesitate because there is danger that sales will progress slowy, the land be left idle on their hands, but so cut up as to make former industries not practical. Again, they dislike the installment plan because courts have ruled that party once in possession cannot be removed until last installment is delinquent.

To promote sales, secure good prices and insure disposal of whole tract, some modification of the paternal plan offers many advantages, but requires work of a good solicitor, the same as life insurance business does. Such are meeting with very good success in the East, when backed by proper credentials.

One firm has in two years planted and disposed of 3060 acres and started on another tract of 2000 acres. Another firm has been working in Pennsylvania through a local agent there, and expects 40 families of actual settlers in September. Such development is good basis for the growth of a town. It is far better to see them grow as trade demands, than wrong end first, as so many have been started. This plan insures disposal of the entire tract and immediate development, thus enhancing values of adjacent property.

The small land holder, who develops his own property, usually needs some income from the time when his labor is not required at home. In a section settled by others in like circumstances, there are no employers. To find work he leaves home. Possibly he can only get work when most needed at home. If compelled to borrow money, it is at a disadvantage. The paternal plan meets these objections, and by supplying work for those who need, makes subdivisions of other lands in vicinity practical. Under this system, improvements like the far-famed Magnolia Avenue of Riverside are made to contribute vastly to values. Considering advantages of large purchases, economy in planting and cultivation, advantages of expert superintendence, convenience of the installment system, payable as needed for development, chances for laying out and planting in such a way as to greatly increase attractions at little cost, we believe that the Paternal System of Colonization, under proper restrictions, has come to stay. FRANK S. CHAPIN

AGRICULTURAL ENGINEER

Drainage in Irrigated Districts.

The newspapers in irrigation districts seem to be overcoming their horror of saying anything about the needs of drainage. The Fresno *Expositor* of last week has the following:

Twenty years ago, if a meeting of the citizens had been called to discuss a means for draining the soil of Fresno county, the men taking part in the meeting would have been considered crazy. The long reaches of plains, bounded only by the horizon, were so dry and parched that they seemed able to drink an ocean dry and still be thirsty for more. Little did any one then suppose that the miles and miles of arid prairie, shimmering with heat, ever would need drainage.

The years that have elapsed have brought a change. And the change in the landscape, and the physical condition of the plains between King's river and the San Joaquin, has been as great as the change which the agency of man has been instrumental in bringing about for any country in the world.

Although the plains 20 years ago were so parched that it did not seem that they ever could become filled with water, and it was necessary to dig wells 50 to 100 feet deep, yet now it is all different.

A recent meeting of the Farmers' Institute in this county devoted nearly an entire day to a discussion of the problem of draining the lands in the irrigated districts. It was an all-important problem, and it received the consideration it was entitled to. But it was somewhat strange, after all, that it should become so soon necessary to drain the plains which less than a generation ago were dry and parched. Yet such is the case. The work of man has brought about this change. It is attributable to his agency and to no other. It is not known that such a great physical change was ever before accomplished, in many times the space of years, by the works of man.

It was done unintentionally. In fact, no one supposed that it ever could be done. The canals were built from King's river leading the waters out on the plains, and work of irrigation was commenced on a small scale, and from that small beginning, it grew to the large proportions which it now has attained into.

The vineyards, the orchards and the gardens grew and flourished, and the desert was transformed into profitable possessions.

But while this was being done, there were not many who ever thought how soon the soil, to its very foundations, would be filled with water.

After the work of irrigation had gone on for some years it begun to be noticed that the water in the deep wells was rising. Year by year it approached nearer to the surface of the ground. In digging wells, instead of going 50 feet for water, it came to be that water was found at 40, 30, 20, and later it was reached in still less. This was because the soil was filling. From the bedrock, perhaps hundreds of feet below the surface, it was becoming full from one side of the plains to the other.

As might be well expected, in course of time, in the low places in the plains, the water began to appear on the surface, and to stand in pools. At first, when these low places began to appear damp, it was called sub-irrigation. When the water appeared on the surface it was called ponds.

The change was slow and gradual. But it has been complete. In many of the vineyards that have long been irrigated, the water is so near the surface that irrigation is no longer necessary. By digging a few feet water is reached.

In more places than one, where certain parts of vineyards are low, windmills may be seen at work pumping water up into the canals so that it may flow away. This reverses the process of a few years ago, when windmills were employed to pump water on land, not to pump it off. Then there was a scarcity, now there is a superabundance, and it is desirable that it flow on to other districts.

Thus it can be seen that the drainage problem in Fresno county is not a theoretical one, but a practical need. The Farmers' Institute gave much consideration to the matter. If the country were all level and smooth, it would not be so necessary to drain the land, but, as it is, the water settles in the low places, while the more elevated portions are comparatively dry.

From the nature of the country it will not be a very difficult matter to construct outfall canals and ditches to carry off the surplus water. The plains between the San Joaquin and Kings rivers are considerably higher than either of these streams, and the water can be drained either way. It also can be drained westward into Mussel slough, Cole slough and the other swales in that region.

So there is no great difficulty in the way of carrying out the drainage problem, but the work must, in course of time, be considerable.

HORTICULTURE.

The Lemon in California.

James P. Jones, one of the Horticultural Commissioners of San Diego county, has written for the San Diego *Union* an essay on the lemon, from which we take the following, which will interest all who are thinking of the lemon in the different parts of the State. He says:

When a person has determined that he will plant a lemon grove, the first thing that will present itself to his mind after securing the land will be what variety shall he plant, and on what stock shall they be budded, and much of his after-success will depend upon the answer to this question. There is hardly a variety of lemon grown which is not the favorite of some one.

Many will tell you to plant the Eureka, while it is well known that it is a tree of straggling growth and of scant foliage. Such a tree does not give proper protection from frost in winter or from sunburn in summer. There are other objections. The fruit has a very bitter rind, and is often coarse and overgrown. Its best quality is its early and prolific bearing.

What is known as the Sicily lemon is grown from seed from fruit imported from Sicily, hence the name, and as many varieties are grown under the same general name, they will not do to tie to. A safe procedure would be to take buds from a tree, no matter what the name, if in fruit, curing and growth it meets your ideal.

The Villa Franca, the favorite Florida variety, is a tree of much promise, it being a medium as to growth, foliage and early fruiting between the Eureka and the Lisbon. It is a new variety here, having fruited but two years in Southern California. The rind of this lemon, though sweet, is rather coarse and thick, but this is characteristic of the lemon on all young trees, and will probably be cured as the trees attain age.

The Lisbon lemon tree was imported from Portugal, and has been thoroughly tested, and seems to meet the requirements better than any other. The tree is a vigorous grower, and attains a large size; does not fruit much until the third year. Its habit is to put on wood rapidly. Trees are often found 10 to 12 feet in height, and well proportioned at that age, giving abundant limb surface for the immense crops that are to follow. The only objection that is urged against this tree is, that it is very thorny, and it is claimed by persons well qualified to judge that about 25 per cent of the fruit is made unsalable by thorning.

I recall a young gentleman from Los Angeles county who set 20 acres to seedling oranges, with the intent to bud them to lemons. Before doing so, however, he came to San Diego county, as he said, to talk with me about varieties, and to look at bearing groves planted to different kinds. After visiting all points where information was to be had, or lemon groves seen, he came to me and said: "I believe you are right. I shall bud to the Lisbon, thorns or no thorns. I believe there will be more profit with the Lisbon, even if one-fourth are unfit for market."

The fruit is oblong rather than roundish, very uniform in size, rind thin and sweet, cures perfectly, and is the best keeper grown. As to thorns, prune them off. This will require labor, but, believe me, it will be time well spent.

Several seedling varieties have been propagated in this county, viz., the Agnes, by Frank Kimball, and the Bonnie Brae, by H. M. Higgins. Of the Agnes, it may be said that the quality of the fruit is hard to excel, but its shape (being in form much like the orange) spoils it for market purposes.

The Bonnie Brae is the most beautiful lemon grown. Its rind is smooth as a kid glove, and so very thin that many think it cannot be shipped to distant markets. I am not prepared to accept their judgment as final. I feel very much like an importer of citrus fruits did whom I met at the southern district State Citrus Fair, and that is, that the appearance of the fruit will sell it in any market of the world, and that I would take them to that market, even though I were obliged to ship in egg-boxes or those made on a similar plan.

There is one more lemon that I shall consider here—the Belaire Premium. This lemon originated in Florida, and in form is the most perfect of any known. I have one tree, sent me by a friend, which has fruited a little for two years. The tree is perfectly thornless, but not a very vigorous grower; rind rather thick and coarse, but sweet; acid very strong and of excellent flavor. A lemonade made from it will retain its quality for 24 hours, if kept cool.

The question of budding stock for the lemon is of great importance, and lays at the very foundation of this industry, but there is no question involved in the growing of the fruit in which opinions differs so widely.

I should favor the wild sour Florida orange stock on which to bud the lemon were it not that this stock is often affected with what is known as twig and leaf scab, and while this malady is never found above the bud, when budded to the orange, it is a well established fact that it does go above the bud when budded to the lemon, often enveloping the whole tree, fruit included. I am informed by Dr. Claflin, of Riverside, who spent months in Florida last winter traveling over the state in the interest of citrus culture, that in several lemon groves he found this trouble, and that the fruit visited from those groves could not be sold and was an entire loss to the growers. In justice to the sour stock I should say that this malady has not appeared on sour seedlings grown in Southern California, though the seeds were imported from Florida.

Refering again to budding stock, some Florida growers are taking the rough lemon stock, budding to sweet orange, and after the stalk from the bud is of sufficient size budding with the variety of lemon they wish to propagate. This method leaves a piece of sweet orange wood in the stock between the sour root and the lemon. It is claimed that this method is a counter to the bitter, sour flavor that possibly might be imparted from the sap from the sour root.

The best results as to growth which I have seen, has been from budding the lemon on grape fruit stock, but I am not advised as to the longevity of that stock and would not care to recommend it, though I think experiments in that direction might lead to happy results.

I think it preferable to bud the lemon on some kind of sour stock, and would state as a reason that most sweet stock is subject to foot rot (or Mala de Goma) to some extent. While sour seems exempt, I do not think it difficult to determine why Florida growers bud the wild sour stock with the sweet before budding to the lemon, and the reason given to effect quality of fruit is not the true one as the twig and leaf blight or scab never gets above where the sweet orange bud is inserted, it is reasonable to suppose that the section of the sweet wood between the sour root and the lemon bud will be ample protection, and hence its use.

As to cultivation it cannot be too thorough. There is a tendency to have irrigation take the place of cultivation, but the practice is not to be encouraged. A medium amount of water and a thorough stirring of the soil after each application is the correct thing and trees so treated will be far ahead of those where the water is allowed to run along the rows for several days chilling and souring the ground and often causing foot rot and gumming. A good illustration of what can be done with a minimum amount of water aided by thorough culture and mulching can be seen on Point Loma at the grove of Frank Jennings. Last season the trees received about 21 gallons apiece, but the growth exceeded other groves in what is believed to be a favored locality where the ground was kept saturated.

Perhaps the distance apart which lemon trees should be planted is of some importance, and in setting by the equilateral triangle method at 25 feet apart will give 79 trees to the acre, and for a tree which attains the size usual to the Lisbon or Villa Franca, is plenty close, while 20 feet apart will give ample room for the Eureka or Bonnie Brae. The question is often asked, "Shall I attempt to grow anything between the trees?" I say, understandingly, "yes, almost any hoed crop. But you should return to the soil by the use of fertilizers all and even more nutriment than is abstracted by the crop removed." I think it a good plan to plant a peach tree between the lemons; both can be irrigated with little extra trouble and as the peach is past its prime in ten years, they can be removed at any time when the lemons need the room, and will in the mean time pay all the expenses of preparation of ground and culture of both trees and leave a margin on the right side of the ledger besides.

The Guava in California.

[An essay read by L. E. ALLEN, of San Diego county, at the Marysville Fruit Growers' Convention.]

Unlike the orange or lemon, the guava is still in almost its natural or wild state, only being improved as nature improves all fruit, by change of climate, soil, or crossed by bees, etc. In all our leading horticultural papers, magazines, pamphlets, etc., we find the orange and lemon receiving the utmost attention of our most able horticulturists, and seemingly these fruits have nearly attained perfection, while the guava is left to make its way into our homes and market as best it can, unaided, unimproved and neglected by man.

As to the origin of the guava, I can do no better than to quote from the United States report: "Best authorities agree that tropical and subtropical America is the original home of the guava. The fact remains, however, that the cattley guava was first introduced into England from China in 1820, though it is possible that this species and yellow cattley, or Chinese guava, was first carried from Brazil to China before their introduction into European hothouses.

"The common guava (*Psidium guavave*) was first introduced into Florida by Col. H. V. Snell, in 1847, and the original trees are still standing, or rather their roots, as the tops have been frosted down several times. The guava of this species is now common all over South and Middle Florida in endless varieties, size, shape and vigor, pear-shaped, apple-shaped, large, small, pink, yellow and white-fleshed, with flavor like that of strawberry to that of sawdust and vinegar; full of seed and almost entirely seedless."

The varieties of guava are numerous, and many of them have not been introduced into the United States. The one most common in Southern California is the cattley guava (*Psidium cattleyanum*), or strawberry guava,

so called because of its strong resemblance in flavor and odor to a ripe strawberry. It is also called the hardy guava, as it will endure more frost than most other varieties. It is an evergreen with small, thick, glossy leaves, resembling the camellia; flowers white and not very conspicuous, and are borne at the axis of the leaves. Fruit commences to ripen in September, and continues for six months in the most sheltered localities, although the bulk of the crop is harvested in about four months. The fruit is eaten and prepared in almost every conceivable way, and is very delicious whether eaten fresh from the bush or sliced with cream and sugar, preserved or made into strawberry shortcake, pies or puddings.

But its crowning excellence, and that which will make it most valuable as an article of commerce, is found in the delicious jelly made from the ripe fruit. It is not only world-famed for its excellence as a table delicacy, but possesses medicinal properties, being highly valued by singers and public speakers as a voice clearer. A fine wine is also made from it.

We find the so-called strawberry guava of San Diego county of many varieties, differing in color, form and flavor and ranging in size from two inches in diameter to those so small and seedy as to be entirely worthless, though grown on the same soil and produced from same seed. I believe the guava is susceptible of as much improvement as any other fruit, and much can be done in this line by planting only seed from the finest and largest fruit, also by thorough cultivation, careful pruning and culling out imperfect plants and those which produce inferior fruit, thereby avoiding the possibility of hybridizing by bees or scattering of seed by birds.

Florida is said to contain hundreds of varieties unnamed, and most of them worthless. Because of chance seedlings from those introduced by Mr. Snell, and our carelessness, there is danger of producing the same condition here. By using the same care that has been exercised in the orange and lemon, I expect a guava will be produced as much superior to those we now have as the Navel orange or Eureka and Bonnie Brae lemon is superior to a worthless seedling.

We also have from Florida the *Psidium pyriferum* or pear guava—plants of large growth, a light green and resembling that of the apple, but larger, pear-shaped and when ripe of a beautiful yellow color, fine for eating, etc.

So far as my experience goes, am not favorably impressed with it, as it is too tender for our occasional frosts and takes too long to mature its fruit, and is also a shy bearer. We have plants five years old large enough to produce 100 pounds of fruit. Some of them have none at all, others a few, much of it only about half grown.

The guava thrives best on a sandy loam, but will adapt itself to any soil and prove satisfactory; requires about the same amount of water and cultivation as the orange, but unlike the orange it needs no treatment for scale or other injurious pests, is free from disease and always produces a good crop.

And as for profit, I believe the guava will compare favorably with and surpass any other fruit, not excepting the orange or lemon, when we take into consideration the small amount of care required, ease of cultivation, together with the certain and bountiful crops and early age at which it begins to yield returns. To illustrate: Suppose we take one acre of ground ready to plant.

We put guavas eight feet apart each way, or 680 plants to the acre, at $40 per thousand cost $27 20; planting, $25; care first year, $25; water, $3.50; care and water second year, $28.50; cost of plants, care and water for two years, $109 20.

At the end of the second year, we will have harvested a small crop. The plants should yield at least 25 cents each, $170; packing and marketing, $40; net income, $130; expenses for the two years, $109. Profit for the first two years, $21.

The inquiry is frequently made: "What are we to do with our fruit? We have no market; it is too far to ship East. The weather is too warm," etc. We can only answer by comparison. We have no home market for peaches, prunes, apricots, etc., but hope that as soon as we have fruit enough to support a cannery, one will be built. So with the guava.

Much could be said on this subject, but as it belongs to the question of "How to market," we will leave it for others. However, will add, our Eastern friends are ready for all our various fruits, if only properly put up and placed in their markets.

POINTS ON PEANUTS.—The following paper on Peanuts, written by J. B Rea of El Cajon, was read before the County Horticultural Convention in December: I have been requested to give my method with peanuts. The best soil is a light, sandy loam. Time to plant, when the ground is warm, same time that corn is planted. Plant seed 18 inches by three feet. If the soil is not naturally moist, it must be thoroughly irrigated and cultivated before planting. Cultivate till vines interfere—never touch a vine with hoe, shovel or cultivator. This rule is imperative for best results. Never hill or draw dirt to the vines. Irrigating and disturbing vines after they are up causes muddy nuts which are impossible to make bright afterward. My plan of harvesting to save fodder, which is about equal to good clover hay, is as follows: Put a knife on the two hind cultivator teeth—take all other teeth out—drive the horses astride the row. The knife cuts the taproot of the vine. Leave the vine in the row for two or three days, then put two or three rows together for two or three days till cured. Then haul to barn or storehouse and pick nuts off by hand. The nuts are then put into a wire cylinder and turned around till polished bright, when they are sacked. Although my method is not as expeditious as harvesting by a machine, the fodder is of such good quality as to more than compensate for the extra time. My yield was 40 sacks of 40 pounds to the sack, or 1600 pounds to the acre, worth 3 cents per pound—making $48 per acre.

Destroying Surface Roots of the Fig.

COLUSA, CAL.

TO THE EDITOR:—I have an item from parties near Oroville, who are cultivating the White Adriatic fig, and their experience is that they get much better fruit by plowing deep, and tearing up and destroying all the surface roots on their trees.

I am growing several hundred trees of this fig, and this experience is so adverse to practice and theories I have always heard advocated on this line, that I thought you might throw some light on it through the PRESS.

Fig roots go down very deep, and many of them spread a few inches from the surface. What use the surface roots serve in the formation of fruit, I am not advised. It's been supposed they serve a useful purpose.

FIG GROWER.

[Will the advocates of this practice enlighten us?—EDS.]

THE FIELD.

The Hop Crop of the Pacific Coast.

A short time ago we gave a few notes on the hop crop of the Pacific coast in advance of the census bulletin on that subject. It may interest our hop-growing readers to examine a little more in detail into the results of the census examination of the subject:

In the United States only 17 States now report the production of hops for market. Of these only five produce 100,000 pounds or more each, and may be considered important hop-growing States from a commercial point of view. These are California, New York, Oregon, Washington and Wisconsin. Of the 39,171,270 pounds of hops grown in the United States in the census year 1890, the five States named produced 38,965,920 pounds, or 99.48 per cent.

The following statement shows the acreage and product of each of these five States in the order of production:

States.	Acres.	Pounds.
New York	6,670	20,663,029
Washington	5,113	8,313,780
California	3,974	6,547,338
Oregon	3,130	3,613,726
Wisconsin	967	428,547
Totals	49,854	38,965,920

The averages per acre of the United States and the five hop-producing States are as follows:

	Pounds.
The United States	780
California	1,648
Washington	1,616
Oregon	1,155
New York	547
Wisconsin	443

The 12 other States reported a production of only 205,350 pounds, or 0 52 per cent. These 12 States reported only about o e-twenty-third of the amount produced in the single county of Otsego, N. Y.

The Pacific coast States, California, Oregon and Washington, show, respectively, the following increase in product and its percentage as compared with the census reports of 1880:

	Pounds.	Per Cent.
California	5,103,261	353.39
Oregon	3 339,355	1,378.79
Washington	7,610,003	1,082.08

New York and Wisconsin show a decrease in the same period as follows:

	Pounds.	Per Cent.
New York	1,565,902	7.24
Wisconsin	1,538,280	78.21

The hop acreage of the three Pacific coast States has in like manner increased as follows:

	Acres.
California	2,855
Oregon	2,836
Washington	4,579

In the same time, New York and Wisconsin have decreased in acreage respectively 2402 and 3472 acres. Fifty thousand two hundred and twelve acres of land in the United States were devoted to the cultivation of hops in the year 1890 (census year 1890), an increase of 3412 acres in ten years.

It will be observed that this increase of acreage is by no means proportionate with the increase in the crop for the same period. The increase in the quantity of hops grown is 47.56 per cent, while the increase in acreage is only 7.29 per cent. The discrepancy between production and area is readily accounted for, by the fact that in the States of New York and Wisconsin, where the average yield per acre is small, ranging from 443 to 547 pounds, many growers have retired from the business, and hence the acreage has been largely reduced. New York has fallen off from 39,072 to 36,670 acres in the past ten years, and Wisconsin from 4439 to 967 acres during the same period. Thus, in these two States, there is a decrease of 5874 acres since the census of 1880, and the decrease is still continuing. On the other hand, an enormous increase in the product is shown in California, Oregon and Washington, where the average yield per acre is very large, ranging from 1155 pounds in Oregon to 1626 in Washington, and 1648 in California. These two elements, increase in acreage where the average is great and decrease where it is small, account for the result shown.

The variations in yield in hop-growing localities are frequently very great, and in some States the uncertainties of the crop have been so marked that its cultivation is nearly abandoned. Twenty years ago, the States of Maine, Massachusetts, Michigan, New Hampshire, Vermont and Wisconsin produced annually ten times the quantity they now produce. Wisconsin ten years ago ranked second only to New York in hop production, but in that period it has been left far behind by the Pacific States, and now ranks as the fifth, producing less than 500,000 pounds, against about 2,000,000 in 1879 and 4,500,000 in 1869.

Ten counties in the United States produce over 1,000,000 pounds of hops each. These counties being the most important localities of the hop growing industry, the following analyses of the statistics reported from them will be of interest. The acreage and amounts respectively produced by them are given as follows, the counties stated in the order in which they rank as producing counties:

Counties.	State.	Acres.	Pounds.
Otsego	New York	7,749	4,698,687
Madison	New York	6,956	4,094,440
Oneida	New York	6,002	3,704,341
Pierce	Washington	2,191	3,699,671
King	Washington	1,768	3,238,075
Schoharie	New York	5,563	3,148,885
Sacramento	California	963	2,134,606
Sonoma	California	1,646	1,263,610
Marion	Oregon	974	1,169,657
Franklin	New York	2,930	1,106,123

The aggregate production of these ten counties is 28,258,095 pounds, grown upon 36,142 acres, or 72.14 per cent of the entire hop crop of this country from 71.98 per cent of acreage.

The following table exhibits the average yields per acre of these counties, as compared with their respective State averages and with the average of the United States, they being arranged in rank according to production per acre, the signs indicating the quantity above or below the State or United States averages, respectively:

Counties.	State.	Average p r acre.	Compared with State average.	Compared with United States average.
Sacramento	California	2,217	*569	*1,437
King	Washington	1,831	*205	*1,051
Pierce	Washington	1,689	*63	*909
Sonoma	California	1,208	—440	*428
Marion	Oregon	1,201	*46	*421
Oneida	New York	617	*70	—163
Otsego	New York	606	*59	—174
Madison	New York	589	*42	—191
Schoharie	New York	566	*19	—214
Franklin	New York	378	—169	—402

*Denotes plus.

It will be observed that the average yield per acre is enormously greater in the Pacific States than elsewhere. This fact tends to but one result—the gradual abandonment of hop-farming east of the Mississippi and its rapid increase on the Pacific Slope. New York, however, still remains the greatest hop-producing State.

Honey Dew on Hop Plants.

TO THE EDITOR:—In your issue of Nov. 28, 1891, your Corvallis correspondent makes me say at the Harrisburg Farmers' Institute: "The excrement of the hop lice falling on the leaves of the hop occasions a condition favorable for the growth of mold, etc."

What I really did say was that "*honey dew secreted by the lice* at work on the under side of the leaves and falling on top of the leaves below occasions a condition favorable to the growth of mold, the so-called 'hop blight.'"

Will you kindly make the correction in the columns of your paper? F. L. WASHBURN.

Sugar Beet Growing in Pajaro Valley.

The *Pajaronian* of Watsonville gives a review of the cost and returns from sugar beet crops in the Pajaro valley, during the last season. The editor says by way of introduction:

Although these are some of the most favorable instances, yet the average is not far behind, and it is difficult to find a farmer who did not make more from his beets this year than from any other summer crop. The average yield for 1891, as shown by the Western Beet Sugar Co.'s books, is between 13 and 14 tons per acre, which is $5 per ton—the average price paid by the company—gives a return of $65 to $70 per acre. The cost of production, not including rent of land, varies from $2 to $3 per ton, or from $26 to $40 per acre. It is, perhaps, impossible to give the exact average profit per acre for the season, as so much of the work is done by the farmers and their estimates of the value of their labor vary so extremely, yet it is quite safe to say that the average profit on sugar beets this year was $30 per acre, and that this figure was considerably increased when the farmer did his own work. The following results of this year's crop are taken from the cultivator's own figures. In every instance the land belonged to the beet raiser, and his estimated value of rent of land is also given. Where the farmer did any of the work himself, the cost of such work is estimated at the amount it would take to have it performed by hired labor and teams.

R. BURLAND—5 ACRES.

Plowing and preparing land, $4 per acre—22 cents per ton—total, $20.

Seed, $1.20 per acre—7 cents per ton—total, $6.

Hoeing, thinning, topping, and loading into wagon, $27.28 per acre—$1.50 per ton—total, $136 40.

Plowing out and hauling, $9.09 per acre—50 cents per ton—total, $45.45

94.742 tons yielded $473.71; profit, per acre, $53.17; per ton, $2.71; estimated rent of land, $15 per acre—82 cents per ton.

L. E. PEARCE—15 ACRES.

Plowing and preparing land, $5 per acre—31 cents per ton—total, $75

Seed, $1.02 cents per acre—6 cents per ton—total, $15.30.

Hoeing, thinning, topping and loading into wagon, $24.23 per acre—$1.50 per ton—total, $363.45.

Plowing out and hauling, $8.08 per acre—50 cents per ton—total, $121.20.

241,147 tons yielded $1205.73; profit per acre, $42.05; per ton, $2.63; estimated rent of land, $15 per acre—93 cents per ton.

O. TUTTLE—5 ACRES.

Plowing and preparing land, $6.50 per acre—32 cents per ton—total, $32.50.

Seed, 78 cents per acre—4 cents per ton—total, $3 90.

Thinning and hoeing, $8 per acre—40 cents per ton—total, $40.

Topping, $14.07 per acre—70 cents per ton—total, $70.35.

Plowing out, $3 per acre—15 cents per ton—total, $15.

Hauling, $10.05 per acre—50 cents per ton—total, $50.25.

102.56 tons yielded $512.81; profit per acre, $60,16; per ton, $2.89; estimated rent of land, $20 per acre—$1 per ton.

D. TUTTLE—11 ACRES.

Plowing and preparing land, $3 per acre—14 cents per ton—total, $33.

Seed, $1.50 per acre—7 cents per ton—total, $16 50.

Hoeing, thinning, topping and loading into wagon, $27.52 per acre—$1.25 per ton—total, $302.72.

Plowing out and hauling, $11.01 per acre—50 cents per ton—total, $121.11.

242.135 tons yielded $1210.67; profit per acre, $67.03; per ton, $3.04; estimated rent of land, $20 per acre—91 cents per ton.

J. W. GALLY—7 ACRES.

Plowing and preparing land, $5 per acre—20 cents per ton—total, $35.

Seed, 71 cents per acre—3 cents per ton—total, $4.97.

Thinning, hoeing, topping and loading into wagon, $37 38 per acre—$1.50 per ton—total, $261.66.

Plowing out, $4.29 per acre—17 cents per ton—total, $30.03.

Hauling, $12.46 per acre—50 cents per ton—total, $87.22.

171.21 tons yielded $856.06; profit per acre, $62.45; profit per ton, $2.60; estimated rent of land, $15 per acre—60 cents per ton.

A. C. PECKHAM—6 ACRES.

Plowing and preparing land, $5 per acre—29 cents per ton—total, $30.

Seed, $1.17 per acre—7 cents per ton—total, $7.02.

Thinning, hoeing, topping and loading into wagon, $26.22 per acre—$1.50 per ton—total, $157.32.

Plowing out and hauling, $10.49 per acre—60 cents per ton—total, $62.94.

103.43 tons yielded $517.15; profit per acre, $43.31; profit per ton, $2.54; estimated rent of land, $15 per acre—86 cents per ton.

J. PEDERSEN—15 ACRES.

Plowing and preparing land, $7 per acre—30 cents per ton—total, $105,

Seed, $1.09 per acre—5 cents per ton—total, $16.35.

Thinning, hoeing, topping and loading into wagon, $28.43 per acre—$1.20 per ton—total, $426.45.

Plowing out and hauling, $9 48 per acre—40 cents per ton—total, $142.20.

350.17 tons yielded $1750.86; profit per acre, $70.72; per ton, $3.05; estimated rent of land, $20 per acre—84 cents per ton.

J. ALBRIGHT—6 ACRES.

Plowing and preparing land, $8 per acre—29 cents per ton—total, $48.

Seed, $1.42 per acre—5 cents per ton—total, $8.52.

Thinning, hoeing, topping and loading into wagon, $40.68 per acre—$1.50 per ton—total, $244.08.

Plowing out and hauling, $21.70 per acre—80 cents per ton—total, $130.20.

165.54 tons yielded $827.70; profit per acre, $66.15; per ton, $2.36; estimated rent of land, $15 per acre—55 cents per ton.

M. TUTTLE—10 ACRES.

Plowing and preparing land, $5 per acre—27 cents per ton—total, $50.

Seed, $1.12 per acre—6 cents per ton—total, $11.20.

Planting, 65 cents per acre—3 cents per ton—total, $6.50.

Hoeing, thinning, topping and loading into wagon, $17.81 per acre—95 cents per ton—total, $178.10.

Hauling and plowing out, $9.37 per acre—50 cents per ton—total, $93.70.

187.527 tons yielded $937.62; profit per acre, $59.81; per ton, $3.19; estimated rent of land, $20 per acre—$1.07 per ton.

THE WOODEN NUTMEG of fraud fame has been eclipsed by Dutch ingenuity. According to the word sent from Utrecht, the Hollanders are making artificial almonds in large quantities from paste composed of glucose. They are shaped and colored to nature, and steeped in nitro-benzole, to give the necessary odor. Hundreds of bushels have been sold to unscrupulous dealers, who mix them with the genuine article. The same people are at work on a varnished coffee bean.

PATRONS OF HUSBANDRY.

Our Official Grange Edition. The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST, by addressing the publishers.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The new year is fairly started. At the first meeting of your Grange make a list of all farmers in your jurisdiction, with the members of their families, who are eligible to the Grange, and call on them with the view of interesting them in Grange work. You will surely find some who will join the Grange. It will pay to try. Good seed is almost sure to grow, and especially so if well planted in good soil.

Wanted! A charter list for a Grange in Southern California!

A good organizer can make money by taking the field in behalf of the Grange.

Manchester, N. H., is bidding high for the next session of the National Grange.

The new word is ready.

Help the officers of your own Grange and of the State Grange and of the National Grange to advance the interests, elevate the characters, increase the opportunities and enlarge the sphere of the American farmer. Help your Grange paper, for by so doing you help yourself, you help the Order, you help the farmer and you help humanity. Any means of education is a help.

The success of an army in a hard-fought battle is often due to good music. History teaches so. The general knows it; so does the soldier. Even the drummer boy knows his worth. Just so in the Grange. We find music a winning instrument. Try and have plenty of good music, and I am sure you will go home and say: "We had a good meeting to-day."

Appoint a committee of your Grange to assist your County Deputy to organize new and reorganize old Granges. Visit the locality where a Grange is most needed, and stay with those farmers till you get a Grange. "If at first you don't succeed, try, try again." "Where there is a will, there is a way."

Ask farmers to read; ask them to think; ask them to act; and then offer them the Grange as a means and as an end. The more they inquire about the Grange, the more they will respect it, and the more they will be convinced of the importance of an organization among farmers.

Recommend a good, live, competent Deputy. We must have workers. The Grange must grow; it must be extended. Work will do it, and nothing but work will succeed.

From and after this date, the National Grange will furnish the working tools, knife and pencil with each charter outfit.

The Grange will have suitable headquarters at the World's Fair, for all members of the Order. There will probably be a Bureau of Information, and from time to time, lectures will be given and essays will be read. On this point, more anon.

We want to elect men to office who will be servants, not masters of the people. Please bear that in mind. We want honest men, not the ordinary two-by-four hothouse politician. We want men who represent ideas more than they do dollars. In short, we want fitness, not flesh alone.

The sad news of the death of Bro. Wm. M. Ireland, one of the founders of the Order of Patrons of Husbandry, reminds us that there are but few of that noble band who have not been called to the Land of Eternal Rest. Bro. Ireland died Christmas Eve, 1891. His many years of usefulness on earth are closed, but the work he helped to begin will live after him. He erected his own monument. The Order of Patrons of Husbandry is sure to live and sure to occupy a useful position long after the last one of its founders has been garnered. All honor to the name of each one of the founders of the Grange! Let the announcement of the death of Bro. Wm. M. Ireland, a founder of the Grange, be made by the Worthy Lecturer of each subordinate Grange in California. Peace to the ashes of our departed brother!

The officers of Bennett Valley, Sebastopol and Santa Rosa Granges were jointly installed at the Hall of Santa Rosa Grange by Past Master G. N. Sanborn, on Saturday, Jan. 9, 1892.

The Baby Grange—Glen Ellen—has installed newly elected officers. A class of five members is to receive the third and fourth degrees at the next meeting, January 23d, and all Patrons in good standing will be welcome.

Splendid weather! More like May than January! Just the finest kind of growing weather. A good time to scatter some Grange seed. Send out a few Declarations of Purposes. Hand your farmer neighbor a copy of the Constitution and a blank application for membership. Sow Grange seed!

Cooperative Buying.

Practical Results Accomplished by Two-Rock Grange.

TO THE EDITOR:—Enclosed please find the report of the Cooperative Committee of Two Rock Grange, which was read and accepted at our last meeting, and, at the request of W. Master Martin, copied for publication in the RURAL PRESS for the purpose of leading other Granges to feel an interest in similar work.

If anything I could say, would induce other Granges to follow our example, I would gladly do so. To those who will read our report, it would be unnecessary to point out the material benefits derived, as the figures speak for themselves. And surely all know, that all kind of products now pass through too many hands, making the difference between the price the producer gets and the price the consumer pays, altogether too large. We complain of overproduction, but if consumers could be supplied with the various products they need at less expense than is now the case, overproduction would not be heard of, or at least very little.

Especially should we never speak of overproduction of the necessaries of life, as long as one worthy human being suffers for the want of them. We should then put the blame where it belongs, viz., to our faulty system of distribution.

It is, however, not so easy to remedy an evil which has existed so long, but we should try; we should make a beginning, even if it is somewhat difficult.

The first difficulty will be in getting a good committee; a committee that will work and work together; one willing to sacrifice time for the general good, and not be discouraged even if it sometimes hears grumbling and criticism instead of appreciation, for in the end honest efforts will always be appreciated. Then the members must become interested. This would seem easy, as not only can they be shown that they will receive a direct benefit, but that, by getting accustomed to work together, we farmers, can ultimately remedy all the social, political and commercial evils we now complain of. Nevertheless, the bulk of the members will be found slow to get started, and for various reasons; one of which is the scarcity of cash. In too many instances the members are indebted to the local stores in such a way as almost to be owned by them. There are other reasons that need not be mentioned. This, the most common one, is mentioned because it is the one we should most try to remove. It is worth sacrificing something to become free men and women. If we have a great many unpaid store bills we are not free.

The manner in which Two Rock Grange worked last year is briefly this: Every other month a combined order for groceries would be sent off, shortly after the first monthly meeting. The goods would then arrive before our second monthly meeting, on which day such articles as were to be divided were taken to the hall and divided. The Grange owns weighing scales and furnishes books and necessary stationery.

In some cases it may be well to pay the committee one per cent of sales to partly pay them for their trouble; in other cases, it would not be necessary. In order to avoid as much as possible buying broken packages, it is well to have a sinking fund either advanced by the Grange or created out of the orders by charging one or two per cent on the various bills for the purpose. The committee can then always order full packages of such articles as don't spoil, like soap, starch, rice, beans, etc., and hold them until used. We buy such articles as coal oil, flour, feed, etc., once or twice a year. Hardware we have so far not bought with any regularity. We have also taken advantage of the Trade-Card system to quite a large extent. C. NISSON.

The Committee's Report.

The above mentioned report of Two Rock Grange Cooperative Committee is as follows:

Worthy Master: Your Cooperative Committee begs leave to submit the following report for the year 1891:

We have bought groceries to the amount of $1246.41. Calculating that we have made 20 per cent by buying these goods wholesale for cash, instead of at retail, it made us a saving of $311.60.

In hardware we have not bought together as we should have done, for reasons explained during the year; but on the two bills of goods bought, a large saving was made. It is somewhat difficult to say what the average discount would be; on some articles it was 70 per cent, incredible as it seems, on others 50 per cent, 30 per cent and less. The average discount would probably not be less than 30 per cent, making a saving on the two bills of $37.56. In other words, instead of paying $125.70, we only paid $80.64. Under the "trade card" system, members have bought about $300 worth; with a saving on these purchases of ten per cent, a saving was made of $30. Of coal oil we have bought during the year about $400 worth, with a discount of 15 per cent, making a saving of $60.

On feed and flour we made, on one transaction, a profit of $200. This was somewhat of an accident, however, as was explained at the time. As a regular thing we have not been able to get more than 2½ per cent discount from feed and seed from ton rates, and on flour from 5 to 10 per cent.

The aggregate profit made, exclusive of feed, seed and flour, amounts to $428.50. As comparatively few members have taken as much advantage of our system of buying as might have done so, it is safe to say we could easily double this amount, and even treble it. We think our members do not quite realize how much they might save, because, in buying in the ordinary way in small quantities, the extra price paid amounts to but little each time, and is therefore not noticed much. It is for the same reason that a tariff tax is so popular all over the world. It is paid in small installments and not felt much at the time, although it is well known that it is the most expensive way of collecting a tax.

In showing the total of the profits made during the year, we hope we have made it clear that cooperative buying is a decided success. We desire, however, for the benefit of our successors, to say that this system of buying entails a great amount of work on the cooperative committee, and we should all make it a point to lighten this work as much as possible, by being prompt in sending in our orders, when called for, have them clearly made out, and always accompanied by sufficient cash to cover the orders. Respectfully submitted.—C. NISSON, J. R. DENMAN, WALTER CHURCH.

Practical Topics Before Dixon Grange.

EDS. PRESS:—Our Grange is in a prosperous condition. We have not missed a meeting since we organized on the 7th of last March. I am sorry to say that we did not receive the communication relating to the Grange Anniversary, until the time had passed, so we did not have an opportunity to celebrate it. I append some notes from the minutes of a preceding meeting so that you can see the direction of our discussions:

Sister E. J. Aylworth suggested select readings at each meeting. Bro. McCrory called upon the Lecturer for remarks, who however felt himself unable to instruct those who knew as much about farming as himself. Bro. Colter called to mind a Grange meeting which occured years ago. Each member was assigned a subject, such as fruit culture, tariff etc. He suggested breaking up our quaker meetings by a similar programme.

Bro. Wells said he believed it would not do to graft apricot on peach stocks, as the wood does not unite. Apricot should be grafted upon apricot of a different variety. [The peach is the best stock for the apricot under some conditions.—ED. PRESS.] The Royal is the best apricot, for it always produces a crop which is the most saleable.

J. K. Armsby had told him that the Fresno peaches, though larger than the Vacaville peaches, were not so favorably received upon the market. The Vacaville peaches were brighter. They used French sulphur, which costs 5 cents per pound, while Fresno used the common California sulphur at 2½ cents per pound.

He said all peaches should be graded before drying by a grader which grades into several different sizes, for large peaches bring the best price, while large and small mixed do not dry so evenly and bring no better price than the smallest.

He recommended the use of bisulphide of carbon for exterminating weevil from granaries and grain sacks.

Bro. Colter said a gentleman had recommended the use of alum mixed with whitewash as an efficient remedy for weevil, and that he himself had used carbolic acid crystals which he dissolved.

Sister Aylworth recommended the use of carbolic acid powdered, around chicken houses for removal of insects.

B. M. ROCKWELL, Ass't Sec'y.

PAST MASTER COULTER called in after attending the bank meeting on Wednesday. Suffering from a slight indisposition, he returned to Santa Rosa by early afternoon train. With Past Master Flint, he will visit Vacaville Grange Jan. 23d, when lots of good Grange doctrine and sound sense will be dealt out by word of mouth to the Grangers and farmers of Vaca valley, who should attend with their household jewels in round numbers on so good an occasion.

WATERLOO. — Secretary Merrill writes that Waterloo Grange will install officers Jan 23d.

PUBLIC WELFARE

Selling Grain Short

Senator Washburn of Minnesota, the author and introducer of the Option bill presented to the United States Senate last month, while in Chicago on his way to Washington, was interviewed by an *Inter-Ocean* reporter, and said: "I have just finished reading the interview in your paper with Mr. Counselman, in which he severely criticised the bill introduced by me to prevent grain-gambling. I am not surprised at his hostility, nor disturbed by the sarcastic references to my philanthropy in the premises, for any effort directed toward the curtailment of the great evil known as short selling is expected to call down the wrath of all dealers in illegitimate or fiat grain. What I want to do is to stop the pernicious, demoralizing practice known as 'short selling,' where a man can go on a board without a kernel of grain, real or prospective, and sell a million bushels, depressing the market the same as if so much grain had been dumped on it. Mr. Pillsbury, the largest buyer of real wheat in the world, tells me there are men in Minneapolis with their offices in their hats, who sell more wheat in a year than he buys."

Referring to the meeting of the Minneapolis Chamber of Commerce called on Saturday for a conference with him, the Senator said:

"Of course, the Board of Trade folks up there occupy the same position as the Chicago Board, save that they believe the bill means the utter demolition of all trading in futures, but they will find their mistake when the bill becomes a law and goes into effect. A very interesting table I came across the other day selects ten days from April to October, 1890, and shows that in those days, while the actual sales of wheat amounted to 437,800 bushels, the optional sales of fictitious wheat amounted to 125,720,000 bushels. On the 14th of April, 1890, New York speculators sold 44,000,000 bushels of fiat wheat, probably more than twice as much as reached that city during the year, and the actual sales that day were but 6000 bushels.

"Were it not for Board of Trade methods, I think every bushel of wheat would be worth 20 cents more to-day. In fact, all Europe is astonished that it is getting our wheat to-day for such a ridiculously low price, considering all the circumstances. They expected to pay more, and it is an outrage upon the producer that he should be a sacrifice to the relentless greed and disreputable deals of the short seller on our Boards of Trade. In my opinion, some kind of relief will be granted the producer in a restrictive law that will preserve all the good features in future dealings and eliminate the bad."

Don't Take Stock In It

A man at Antioch, who is in the saloon business, has built the finest house in town. A bold inquirer asked where he got the money to put up such a beautiful and expensive piece of architecture. The answer given was to the effect that the workingmen of Antioch and vicinity made weekly contributions to this building fund—many of them casting in all that they had, even honor, manhood and self-respect, placing themselves on a degraded plane with the canaille, while they suffer the loss of their hard-earned money. Dear workingman, are you helping some saloon-keeper to build a fine house, while you degrade yourself and family by keeping them in second or third rate tenement rooms or a hovel? Do you go down every day or week into your pocket to help some saloon-keeper to support his wife and family in elegance, while you are obliged to see your own, poorly clothed and half fed? If so, may God help you to boycott the saloon and thereby break the chains of the worst monopoly that ever cursed the world.—"POW" in *Tradesman*.

FARMERS' ALLIANCE.

The Truth Close Home.

TO THE EDITOR:—As I have noted the real value of a dollar or any piece of money is what you can get for it. As collateral propositions, it may also be said that if at different times the amount of produce of any kind which can be got for it differs, then the value of the dollar in the purchase of commodities is variable, while if it will always be accepted as credit for just one dollar on book account, then its value in the payment of debt is always the same; so each piece of money may have, generally does have, at the same time a variable and an invariable value; and as value is a relation between human want and the available supply for it, there is no measure of values save the amount of human desire in any given case, and all talk about money, as a measure of value is empty combination of words. One fact stares us in the face in this country: There is not enough of the metals which have been selected for the money purpose, to do the business of the country. There is a great lack of them, and we find it necessary to, and as a matter of fact, business men do supplement them with pieces of paper used for the same purpose as the metal pieces, which use, Webster's dictionary says, makes them money. In short, any material commonly used to equalize the valuations put upon things by agreement of human beings is money. It is this use which gives to any material, for a time, the character of money—metal, paper, sawdust, sand or any material whatever. (See definition.) The real question is, whether it is better that these paper pieces should be of varied commercial character and form, issued by different citizens and corporations, or whether they should be of only a few forms, and issued by the General Government.

At this point it is necessary to remember that the General Government is simply the greatest citizen of the Nation; it is a corporate, legally constituted individual in all business matters; it is a public citizen which can do the same acts in a business way that private citizens can do, whenever it is authorized to do them by Congress or the people. It can issue its notes in satisfaction of accounts with private citizens, and receive them in accounts of private citizen with it; and the current worth of such notes will be determined by the knowledge of the private citizen as to the Government's readiness to, at all times, receive them as freely as it gave them out (that is, for all debts due it as well as all debts from it), and at the same valuation in matters of account, in this respect being subject to the same laws of business as the notes of private individuals. The question, again, is whether these paper pieces—which have scarcely any intrinsic value as paper, but which may have, as notes, whatever value is put upon them, provided it is justified in the minds of men by the circumstances of their creation and circulation—the question is, whether such paper pieces shall be issued helter-skelter by individuals and private corporations under a great variety of circumstances, the exact knowledge of which must necessarily be limited to sections of the country, or whether they should be issued by the General Government, which every one knows about, under circumstances which may be made well known to every citizens.

The advantage of simplicity, to be gained by General Government issue, is easily apparent. It is also apparent that the resources of the Government are greater than those of any private individual or corporation could be. Its revenue, or income, is also greater; and the amount of such revenue due it is the measure of its ability to receive its notes back from citizens, giving them credit and extinguishing their debts to it. This revenue it is authorized to collect would thus be a "redemption," or, rather, exchange fund, for any paper pieces it might issue in addition to the limited metal currency; and this revenue fund now amounts to $400,000,000 a year, every dollar of which must be paid by citizens, with some kind of money. If that greatest of all citizens, the General Government, could afford to recognize its own notes at their face value in all commercial transactions and in payment of debt, all private citizens could also afford to; and thus all commodities in the United States which changed hands for cash would add themselves to the revenues of the Government as a still larger exchange fund for the Government's paper money; and even beyond this, we may go, and to satisfy those who prefer to handle metal money, we may say that the different kinds of material upon which the Government places the money stamp (the authority to circulate as equalizers of value) shall be exchangeable at the will of the holder, at places designated by Congress, for equal amount of any other kind of money issued by the Government and in its hands, and not specifically appropriated by the Government for its regular expenses.

Thus private citizens would gain all the advantage that could accrue from the maintenance by the Government of a special specie "redemption fund" which the banking interest of the East and Europe now leads the Government into pretending to maintain.

Two things only are necessary to a mixed currency which shall be equally honest and just to all in a nation: 1. That all materials used by the Government as money shall stand equal in legal tender quality. 2. That all classes of money issued shall be interchangeable at the will of the holder at Government depositories to the extent that each kind called for is in the hands of the Government and free from specific appropriation; provided that when metal money is called for in lieu of paper, the Government shall not pay more than half the sum in gold, and may elect to pay all in silver whenever, in the judgment of the officials, it is necessary to do so in order to protect the public welfare.

The legal tender clause of money should read: "This piece (or bill) is legal tender, within the United States, for all debts, public and private, to the amount specified upon its face"—in case of dollars and larger; or, "to the amount specified by law," in case of fractional currency, if it is decided to place a general limit to the legal tender quality of such currency. The face denomination of a piece should be the only standard of its value in payment of debt.

The larger bankers—the "banking interest" in a general way—of this country and Europe ask that the currency systems of the world be augmented by the issuance, in addition to metal of a paper currency, which shall be held to be valuable only because such paper shall claim that behind every dollar of it there is a gold or silver dollar ready to take its place in the hand of the holder at the holder's option. In case the claim were true, and there was a gold or silver dollar locked out of circulation for every paper one put in, then the paper would be but a substitute and the volume of currency would not be increased. If the claim were not true, and the paper was issued in excess of the gold and silver held out of circulation to "support" it, then it would become false to the extent of the overissue; and as no one could know which dollars would prove baseless in case of attempt to exchange more than the amount of the gold and silver held, the taint of distrust and danger would be thrown upon the whole paper circulation. Paper circulation should depend for its value upon the fact of its equal receivability with all other kinds of money issued by the same Government. A paper currency which depends for its value upon metal is necessarily either a substitute or a fraud. The bankers would not object to a dishonest paper issue because they could control its metal base, raise the price of gold and silver, when needed by private citizens for purposes for which the bankers beforehand would carefully see that the paper was not legal tender and so reap a profit by discount. Such is the kind of paper money they favor everywhere, and the kind they secured in the United States during the war of the rebellion and in the Argentine Republic during its recent land boom, and by which they wrought financial destruction to all but themselves and even to some of themselves.

F. P. C.

Executive Committee Meeting.

FRESNO, CAL., Jan. 5, 1892.

TO THE EDITOR:—In reply to your inquiry as to January meeting of State Executive Committee, I will state that as our late December meeting at S. F. was so near the end of the year, we decided not to meet again until April.

I would enjoy being at your county meeting, and did our committee meet at all this month in S. F., would certainly make dates so we could be with you. As in future we have so much longer time in which to hold county meetings, if counties will leave dates to be arranged by County Presidents and Secretaries, or to a committee, so arrangements can be made to have dates for several counties follow in proper order, State officers and others can visit many counties and great good would come from visits by one Alliance to another, where practicable.

Our Institute and County Alliance at Fowler this week promises to be a big success, if I judge correctly by interest manifested on all sides. Fraternally yours,

JOHN S. DORE, Ch. Ex. Com.

Alliance and Union Meeting.

J. L. Gilbert, Lecturer State Farmers' Alliance, has consented to attend the Alameda County Alliance meeting at No. 865 Broadway, Oakland, on Saturday, and speak at the public Union Meeting at the same place, in the evening. J. J. Morrison, District Lecturer, from Placer county, and members of the Farmers' Alliance, Trades Unions, Citizens' Alliance and other progressive associations will speak in the evening.

A Great Aqueduct for Irrigation.

(*Continued from page 45.*)

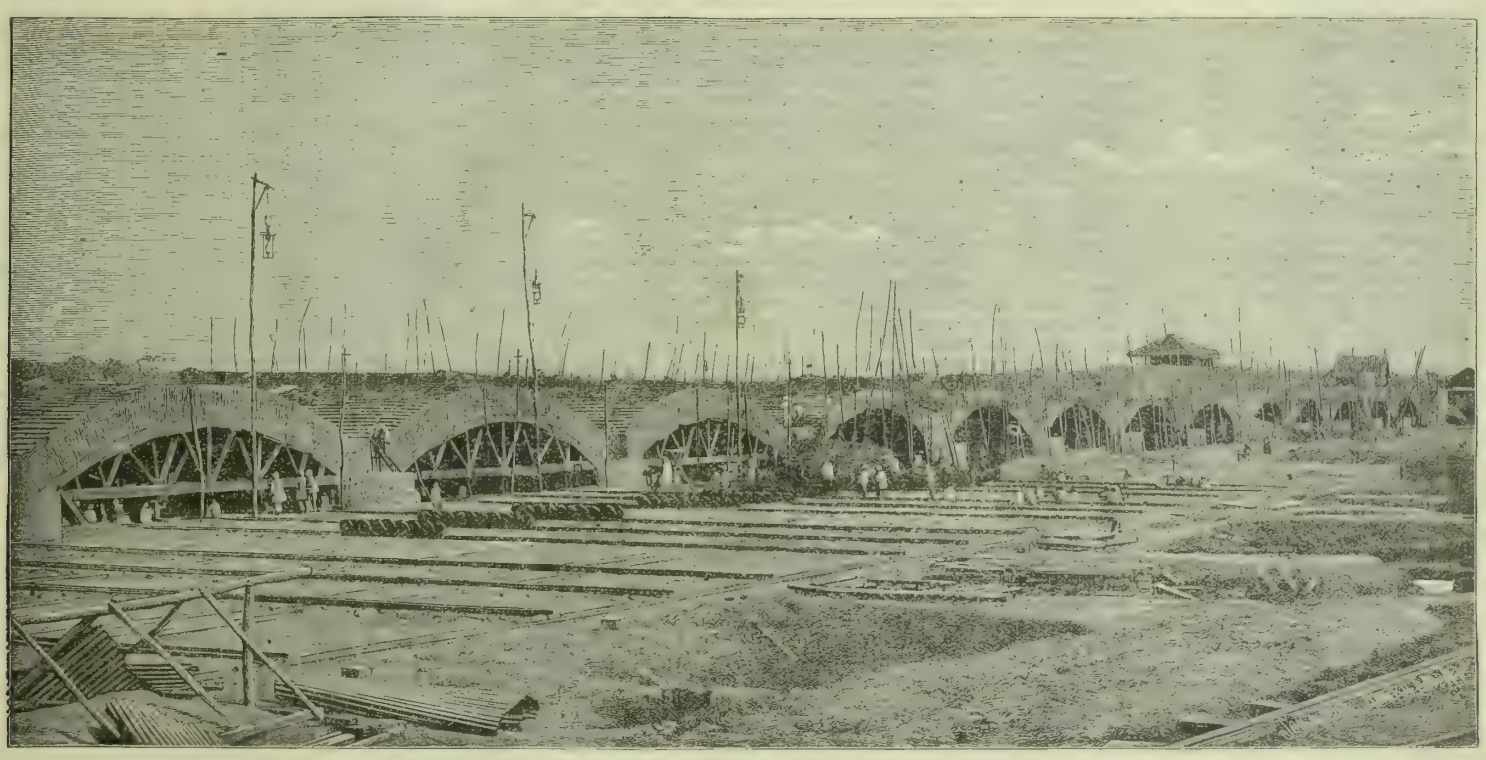
by skips, and in each pier the wells, by corbeling out the brickwork, are joined together for the superstructure of the pier.

The total quantity of well sinking was 15,019 lineal feet, or nearly three miles, and was executed by hand and steam dredging. It was commenced in May, 1886, and completed in May, 1888. The arching was commenced in November, 1888, and finished in April, 1889.

The well sinking and arching went on night and day, the work being lighted by ten arc lights of 2500 candle power each. This construction is shown in the engraving on page 29.

Now that the aqueduct is completed, it forms a most striking object in the vicinity, and will, *Engineering* hopes, stand to bear witness in far distant ages to the beneficence of British rule in India and to the skill of English engineers.

The solidity of the great arches and piers and the fine sweep of the bastion-like wings all unite to give an idea of vast strength and stability, while the monotony of such a large surface of facade is relieved by the effect of light and shade obtained by the bold corbeling out over the spandrels to form a support for a roadway on either side of the canal, and the long horizontal lines of the cornice and railings are broken up by a tower at each end and one at each of the abutment piers.



THE NADRAI AQUEDUCT — BRICKWORK IN PROGRESS. — *See first page of this issue.*

WHAT THE BUZZ OF A BEE SAYS.—In a recent work on the bee, T. W. Coman states that the insect can draw 20 times its own weight, can fly more than four miles an hour, and will seek food at a distance of four miles. By a beautiful mechanical adaptation its wings bear it forward or backward, with upward, downward or suddenly arrested course. Its threefold voice organs are the vibrating wings, the vibrating rings of the abdomen, and a true vocal apparatus in the breathing aperture or spiracle. The buzz is produced by the first two, and the hum, which may be "surly, cheerful or colloquially significant," by the vocal membrane. A number of the bee's notes have been interpreted. "Humm" is the cry of contentment; "wuh-nuh-nuh!" glorifies the egg-layings of the queen; "shu-u-u" is the note of the young bees at play; "s-s-s-s" means the muster of a swarm; "b-r-r-r" the slaughter or expulsion of the drones; and the "tu-tu-tu" of the newly hatched young queens is answered by the "qua-qua-qua" of the queens still imprisoned in their cells.

FARMERS' INSTITUTES.—The Farmers' Institute at Fowler, Fresno county, on Thursday of last week, was a grand success in interest and in the importance of the discussions. We hope to present an outline of proceedings in our next issue. Preparations are being made for an Institute the first week in February, of which we expect to have fuller information in a later issue.



Mother's Country Parlor.

[Written for the RURAL PRESS by W. T. HEALY.]

A simple room with trimmings plain,
Clean, spotless sash and window pane;
Lace curtains that have known no stain,
Are seen in Mother's Parlor.
My brothers and my sisters, too,
Have loved that place their childhood through;
And love it still, indeed they do,
'Tis Mother's Country Parlor.

The pride of mother's thoughtful care
Is what you'd see on entering there.
You could not find a room elsewhere
More neat than Mother's Parlor.
A little organ, dear to me,
In richest tones of melody,
Pours forth sweet anthems, full and free,
From Mother's Country Parlor.

Upon the walls hang pictures dear,
Of those who almost welcome here,
The stranger who has chanced to steer
His course toward that old Parlor.
And there is Mother's easy chair,
You never see her sitting there,
Because she'd have her friends to share
Its comforts in her Parlor.

Those albums lying on the stand,
Have passed through many a loving hand,
And set before their vision grand
Old friends of Mother's Parlor.
Some of those old friends are gone,
And, as the silent years roll on,
We see their photographs alone
In Mother's dear old Parlor.

Their photographs I love to view;
I love to look the albums through,
And tell my friends how much they knew
Those dignities of Mother's Parlor.
No personage will ever be
So eloquent and grand to me
As those wise heads I used to see
In Mother's Country Parlor.

But as I grow toward manhood now,
Youth's emblem soon will leave my brow,
From thee my bark will turn its bow,
And yet, beloved Parlor,
While going down the stream of fate,
On childhood's days I'll meditate,
And vainly will I often wait
For scenes so dear and folks so great,
As those I knew, my childhood through,
In Mother's Country Parlor.

A Dream.

After Olive Schreiner.

[Read before the Woman's Club of Los Angeles, Cal., by MRS. SARAH F. JUDSON.]

In the dark night I lay on my bed. For a long time I tossed uneasily about, for the tea at the Ruskin Art Club was strong, and I could not sleep. My thoughts were of the woman who lay out on the desert, with sand piled about her. I had first heard of her that day, and she interested me exceedingly.

At last I fell asleep and dreamed I saw the woman lying on the sand, near to the stream which she must cross before she could come into the Land of Freedom. I saw that her head was lifted, and the light of hope was in her eyes, but the burden upon her back was too heavy; she could not rise.

Of this burden, which so weighed the woman down, I could only see the cover. It was made of cloth, woven in the most primitive style, and the bands which bound it to her body were of the strongest metal and very rusty.

There stood one beside me in whose hand were the keys to the book of knowledge, past, present, and future; and I said to him, "I have a woman's curiosity. I wish to know what is in this terrible burden which crushes the woman to the earth."

He touched my eyes, and said, "Look!" and though the cover and the bands remained unchanged, I saw that the burden was composed of many packages, some old and moth-eaten which the woman had carried always, others which she had gathered by the way and patiently borne upon her back.

The first and largest package was marked "Clothes," and in it was such a multiplicity of garments that time would fail me to name them all. There were dresses for every hour of the day, some of them with trains for street-cleaning purposes; dresses for every degree of heat and cold; dresses expressing every shade of sentiment, from the airy ball-costume to the crape-covered robe of the inconsolable widow, with every thing to match, from bonnet to shoes—these last a trifle small for the wearer. There were corsets, of course, and strings, and elastic, and whalebones, to hold poor humanity down and back, and fetter arms and limbs. There were dotted veils, each dot worth $10 to the oculist; kid gloves for hot days; and jewelry enough to satisfy the most barbarous taste.

In close proximity to the clothes were "Aids to Beauty," including "Bloom of Youth" (the sort that comes in bottles;) face-bleach, warranted to regenerate the worst complexion; quantities of false hair; improvers of every kind, rogue and paint for the lips, bleaches and dyes for the hair; in fact, all the devices by which the fair sex from time immemorial have sought to cheat Time and make themselves attractive, with doubtful success. The next package, rivalling in size and importance its neighbor, Clothes, bore the label "Society," and first exhibited the menu of lunch, a pink lunch of thirteen courses, the most indigestible and complex dishes possible to be concocted, ending with ice cream as an aid to digestion. There were visiting cards of the dear 500 whom nobody cares about; cards for dinner parties, birthday parties, anniversaries, at all of which your *presents* are requested; receptions big and little, with souvenirs hand-painted, bills for music, colored waiters, gas, used in preference to sunlight, refreshments, flowers; and close by I saw black-bordered stationery, indicating the exact relationship and the time elapsed since the death of the departed, gates ajar in flowers and a dove for the funeral of a wicked old man.

There were other things but I will not mention them all.

A very bulky package called "Household" then claimed inspection. In it were curtains to keep out the sunlight; looks for windows that were never opened, easy chairs, some very light novels, photographs of servant girls who never went to cooking school, or any other school, company things simply innumerable, badly-painted pictures, and very amateur work of all kinds, common shells and specimens, Christmas cards, tidies, drapes for everything, bric-a-brac, things neither ornamental nor useful, and the trail of the dust cloth was over them all. There were children's garments elaborately trimmed; receipts and bills of fare for every-day use, including every complicated and unwholesome viand known to the ingenuity of woman.

A small bundle; which gave me a thrill as I looked, held stimulants; principally tea and coffee, and, in small quantities, drugs of all kinds, with a very little alcohol to brighten the intellect, if required, and assist poor weak sisters to keep up when tired nature refused its aid. Besides the stimulants, were narcotics to soothe the nerves when some of the other things had done their work too well.

At this stage of my discoveries I began to feel weary, for I have not told the half of what I saw; but he who stood beside me said: "Go on. This opportunity may never come to you again, and you have not yet seen the heaviest things which the burden contains."

And I looked again, and saw a strangely assorted collection, marked "Miscellaneous," in which were some small coins, presented by a man to his wife for purchasing necessaries for the family; receipts for the work done at half a man's pay; dressmakers' and milliners' bills.

There were chains and fetters, stamped with the makers' names, viz.: Precedent, Established Custom, Popular Opinion, and many others.

There was a box containing marbles, black and white; and I said to him standing by me, "What are these for?" And he answered, "They are used by Clubs for the Advancement of Women, the white ones for voting in women who do not especially need their help, the black ones for voting out those who hold imploring hands to them for inspiration and help—for driving them out into the world with the brand of infamy upon them, so far as it lies in the power of a Woman's Club to do it."

At this I blushed, and I think I must have groaned a little in my sleep, for those marbles weighed heavily on my conscience.

There was a pair of tweezers, bright from long usage, in which the characters of women had been held up for inspection; a microscope to aid in the good work; and a stiletto, stained with blood from the hearts of beautiful women. This murderous little instrument was made of combinations of words, looks and insinuations, harder and sharper than the finest steel, and used principally by very virtuous women who never did anything wrong in all their lives.

Last and most pitiful of all, there was a baby—a sad-faced little thing, with tears upon its face, one of the large family of unwelcome children, the offspring of an enforced maternity.

Underneath all the rest, quite out of sight until the last, I found a small package marked "Work." In it were plans for bringing up and educating the children; answers to the question, "What shall we do with the boys and girls?"—plans for making them happy and beautiful; appliances for the care of the sick and helpless ones of the earth; garments for the orphans and aged; plans for charities and reforms of all kinds; kindergarden and church work; plans for saving the fallen, and winning back the weak and erring ones into right paths.

The bands that bound these things together were of silk, with the words "Love" and "Duty" woven therein, and formed a yoke easily adjusted to the wearer, and the bundle was not heavy because of the yoke.

And when I had seen all that was in the burden, I wondered not that the woman was unable to rise. I wondered more that she had ever come so far on the road that leads to the Land of Freedom.

I was very sad, and said to him who stood by me, "Is there no hope for the woman?" And he answered, "Yes. See, her head is lifted, she is thinking! Look again." And I looked, and behold, there came to her a band of angels. Their names were Reason, Common Sense, Education, and Independent Thought. One carried in his hand a staff with the word "Enfranchisement" engraved thereon. This he offered to the woman to assist her in rising, and give her strength to go on the way.

They all whispered in her ear, and tugged at the bands of metal. The woman struggled, till at last the bands snapped asunder, and all the burden rolled away, except the last and least of all, which the woman cheerfully adjusted to her shoulders by the bands of Love and Duty.

And with the vision of the woman standing, staff in hand, her face turned toward the Land of Freedom, I awoke.

Polly Frost Talks With Betsy Snow.

DEAR MRS. SNOW;—The editor of the RURAL granting me his permission I would like to talk with you for a little while. Of course these are busy times with the farmers wives, (what times are not?) Just now we are occupied with the making of head-cheese, cleaning pig's feet, trying out lard, helping with the sausage, etc. And here let me tell you two of the ways I have of providing for times of scarcity. When we have quantities of sausage in the winter, I fry it, and pack it down in jars as closely as I can lay the cakes together, and then heat lard and pour over it, entirely covering the sausage, which in this way will keep fresh and sweet all summer. And if any of the readers of the RURAL like myself live far from "the butcher and baker and candle-stick maker," they will find themselves provided with many appetizing dishes in this way, when confronted with that everlasting problem, as to what shall we eat. Our sausage put down last winter was perfectly good in August and September. I put it down in gallon jars, take it up and heat it through when I wish to use it. Another method of looking out for times of scarcity is by canning mince-meat. Before the fruit season comes, when our stores of canned fruit wax low, the problem of desserts for dinner becomes a vexed one, and at this season when apples and fresh beef are plenty in the farm homes why not prepare for future needs? for the hungry men will enjoy mince pies in the late spring. But perhaps my housewifely ways will not be new to other housekeepers.

It is as you say Mrs. Snow, we are in the midst of the holiday season, and if it is also as you say, that good husbands are ordering groceries and other indispensable articles for their wives' Christmas gifts, let us accept them cheerfully, and put it down to man's stupidity, for the experience of years teaches me that men are stupid creatures. They may be our superiors mentally, (but I do not believe they are,) but be that as it may I insist upon it, that they are stupid. There is Deacon Brightly a good man truly, but he never seems to have any innate sense of the fitness of things but goes blundering along all the years of his life, and the funniest part of it is, his wife never uses her quick woman's wit to counteract his stupidity; never indeed sees that he is stupid. Of course, the money the careful housewife has taken in from the sale of poultry has gone to help pay the taxes, or for something equally necessary; and why should it not? I am sure I worked no harder for the poultry money than Tom did for the money from the grain. And if our partnership means anything, it must mean that the payment of the taxes is a matter of just as vital interest to us as to our husbands. There is one thing in your letter of the RURAL of December 12th with which I feel like taking issue, Mrs. Snow, that is, that devoted wives are using their long hoarded nickles to buy cigar-cases for their husbands. I mean I take issue with the thought that this is the right or proper thing to do. Now, Mrs. Snow, be just as fond of your Fred as you please, that is your affair. Rise early and walk off just as far as you told of in one of your letters some years ago, and get a pumpkin and make pumpkin pie for breakfast, to suit your husband; all that is a matter for you to decide yourself. But I do protest, and that vehemently, against any woman who entertains the old-fashioned belief, "that cleanliness is next to godliness," doing anything to aid or abet her husband in continuing in this vile practice. Of course our husbands have ways and ways of their own in which they must be let alone. Josiah Allen, you remember, would go in his stocking feet. Tom Frost does have such a fondness for newspapers and I have to bear it patiently, but to encourage any man in the filthy habit of using that poisonous weed, I never shall while my name is POLLY FROST.

A STOUT elderly lady was hanging by a strap and casting black looks at an inoffensive but ungallant male beauty who sat sucking the head of his cane. A sudden lurch of the tram car flung the lady upon him with great force. "Say, dash it, don't you know," exclaimed the youth, "you've crushed my foot to a jelly!" "It's not the first time I've made calf's-foot jelly."

AT the close of a concert, while a young gentleman was struggling with his hat, stick, overcoat, opera glass and his young lady's fan, all of which he was trying to retain on his lap, a suspicious looking bottle from the overcoat pocket fell on the floor with a loud thud. "There," he exclaimed to his companion—"there goes my cough medicine, too!" There was presence of mind for you.

The Farmers Wife as She is Not.

[Written for the RURAL PRESS by MAID-OF-ALL-WORK.]

When the town quill driver undertakes to write about the farmers' wives of California, he succeeds in making a fine display of his own ignorance and filling up a column or two to the great injury of the paper containing the stuff, and he approximates a description of a farmer's wife about as well as a description of a flat boat would pass for a representation of a locomotive. It is intended to be witty, and is marked, "funny, this is to be laughed at," but it is a weeping failure, because the individual who is intended to bear the brunt of the wit has been dead and buried a great many years.

In the olden times when nursery tales were invented, three blind mice got after a farmer's wife, and she seized the best piece of cutlery she had in the house, and brought it down with such force and accuracy as to seriously damage the beautiful curve of their caudal extremities. And this same thing is liable to happen again if our city dailies do not cease to damage the reputation of our beautiful and prosperous State by bringing out illustrations of the farmers' wives as draggled and dirty and overworked, and generally abused. A great many people read these things and think they are founded on fact.

The average farmer's wife in California is neither a drudge nor a sloven. If farms here could not support their women better, they would cease to be desirable in the modern way of looking at things, and land would drop so low it would revert back again to large holdings.

Imagine a wife on an average California farm going out to milk, as represented in a daily not long ago. No one would be more surprised than the cow. In this tidy woman with a neat foot and well kept hair, the cow would see no resemblance to the slip shod creature so familiar to the imagination of the city penny-a-liner. When milking time comes the California cows expect to see the best hired man or the man who pays the taxes on the farm, and she would'nt stand for Mary or any other woman.

If the sad man who writes funny articles on the farmer's wife could attend a session of the State Grange, the blow to his imagination would be so great, that his surprise would take the form of petrifaction. He would be labled "soft-soap-stone," and set aside in a corner. Those grand dames in silk and velvet and fine shoes, who make witty speeches, and report laborious committee work, and make times agreeable wherever they are, are somewhat different from the wretched creatures of the quill drivers' imagination.

They evidently have done something else beside churn and wash.

The women of the State Grange are representative women, and they represent tasteful and comfortable homes, contentment, and all the domestic and social graces.

Contrary to the illustrated versions in the papers, the California farmer's wife does not churn butter with boots on, a grain sack for an apron, and her hair standing in seven directions, nor does she have to carry her butter to town in a basket and trade it for calico and buttons.

She is not a cross between an emigrant German with a growler, the Irish widdy of footlight comedy fame, with her "auld market basket." She is educated, neat and industrious, and if she does her housework, she does it with ease and grace.

Washing, sewing and butter-making are getting to be eliminated from the farmhouse work, as largely as from city homes.

The farmhouse has lost its heterogeneous character. Farmers are divided into horticulturists, viticulturists, stock raisers, dairymen, wheat growers; and the farmhouse is the place where the family resides, and not where petty industries are kept up to support the paucity of the acres.

One whose memories of a hard and joyless childhood on a farm way back in Missouri or somewhere else, leads him to libel the California farm home, ought to be invited out to pay a visit to the genuine California farm home he knows so little about. He will be treated like a king, and will be fed on light diet while he slowly digests his surprise. The daughter from the Seminary will sing for him, the Normal School girl will inform him on the leading questions of the day, the Business School graduate will beat him at chess, and he finds it is no use to make love to the pet daughter of the house, for the farm is too good a place to leave.

Even in humble farm homes where prosperity has not yet arrived, squalor, misery and dirt is never present in the absence of intemperance. The wife of a poor man is able to live a great deal easier in the country on a farm, than she can in the city, and food to eat is always assured.

She has no false appearances to keep up, she isn't a slave to her door-bell, and her work, if she has to work for wages, is independent and self-controlled. The penny-a-liner who would describe the farmhouse, will be surprised to learn that pigs are no longer allowed to wander at will in the kitchen, and that knitting the family hosiery, and making the masculine garments from the weaving up, is a forgotten art.

In these times the conveniences and comforts of life are about equally distributed between the city and country, according to the

respective conditions of the families. The poor see more misery in the city, and the rich flee to the country for rest and comfort.

Browning says: "There is nothing good in the city, but the patient lives of the poor."

All the world is in sympathy with that patience, and all the love and means of philanthropy is now being directed to the alleviation of that misery and sin. And the only remedy seems to be transportation to the freer opportunities and purer air of fields and pastures.

It is so much easier to make fun of things than to present truths in readable shape, that the dummies of the farmer and his spouse, made entirely out of "old clothes," are continually set up to fire bad jokes at. For cheap reading, this is space-filling, but does it advance the prosperity of an agricultural State, whose hope lies in training the next generation to cultivate our thousands of now lightly tilled acres. Or have we reached a time when we can afford to pay anything for a laugh, or be witty at our own funeral. If we must make fun, let it not be of our homes of industry, economy and enterprise.

But if the humorist can spare no one, let him dilate upon the miserable slip-shod farmer's wife as the exception, and not as the rule. Beware, oh, all blind mice, for there may yet be a farmer's wife who has a carver, and knows how to use it.

Lessons in Volapük.

The International Language of the Entire World.

LESSON 13.

In lesson 1 it was taught that any adjective may be made an adverb by adding o to it. There are also primitive adverbs of which the following are the principal:

Of time.	*Of manner.*	*Of quantity.*
Ai, always.	Also, thus.	Dilo, partly.
Anu, at this moment.	Elso, otherwise.	Lölo, entirely.
Bevüno, meanwhile.	Jeno, actually.	Mödo, much.
Biseo, beforehand.	Mofo, away.	Säto, enough.
Bletimo, recently.	Plobo, thoroughly.	Te, only.
Buö, formerly.	Sägo, even; yet.	Ti, nearly.
Denu, again.	Somo, so; in such manner.	Töbo, scarcely.
Egelo, always.	Voto, otherwise.	Tu, too.
Fino, finally.	Vio, how.	Umo, more.
Jünu, up to now.	Zo, round about.	Vemo, very.
Läto, lastly.	*Of place.*	Za, nearly; about.
Nog, still.	Diso, below.	*Varied.*
Nu, now.	Domo, at home.	Ba, possibly.
Ofen, often.	Fö, in front.	Beno, well.
Poso, afterwards	Ge, back.	Bo, of course.
Siso, since.	Ino, within.	Deno, nevertheless.
Sotimo, sometimes.	Is, here.	Kludo, consequently.
Suno, soon.	Lino, around.	Leno, by no means.
Täno, then.	Pö, behind.	No, no.
Ya, already.	Seo, without.	Si, yes.
	Suso, above.	Sikodo, consequently.
	Us, there.	Za, moreover.
	Valöpo, everywhere.	

Interrogative.

Liko? how? Kimna? how many times?
Kikod? why? Klöp? where?
Kimiko, in what way? Klüp, when?

Relative.

Kö, where. Kü, when.

The vowel series avails to form adverbs of time, as for example:

delo, by day. ivigo, three weeks ago.
adelo, to-day. omulo, next month.
ädelo, yesterday; uyelo, year after next; evigo, week before last.

Exercises.

Ogolob oyelo lödön in dom olik—Jiblod obik kidof ai obi—Elogom bletimo fleni olik kel äkömom idelo—Okömoms denu umulo—Kimiko sagol volapükiko atosi?—Kimna eflapom jevali olik?—K öp ogolols oyelo ol e jinef olik?—Epölüdof lolis, kanof deno lemön flolis et kels binoms su tab—Kanon lifön nen fineds, nams u lams, ab no nen kap—Epelob ti sentabis fols a paun plo kaf et kel no binom gudik—Li-kanol konön obe kikod man at ebetom edelo vomi et e esedom adelo ofe lolis?—No li-ovipol spatön odelo ko ob ve jol fluma?—Ologobs us flolis nidik e nimis smalik e gletik.

I recently saw a man without feet or arms who formerly lived at your father's house—I shall by no means give you books if you lose them again—Yes, sir, I said that that boy that you saw yesterday will come to your sister's house to-morrow to remain there—If you will go soon then I shall go with you to the house where those boys live who always hate each other, although they sometimes kiss each other and have been taught to be friendly—I shall go soon. Will you go with me? otherwise I shall go with my uncle—Where shall I see you, day after to-morrow? It is especially (patiko) bad to bate your brother or your sister.

This series of twenty lessons was begun in the PACIFIC RURAL PRESS of Oct. 10, 1891. Those desiring assistance in the systematic study of the language will be put in the way of obtaining it without cost by addressing A. L. Bancroft, *Cifel* for California, 303 Sutter St., San Francisco.

SKILL RUNS IN THE FAMILY LINE.—It is well known that the Japanese are very skillful workmen, and the reason for this is undoubtedly accounted for in the following extract from an exchange: In Japan apprentices begin to learn their trades usually much earlier than in our country, so that when majority is attained the mastery of the crafts is thorough. Another striking feature of the Japanese system is that of heredity. Skill runs in family line. Not a few of the famous artisans of the present decade are descendants in the ninth, tenth and even twentieth generation of the founder of the establishment. A carpenter in Fukui can boast of his ancestry of woodworkers through 27 generations; and the temple records show such boasting to be true, though often adoption interrupts the actual blood line. At a paper-makers' establishment in Awotabi, in Echizen, the proprietor's ancestors first established the industry a thousand years ago. The same as above, so far as skill in the family goes, is as true of China as of Japan.

Chaff.

GENTLEMAN (to organ-grinder)—"I don't like your playing outside my house." Organ-grinder (blandly)—"Very well, sar, sall I comes inside?"

MINISTER (dining with the family)—"You were a nice little boy in church this morning, Bobby. I noticed you kept very quiet and still." Bobby—"Yes, sir. I was afraid of waking pa."

SHE—"Mamma says she knows that when we are married we shan't live so much like cat and dog as she and pa do." He—"No, indeed, your ma is right." —"Yes, she says she is sure you'll be easier to manage than papa is." —"Oh!"

MRS. BROWNSON—"Why under the sun are you standing here, gazing out of the front door?" New servant—"Sure the sun won't hurt me."

A young man was calling on a county councillor's daughter the other evening, when the father appeared at the parlor door. "May I come in?" he asked, hesitatingly. "Oh, yes," she answered, "you may, but we have a quorum without you.

LITTLE Johnny (looking curiously at the visitor)—"Where did the hen bite you, Mr. Angel-Smith?" Visitor—"Why, Johnny, I haven't been bitten by any chicken." Johnny—"Mamma, didn't you tell papa Mr. Angel-Smith was dreadfully hen-pecked? Why, mamma, how funny you look. Your face is all red."

HE was a bad writer. — Mrs. Green (to young physician whom she had called in haste)—"Oh, doctor! doctor! I fear you have made a terrible mistake! My daughter had that prescription which you sent her last night filled, and she took a dose of the medicine. Now she exhibits every symptom of poisoning. Oh!"—Young physician—"Prescription, madame? Why, that was an offer of marriage.

ENTER housemaid to give notice. Mistress: "Why, Sarah what are you dissatisfied with?" Housemaid (with a simper): "It ain't as anything is wrong, mum, but I'm going to be married." Mistress: "Why, you didn't tell me you were engaged when you came!" Housemaid: "No, mum, I wasn't then. But you remember you gave me a holiday about two months ago to go to a funeral. Well, I'm going to marry that corpse's husband."

WATTS—Aren't you ever going to get tired of shopping? You never seem to bring anything home. Where's the fascination in it, I'd like to know? Mrs. Watts—Oh, I like to look at the new goods, you know, and to see what lovely things I could get if I had only married rich.

YOUNG FOLKS' COLUMN.

The Little Singing Girl.

[Written for the RURAL PRESS by MISS EVELYN.]

Far away in the wilds of the Alps, there once lived a poor charcoal burner. His hut was high up a mountain side, and his little girl Gemma never went to school, because many weary miles lay between Gemma's home and the nearest village.

Gemma did not want to go to school, however. She was quite happy playing under the trees and hearing the birds sing.

"What a sweet sound you make, little birdies," she would say. "How I wish I could do it, too!" and then she would try to imitate the singing of the birds, until at last she could make sounds almost like theirs, herself. Now, behind Gemma's home, the mountain towered up till it was lost in snow and clouds. Some people have a fancy for climbing to the top of such mountains. They say they can see more of the world than they can in the valleys, where the view is shut in.

One bright, August day, when Gemma was about eleven years old, she was sitting at the top of a piece of rock, singing, when two gentleman, accompanied by a guide, came down the mountain side.

"What sweet music!" exclaimed one of the strangers. "It sounds like a nightingale singing."

"I really believe it must be that little girl," replied the other gentleman; and they stopped under the rock to listen.

Gemma, who had no idea that any human being was near, continued to sing, imitating the birds in such a wonderful manner that one of the gentlemen became too much delighted to keep silence.

"Brava! brava!" he cried, clapping his hands.

Gemma was terribly startled. She jumped up and ran to take refuge in the cottage, whither the gentlemen followed, for they wished to see the parents of the wonderful little singing girl.

After some conversation, one of them made a most startling proposition to Gemma's father and mother.

"Let us take your daughter away to the town of Milan to be educated. We will pay all the expenses of her instruction, and before many years she will be the greatest singer in the world."

"But how do we know that you will treat our child kindly?" asked the mother.

"You shall come with us now to Milan to see the school," answered the stranger, "and every six months you shall go there to visit your little girl." So the mother consented.

Poor Gemma! The change was very terrible to her at first. Instead of running barefoot on the mountain side, free as the winds of heaven, she was now shut up within the four walls of a boarding school. Her feet were cramped into shoes, her active young limbs ached for want of exercise. Study, too, was very hard work at first, and she often shed tears when she thought of her dear parents and her lovely mountains. But soon Gemma had a professor to teach her music, and this made her feel as though a ray of sunshine had entered her life. The professor was a nervous, cross old gentleman, who hated to hear children play or sing wrong notes.

He was in the habit of scolding all his other pupils roundly, but he never once scolded Gemma. "The child is a genius," he would cry with delight; "she is the first pupil it has ever given me pleasure to teach."

Sometimes the sister of the rich gentleman, who was paying Gemma's expenses, would invite the little girl to her house to spend the day.

The sister was a very fine lady indeed, and her house was so full of beautiful pictures and costly trifles that her poor little visitor was afraid to move about, for fear of overturning something.

From the way in which the lady looked at her, Gemma felt that she was thinking, "What an awkward child you are, how big your feet are, and how red and sunburnt your hands."

Perhaps the lady never thought this at all, but when Gemma saw her, all in silks and satins, her white hands gleaming with rings, the poor child felt as nervous and terrified as a wild linnet would do if you asked it to make friends with a tame canary. As the months went by, however, the tan wore off Gemma's hands and they became white, she grew accustomed to wearing shoes and learnt to move about as gracefully as any one.

Then the lady treated her more kindly and confidentially.

"My brother is so extravagant," she would say. "He is always doing some foolish act of generosity;" and Gemma would blush, for she knew that her education was one of his acts of generosity.

He himself, however, never hinted this; he was always very kind to the little girl, gave her boxes of candy, and praised her progress in singing.

When Gemma was eighteen, her master said: "She must sing at a concert, for I am anxious to know what people will think of her."

The concert took place in a very large building. All the great people of the town were there, and in the front row, sat Gemma's parents, and her kind friend. Alas! no longer rich, but he never for a moment regretted the money he had spent on Gemma's education, for he said: "Think how many sorrowful hearts will be lightened by hearing her sweet singing."

"How young she is, and how pretty," whispered the people as Gemma appeared. When she sang, it sounded as if the sweetest-voiced nightingale the listeners had ever heard, were pouring forth a song.

"Oh! brava! sing again," they all cried. They got up from their seats and waved their handkerchiefs, the people were all so delighted. "*L'uccello*—the bird," was the name they all gave her.

Of course the newspapers all spoke of "the bird's" wonderful singing. It was quite surprising how much money was offered Gemma to sing in other towns—enough, before long, to make her old parents rich, and enable her to save up a very large sum besides.

Gemma had been traveling about for three years, singing in Germany and England, even as far away as Russia, when she returned to Milan.

Her first inquiry was for her friend. "He has become very poor," they told her, "and scarcely ever goes into society, as formerly. There is a beautiful lady he wants to marry, but as she has very little money, and he has none, the wedding cannot be thought of."

Gemma knew it was no use offering to pay him back all he had spent on her, in her childhood, he was too proud to accept it, so she went to the lawyer, who had her benefactor's estate for sale, and though it cost a very large sum of money, she bought it.

Then she visited the sister, who treated Gemma very affectionately, now that she had become celebrated.

"I want you to hasten your brother's marriage, and give the bride this, as a wedding gift," said Gemma, presenting the title deeds of the estate.

"Never say that it is not yourself who makes this present."

Now, as the sister was very rich, and had not any children, no one was surprised at her making her new sister-in-law a splendid present, and you may be very sure that at the wedding, she took all the credit for great generosity.

Gemma's kind friend and his wife have lived very happily since the wedding.

If you should ever chance to meet them, I hope you will never tell the secret of how they became rich again.

DOMESTIC ECONOMY

Care of Flat-Irons.

It is so easy to keep the flat-irons in good condition that there is little excuse for any housewife neglecting them, no matter how busy she may be. Any woman can easily tell at a glance when these articles are well kept. Some housewives will have in their possession irons that have been their mother's before them, and though they have been in constant use for years, are still as firm and smooth as any one could wish. Other women, with the same kind of irons, would, by neglect and carelessness, in a year or two, render them unfit to use.

Where there are many starched clothes to be done up weekly, it is a good plan to wash the irons once a week, but where plain clothes and only a few starched clothes are to be done, once a month is often enough Take some clean ammonia soapsuds, and with a cloth wash the iron well, afterwards wiping with a dry cloth; then put them on the back part of the stove to dry thoroughly. To clean the irons, always have a piece of coarse sandpaper or a handful of coarse table-salt or a piece of wrapping-paper in which to wrap them. Always have the top of the range perfectly clean before putting on the irons, and never allow them to get too hot. If such a thing does happen, cool them by setting up on end on the hearth. Some women, when in a hurry, cool irons by plunging them into cold water, which will very soon spoil them. Don't keep the irons on the stove when not in use, for it is sure to harm the temper of the iron; and don't have irons on the stove when cooking, more particularly when the article cooking is one that is apt to flow or boil over, or while frying. After taking an iron from the stove for immediate use, first rub it over with a piece of heavy wrapping-paper kept for that purpose, then rub the smooth part with a cloth in which is encased a bit of wax. Rub the iron well over a clean cloth and then it is ready for the clothes. In ironing starched clothes, if any of the starch sticks to the iron, always scrape it off with a knife before placing it on the stove to heat. Irons should be kept in some closed, dry place. If kept on a shelf they are always dusty when wanted.—*Housekeeper.*

GRACE ORANGES.—Have the oranges perfectly dry. Separate carefully each carpel without breaking the inner skin. Stand them in a warm place to dry. Put one pound of granulated sugar in a porcelain-lined kettle, add to it a half-cup of water and stand over the fire to boil. Do not stir after the sugar is dissolved. After the mixture has been boiling about ten minutes, hold the forefinger and thumb in ice-water for a minute, then quickly dip up a little of the boiling syrup with them; press the thumb and finger tightly together, then draw them apart; if the syrup forms a thread, it is at the second degree. Boil gently about three or four minutes longer until it reaches the sixth degree. This may be known by taking a small portion on the end of a spoon, then dipping it into cold water and breaking it off quickly; if it is brittle without being at all sticky, it is just right. The syrup must never be stirred, or it will cause granulation. Now take it quickly from the fire, add a tablespoonful of lemon juice, stand in a basin of boiling water, to keep the syrup from candying. Take the fruit on the point of a large skewer or with sugar tongs, dip into the syrup, lay on a piece of buttered paper and stand in a warm, dry place to dry.—*Mrs. Rorer in Table Talk.*

BOILING VEGETABLES.—Now, what is there to say about boiling vegetables, except to put them over the fire and let them boil until they are done? That is the point—"until they are done," but not a minute longer. So general is the custom of overboiling vegetables, cooking them in a careless, haphazard kind of way, that few people realize their superiority when cooked just the right time and served as soon as done. A general rule to be observed is, that all vegetables must be put into fast-boiling water, brought to the boiling point again as soon as possible, and kept boiling until done. Potatoes, if of medium size, require 30 minutes to cook; of course, if they are small, 15 or 20 minutes' boiling is sufficient. Care must be taken that all are of nearly the same size. Carrots and turnips require 45 minutes when young and an hour in the winter. Beets, an hour in summer and an hour and a half in winter; or if very large, two hours is not too long. Onions, if of medium size, will be done in one hour; when small and young, half an hour is sufficient. Cabbage and cauliflower should not boil over 30 minutes. If onions, cabbage, cauliflower or turnips are boiled in a large saucepan with plenty of water, kept boiling rapidly and with no cover over them, the odor of these vegetables will not be noticeable in the house. I did not believe this until I tried it.

VEGETABLE FLANNEL.—Germany contains a number of establishments engaged in the manufacture of flannel and similar textiles from pine leaves, the articles made being used in hospitals, barracks, etc., owing to the fact that no vermin can lodge in them. When spun and woven, this material resembles hemp, and it may be employed in making many articles of wearing apparel, as the goods are comfortably warm and solid.

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Saturday, January 16, 1892.

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Business Announcements.

(NEW THIS ISSUE.)

Carbon Bisulphide—J. H. Wheeler, Melrose.
Cultivator—Jensen & Lauritzen, Watsonville.
Business College—W. C. Ramsey, Stockton.
Seeds—L. L. May, St. Paul, Minn.
Squirrel Exterminator—F. E. Browne, Los Angeles.
Seeds—John Lewis Childs, Floral Park, N. Y.
Seeds—John A. Salzer, La Crosse, Wis.
Plants—E. Bonner & Co., Xenia, Ohio.
Seeds—Alneer Bros., Rockford, Ill.
Fruit Trees—D. B. Derby, Vacaville.
Gopher Traps—Ira F. White & Son, Pomona.
Imported Clyde Stallions—H. P. Mohr, Mount Eden.
Seeds—F. Barteldes & Co.' Lawrence, Kan.
Seeds—The Dingee & Conard Co., West Grove, Pa.
Registered Shire Stallions—J. L. Parsons, Santa Rosa.

See Advertising Columns.

The Week.

The Citrus Fair at Auburn is in progress as we write, and early reports are of the full success of the fair as a meritorious display and as a recipient of public favor. Half a dozen counties are represented by collective displays, the designers of which have been able to produce quite unique and original effects. Besides these, there are a host of individual exhibitors competing for the array of premiums which have been hung up. These are naturally in the main from Placer county, but not wholly so. The fair seems to be bringing out the achievements of the foothills splendidly, and that will be a grand service to the State. RURAL representatives are at the fair and will secure its salient features for the benefit of nonattendants.

Congress is actively at work, and California Congressmen are introducing a host of progressive measures, some of which we hope will get off the file before the adjournment. We notice that river improvement is urged by our State Board of Trade. It is a good thing. If Congress will give us something liberal and adequate in this direction, we will endure the pigeon-holeing of a good many other things.

The Issue on the Peach Yellows.

There is no more important item in our local agricultural affairs just at present than the issue which is being forced on the practical exclusion of Eastern-grown peach, plum and apricot trees, because of the ravages, east of the Rocky mountains, of the dread disease known as the "yellows." This issue interfering as it does with courses of trade, which have long prevailed, naturally excites opposition among Eastern tree growers and upsets the calculations of local tree dealers who have hitherto relied, in whole or in part, upon the importation of Eastern-grown trees.

Probably no measure can be adopted without interference and hardship to some people. We sympathize with Eastern tree growers who have laid out their future upon sale of stock in California. Some of them have been very enterprising in propagating the varieties our planters desire, and have undertaken, at large expense, to procure buds from California orchards. We do not wonder that they feel aggrieved and that they protest against the position now taken by California fruit growers at their public meetings and through the State and County Boards of Horticultural Commissioners. We have received a number of communications on this subject from Eastern parties, which enlarge upon the grievousness of the situation in which they are placed, and we sincerely regret that they have to suffer in the ways described.

And yet what can California do otherwise than she has done? Here we are with a vast and growing peach interest. It is by much the greatest deciduous fruit interest of the State at present. More than this, we are free from this terrible disease which destroys peach orchards almost with the rapidity of fire or tornado. One cannot read the most conservative reports on this subject, such as appear in the Government publications, without being appalled at the insidiousness, the swiftness and the effectiveness of the scourge. There is no pest or pestilence among fruit trees which can compare with the little understood malady known as "peach yellows."

In view of these things, what can we do but protect ourselves? To weaken or to provide for future restriction may be to "look the door after the horse is stolen;" the animal is now in the stall, vigorous and healthy and promising: let the doors be locked at once.

It has been charged that this movement is at the instigation of the California nurserymen and is for the purpose of corralling locally, the trade in trees. This is not true on the whole, and in fact we believe they have had very little or nothing to do with it. Perhaps an indication of this may be found in the fact that many California nurserymen expected to handle considerable quantities of Eastern-grown peach and prune trees this year and had orders placed for them which they, in some cases at least, countermanded as soon as they knew of the stand taken at the Marysville Fruit Growers' Convention. The result will undoubtedly favor the local growth of nursery trees, but unless we are very much mistaken, our California nurserymen had very little to do with the incisive action which has amounted almost to a practical exclusion of Eastern trees.

Again, the present California stand on this subject is not a local scare. It comes about through Eastern publications as to the character of the yellows and the intensity of its ravages. Current Eastern reports, backed up by the most carefully prepared statements by the Government investigators, must be charged with this protective action by the California fruit producers. Just as we write the mail brings us a new Government publication on this question in its most startling phases. It is entitled "Additional evidence on the Communicability of Peach Yellows and Peach Rosette," and is by Dr. E. F. Smith, the Specialist of the U. S. Department of Agriculture, who has been engaged upon this particular investigation for several years. Let the Californian read the following quotation and see that his protective action is not too early nor too incisive, and the aggrieved Eastern nurserymen also read it and perceive that it is not an issue forced by local nurserymen upon selfish ground. We quote from Dr. Smith as follows:

It is proper to state, however, that the losses continue in the infected districts; that the disease has appeared in new localities; and that regions now healthy are also threatened. The yellows is certainly as far south as southern Virginia and probably as far west as Arkansas and northeastern Texas. Peach growers are earnestly advised to stamp out the disease upon its first appearance, and are warned against the importation of trees from infected districts. These remarks apply with especial force to the Pacific coast, and in this connection it is well to remember that the apricot and almond are also subject to yellows. It would be much safer for the Californians to grow their own peach trees than to introduce any from the eastern United States. If trees are imported it should be known beyond question that they are from regions where this disease does not occur. The mere fact that the nursery stock is healthy at the date of shipment is not a sufficient guaranty that it will continue so.

This is warrant for all California fruit growers are doing, and it should be sufficient to disarm criticism. This State cannot afford to proceed longer in defiance of this disease, but is justified in the most stringent measures for its exclusion.

It is, perhaps, natural that the first thought of those who are temporarily troubled by the refusal of Californians to receive their trees should be retaliation. We are not surprised, then, to find one Eastern tree grower writing us in this way:

Our only recourse will have to be to get similar laws passed by this and adjoining States to exclude California fruit on account of its sanitary condition. We think, if we try, we can get laws that will operate as much against the fruit growers of California as they can by excluding our stock.

This is a heathenish threat, and none, perhaps, will be more ashamed of it in a little time than those who propose it. It is not to be feared on our part, for it is idle and impracticable. No Legislature could be made to adopt any such enactment nor could facts be shown which would justify it in the minds of any fair-minded men. Our Eastern friends in the nursery line, before any such venture could be undertaken by them, would remember that such action would be against their own customers and friends, and in many cases against their own investments. We look upon the threat as merely a manifestation of chagrin resulting from misapprehension of the motives which prevail in excluding trees from doubtful or infested localities. Usually the ill-temper which arises upon misapprehension quickly passes away.

Greatest Money Ever Paid for a Horse.

The *Call* is authority for the statement that an agreement was perfected Tuesday, by which J. Malcolm Forbes of Boston will pay Senator Stanford $150,000 for the two-year-old colt Arion. This is the highest price ever paid for horseflesh, the next highest being Axtell, who brought $100,000. Arion is a bay colt, 15.2 hands high, and was foaled March 13, 1889. His sire was the illustrious Electioneer and his dam Nanette, a sister to Woodnut (2:16½). A few months ago, he made a record of 2:10¾ at Stockton. Mr. Forbes seems to be boring with a bigger auger than Bonner in the horse market.

Arion leads now an illustrious line of high-priced horses which California has furnished to Eastern fanciers. Among them are the following: Anteeo, who reached a price of $65,000; Bell Boy, who sold for $51,000; Mascot for $20,000, Alcazar for close to the same amount, Woodnut for $20,000, Norval for $15,000, and a dozen other stallions, young in years, that went over $10,000.

RATTLING A CROSS BULL —Mr. R. G. Sneath tells us of an early observation of his in the subduing of a vicious bull, as practiced by a San Mateo county butcher. The butcher was called upon to bid upon a cross Jersey bull, who was so ugly that no one could enter the field with him. The butcher made the bid and was given the bull, being cautioned of his dangerous character. He scouted danger, and as the bull came bellowing and pawing before him, he began rattling back and forth between the horns with a piece of a fork handle, striking quick, sharp blows on the horns as near the points as possible. The bull began to back away, and finally started on a run, and the butcher after him. After that the mere sight of the stick intimidated him. Try it; but take our advice and stay on the safe side of the fence until you see how it works.

The Evil of Grain-Gambling.

A measure is again before Congress to put an end if possible to grain-gambling. This, of course, does not mean the sale of futures where it is expected that grain will actually be handled, but the wholly fictitious gaming which has no grain in it, except the words printed on the contracts. The evil in this sort of dealing is so great that we have frequently attempted to characterize it and to depict its evil influences. So long as the practice exists, there will be occasion to strike it in the interest of legitimate producers and dealers.

We are glad to find in current telegrams some expressions from Senator Washburn of Minnesota, who as a resident of so great a wheat-growing and milling State, knows well the influences of the gamblers' practices. He is quoted as saying:

I want to stop the pernicious, demoralizing practice known as "short-selling," where a man can go on a board without a kernel of grain, real or prospective, and sell a million bushels, depressing the market the same as if so much grain had been dumped on it. Mr. Pillsbury, the largest buyer of real wheat in the world, tells me there are men in Minneapolis with their offices in their hats, who sell more wheat in a year than he buys.

A very interesting table I came across the other day selects ten days from April to October, 1890, and shows that in those days, while the actual sales of wheat amounted to 437,800 bushels, the optional sales of fictitious wheat amounted to 125,720,000 bushels. On the 14th of April, 1890, New York speculators sold 44,000,000 bushels of fiat wheat, probably more than twice as much as reached that city during the year, and the actual sales of that day were but 6000 bushels.

This shows how wholly unreal the trade is and how hollow are the reports of markets which are based upon such manipulations. Nor is this the whole of the trouble. If it were, possibly, the people could stand quietly and watch the spectacle of men driving each other to the lunatic asylums or to suicide. The worst of it all is that the gaming unsettles values and gives both producer and dealer no sound ground upon which to proceed. It also makes game of a world's food—a most vicious proceeding.

A still more direct and present effect of the gambling is shown by Senator Washburn in this way:

"Were it not for Board of Trade methods, I think every bushel of wheat would be worth 20 cents more to-day. In fact, all Europe is astonished that it is getting our wheat to-day for such a ridiculously low price, considering all the circumstances. They expected to pay more, and it is an outrage upon the producer that he should be a sacrifice to the relentless greed and disreputable deals of the short seller on our Boards of Trade. In my opinion some kind of relief will be granted the producer in a restrictive law that will preserve all the good features in future-dealings, and eliminate the bad."

Such a law is now before Congress. Now enact it and enforce it!

FROM HAWAII.—We had a pleasant call on Wednesday from H. J. Rhodes of Carpinteria, who was on his homeward way from a year's sojourn in the Sandwich Islands. Mr. Rhodes reports that the McKinley bill seems to be working something of a transformation in Hawaiian industries, leading to a diversity of production, and will result, probably, in making the islands more self-reliant industrially. There is also quite a sentiment springing up in favor of annexation, and generally a progressive spirit discernible. Mr. Rhodes brings back with him many rare and desirable plants, and on his return to the islands next month, will take quite a shipment of orange and other trees for planting.

MORE KITE SHAPES.—It is reported that San Francisco horsemen propose to construct a kite-shaped track near Pleasanton, Alameda Co., a five minutes' walk from the town, and adjoining the Pleasanton Stock Farm, on the road to Dublin. At least 160 acres will be secured, and about $125,000 will be expended on the grounds, including the grand stand and buildings and stables for the accommodation of a large number of horses.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

An Irrigation Bureau.

Senator Peffer of Kansas evidently understands the benefits of irrigation even as far East as that State, and one of the first things he did after Congress opened was to introduce a bill providing for the creation of a Bureau of Irrigation. The details of his plan have not come to hand, it being evident that the wise newspaper correspondents at Washington do not understand the growing importance of irrigation, and look upon the proposition as one of those vagaries which they assume are to be expected from the long-bearded representative of the farmers. Too many people fancy that all the wisdom in the country is bound up in the representatives of one or two Eastern cities and interests and look with a good-natured patronizing sort of air upon anything that is evolved in any other quarter. Particularly do they affect to despise any ideas that have their origin in what they are pleased to refer to as the wild and woolly West.

But the irrigation question is bound to create more and more discussion at each succeeding session of Congress, and it will be the Western representatives who will have to bear the burden of educating their Eastern contemporaries upon the importance of an adjunct by which a good deal more than half of the agriculture of the world is carried on. Heretofore, if they have given the matter a thought, it has been to dismiss it in airy fashion as a subject in which they had no interest.

But the wants of the great arid region are too pressing to be longer treated in this cavalier fashion, and the time is now at hand when national legislation must be had upon the subject of irrigation, water rights and water laws. The demand for such legislation is urgent, and it cannot be much longer deferred.

If Senator Peffer's bill for the establishment of an Irrigation Bureau means the creation of an organization which shall grasp the subject intelligently and pursue a line of action that shall be for the good of the people, and not simply to provide a lot of sinecure positions for politicians, then it should have the support of every intelligent man in the country. There is a vast amount of work waiting to be done by such a Bureau, and which can best be performed under the auspices of the National Government.

Another Plan for Reclamation.

The telegraphic dispatches at the date of writing (January 9th) have given but a meager account of the proceedings of the Irrigation Convention, made up of delegates from Montana, that was called to meet at Helena on the 7th. The only information yet received is to the effect that there was a good attendance, and that, after considerable discussion, the convention put itself on record as recommending that the General Government devote the money realized from the sale of arid lands in the West to providing means for reclaiming the same through irrigation. The Salt Lake Convention, it will be recollected, recommended that the General Government cede all these lands to the States and Territories in which they lie, and that it also expend a portion of the money already received from the sale of such lands in their reclamation.

The Montana Convention has done a good thing in thus proposing another solution of the arid land problem. Before any plan of action can be crystallized and decided upon, it is essential that the subject in all its bearings shall be fully discussed. Conventions should be held in each State and Territory, just as has been done in Montana, and the fullest and freest discussion should be encouraged. Then, out of the multitude of plans certain to be proposed, some one can be evolved which will represent the best sentiment of the entire country in regard to one of the most important economic subjects that has come up for discussion in a long time.

By another issue, the RURAL PRESS will be able to present its readers with a full account of the proceedings of the Montana Convention, and the entire plan there evolved can then be discussed.

District and Other Work.

News comes from the Poso district, in Kern county, that arrangements have been made by the district officers with the Portland Construction Company to complete the canals in that district for the sum of $450,000, payment to be made in the bonds of the district. The necessary papers have been signed, and work will be commenced at once.

During the recent rain storm, the dam now under construction across the Tuolumne river by the Modesto and Turlock districts withstood a severe test. A great flood came down, which the wasteways were unable to carry off. The water accordingly accumulated behind the dam and soon began pouring over the top, which it continued to do in great volume for some time. When it receded, it was found that no damage whatever had resulted to the incomplete structure, which is the strongest proof of the substantial character of the work.

It has been decided to lay steel pipes for laterals in the Perris district instead of those of vitrified clay, as was at first proposed. A pipe factory will be erected on the spot. Contracts for laying them have been let, and the work will be done as quickly as possible.

Escondido district is happy in the receipt of news that the long delayed contract with the Moffit, Hodgkins & Clark Company has been signed and that work on the San Luis Rey water system will soon be commenced.

At the last meeting of the Board of Directors of the Selma district, S. B. Holton took his place as Director of District No. 2. J. H. Sayre was elected President of the Board. The officers have taken steps to oppose the movement made to have the district dissolved, which it will be recollected has been set on foot by those who have so far prevented active operations from being undertaken, and who allege the results of their own work as reasons for interference by the courts.

The proceedings in the organization of the Linda Vista district in San Diego county have been confirmed by the Superior Court, and the right to issue bonds to the amount of $1,000,000 has been affirmed. At the next meeting of the Directors, steps will be taken to at once issue a portion of the bonds voted. Three prominent engineers have made a thorough examination of the proposed source of supply and the works to be constructed, and agree that the plan is feasible and the estimated cost is within bounds.

The San Jacinto and Pleasant Valley district is actively at work in endeavoring to decide which of several sources of supply shall be utilized. The directors are determined to make no mistake, but will take every precaution to secure the best terms and largest supply that can be obtained.

At the last meeeting of the directors of the Alta district, the regular routine business was transacted and the A. B. Clark ditch was purchased for $1180.

A petition will be presented to the Board of Supervisors of San Bernardino county on Feb. 1, asking for the organization of the Riverside Heights Irrigation district. This district includes some 4000 acres of land adjoining Riverside, and lying above the present canal systems. It is probable that arrangements will be made with the Bear Valley Irrigation Company.

A condemnation suit has been brought to obtain the land for the construction of an extensive storage reservoir near Covina, Los Angeles county. A large dam will be erected across San Dimas canyon and several thousand acres of land near Puente will be irrigated.

The Tulare Lake Canal Company is erecting a dam across the Tule river by which a canal 60 feet wide will be supplied with water sufficient to irrigate 50,000 acres of fertile land.

The opposition to the formation of an irrigation district to complete the Oakdale canal has stimulated the stockholders of that concern, and it is said that an effort will be made to resume work on that enterprise.

The Inyo and Kern Canal Company has been incorporated in this city to construct a canal in Owens River valley, Inyo county.

The Orr Water Ditch Company of Nevada has made its annual report to the stockholders. It shows that the company's affairs have been ably managed. It carries about 2500 inches of water, and sells it at $4 per inch, and the expenses are less than $1 per inch. It is a fine property. Charles Gulling is its secretary, and the trustees are J. J. Becker, D. Paul, James Gault, F. Lemmon and M. Gulling. The ditch is valued at $50,000, or $200 a share.

Pumping for Irrigation.

W. S. Green, the sturdy champion of irrigation for the Sacramento valley, has taken up the subject of pumping water from that river to supply the adjacent territory, and is pursuing the matter with his usual force and persistence. Last week we quoted what he had to say upon the subject, and again have an interesting article upon the same lines. He says: "The margin of the Sacramento river from Butte Slough to Knight's Landing, on the east side, is absolutely unfit for grain-growing, but it is the finest grass, orchard and vegetable land in the world. These things cannot be grown to perfection without water at command. On the west side of the river, protection works have made grain-growing possible, but the few who have tried alfalfa say that it is almost a waste of land to sow it to wheat, because the grass is so much more profitable. Mr. C. P. Wilson has 60 acres of alfalfa, on which he pumps the water from the river, and he says that it pays five times as much as any other 60 acres he has. Above Colusa the high land extends farther back from the river, but there is not an acre of the river land that will not yield four or five times as much money if put in some crop that will employ water at any season. We have figured on the pump business, and find if there is any kind of unanimity in agreeing to take the water for a term of years, it can be thrown over the land at the rate of 15,000 gallons for 10 cents. It does not seem that an argument is necessary to induce men to enter into such an agreement. If it is not a success it will cost nothing."

Mr. Green then quotes some statements made by the RURAL PRESS in regard to a proposed irrigation enterprise in Placer county, by which he demonstrates that the cost of pumping is far less than that of water purchased from a company.

Irrigation in Arizona.

Many readers of the RURAL PRESS will be surprised to learn the great extent of the irrigation enterprises of Arizona. In a recent report made to the Secretary of the Interior, Acting Governor Murphy made the following statement in this connection:

"Maricopa county is the most important agricultural district of Arizona, and at present has irrigating canals and acreage of reclaimed land as follows:

Canals.	Length, miles.	Reclm'd acres.
Arizona	41	50,000
Grand	27	.....
Maricopa	26	45,000
Salt River Valley	26	.....
Tempe	19	25,000
Highland	22	18,000
Mesa	9	13,000
Utah	6	10,000
Farmers'	5	21,000
Total	181	182 000
Increase current year		20,000
Grand total		202,000

The foregoing canals are in the Salt River Valley and have been operated for several years, although their extent and capacity are being enlarged with the increased settlement of the lands under them.

CANALS ON THE GILA, IN MARICOPA COUNTY.

Canals.	Length, miles.	Rec'm'd acres.
Buckeye	30	20,000
Palmer	22	12,000
Enterprise	12	6 000
Citrus	14	5,000
Gila River	8	5,000
Total	86	48,000

While these canals are already in operation, another on a very large scale and more important than all the others in operation on the Gila, is now being constructed by the Gila Bend Reservoir and Irrigation Company. When completed, this canal will carry water enough to irrigate about 175,000 acres of land.

Another very important irrigation enterprise has been inaugurated about 35 miles northwest of Phœnix, in Maricopa county, on the Agua Fria, by which it is proposed to reclaim at least 100,000 acres of land. The property is owned by the Agua Fria Land and Water Company, and the prospects are favorable to the early and successful operation of the projected reservoir and canal."

To the above we are now able to add, says the Phœnix *Herald*, the canal now projected and being surveyed and the construction of which will be immediately undertaken by the Rio Verde Canal Co., which will be in the neighborhood of 50 miles long and will cover 150,000 acres of land.

Arizona's Water Laws.

California irrigators may be interested in learning the salient features of the water laws of Arizona. They differ considerably from those of this State, and particularly in the declaration made at the outset that the common law doctrine of riparian rights shall not be enforced in that territory.

The principal features of the laws referred to are as follows:

The common law doctrine of riparian water rights, shall not obtain or be of any force or effect in this territory.

All rivers, creeks and streams of running water in the territory of Arizona are hereby declared public, and applicable to the purposes of irrigation and mining, as hereinafter provided.

All rights in acequias, or irrigating canals, heretofore established shall not be disturbed, nor shall the course of such acequias be changed without the consent of the proprietors of such established rights.

All the inhabitants of this territory, who own or possess arable and irrigable lands, shall have the right to construct public or private acequias, and obtain the necessary water for the same from any convenient river, creek or stream of running water.

Whenever such public or private acequias shall necessarily run through the lands of any private individual not benefited by said acequias, the damages resulting to such private individuals, on the the application of the party interested, shall be assessed by the probate judge of the proper county in a summary manner.

When any ditch or acequia shall be taken out for agricultural purposes, the person or persons so taking out such ditch or acequia shall have the exclusive right to the water, or so much thereof as shall be necessary for said purposes, and if at any time the water so required shall be taken for mining operations, the person or persons owning said water shall be entitled to damages, to be assessed in the manner provided in section six of this chapter.

All owners and proprietors of arable and irrigable land bordering on, or irrigable by, any public acequia, shall labor on such public acequia, whether such owners or proprietors cultivate the land or not.

All persons interested in a public acequia, whether owners or lessees of land, shall labor thereon in proportion to the amount of land owned or held by them, and which may be irrigated or subject to irrigation.

In case a community or people desire to construct an acequia in any part of this territory, and the persons desiring to construct the same are the owners or proprietors of the land upon which they design constructing the said acequia, no one shall be bound to pay damages on such land, as all persons interested in the construction of said acequia are to be benefited thereby.

During years when a scarcity of water shall exist, owners of fields shall have precedence of the water for irrigation, according to the dates of their respective titles or their occupation of the lands, either by themselves or their grantors. The oldest titles shall have precedence always.

It shall be the duty of each of the owners and proprietors to furnish the number of laborers required by the overseer, at the time and place he may designate, for the purposes mentioned in the foregoing section, and for the time he may deem necessary.

If any owner or proprietor of land irrigated by such acequia shall neglect or refuse to furnish the number of laborers required by the overseer, as required in the 18th section of this chapter, after having been duly notified by the overseer, he shall be fined for each offense in a sum not exceeding ten dollars, for the benefit of said acequia, which shall be recovered by the overseer before any justice of the peace in the county; and, in such cases, the overseer shall be a competent witness to prove the offense or any fact that may serve to constitute the same.

If any person shall in any manner interfere with, impede or obstruct any of said acequias, or use the water from it without the consent of the overseer, except as provided in section seven of this chapter, during the time of cultivation, he shall pay for each offense a sum not exceeding ten dollars, which shall be recoverable in the manner prescribed in the foregoing section for the benefit of said acequia; and he shall further pay all damages that may have occurred to the injured parties; and, if such person has not wherewith to pay said fine and damages, he shall be sentenced to 15 days' labor on said public acequia.

All plants and trees of any description growing on the banks of any acequia shall belong to the owners of the land through which said acequia may run.

Any person owning lands which may include a spring or stream of running water, or owning lands upon a river where there is not population sufficient to form a public acequia, may construct a private acequia for his own uses, subject to his own regulations, provided it does not interfere with the rights of others.

Forestry and Irrigation.

The Phœnix *Gazette* is cordially welcomed to the ranks of those who see an intimate relation between forestry and the supply of water for irrigation. The proposition is so self-evident that it would seem as though no sensible man could be found, at all events in a region dependent upon irrigation for prosperity, to combat it. But such men exist, in Arizona, doubtless, as well as in California, and for their behoof the position taken by the *Gazette* will stand quoting. That journal says:

"The question of irrigating the arid lands of the Southwest is one which is attracting much attention at this time. It is undoubtedly necessary to do something to make such land productive, if we are to provide for the hundreds of millions of people who, in the next hundred years, will exist within our boundaries. But while we are considering this question, we should also look to means which will increase the rainfall upon these lands. It is proven that the forests have a great influence on the rainfall of a country, and we should protect these from the destruction which is now threatening them. These forests should be protected from fires, and the cutting of trees for lumber and wood should be so regulated that the ruinous effects which have followed the destruction of forests elsewhere may not be left here. Those who cut down trees should not be allowed to take any less than one foot in diameter. Such a law, properly enforced, would preserve our forests, and thus prevent any diminution in the rainfall, and drouths will be less frequent than they surely will be if the wholesale destruction of our forests is continued."

Workings of the Wright Law.

There are one or two papers in this State that seem to be using their utmost power to destroy the confidence of the people of the State in the irrigation system given us by the Wright law, says the Traver *Advocate*. Why this should be is more than we can conjecture, unless it is that they are either paid for their services by some pettifogging attorneys who can not make a living out of a legitimate practice and are desirous of stirring up some litigation in the districts that these attorneys may make a few dollars in fees, or they do not understand the irrigation question. Prior to the organization of the Alta Irrigation District, while the 76 country was dependent upon the 76 company for water, the people had to purchase a water right, which could not be had for less than 40 acres at the rate of $10 per acre, or $400 for a water right, and pay an annual assessment of one dollar per acre, and upon the failure to pay said assessment the water right would be cancelled. The interest on the original sum ($400) paid for the water right at one per cent, would be four dollars per year or ten cents an acre, making an annual assessment equivalent to $1.10 per acre under the old system. We simply bring these facts before our readers because the parties referred to

have called the attention of the public to the Alta District stating that our assessment is $50,000 which, in their minds, is something enormous, but when our acreage is taken into consideration and compared with the old system it is a comparatively small item. We have in this district over 130,000 acres of land which will make the assessment per acre at less than 40 cents. How does that compare with $1.10 per acre? and if $50,000 is an enormous figure how would $143,000 appear? It is plain to be seen by anyone who will take a little pains to look into the matter, that the district system costs but a little more than one-third that of the old plan, while there are hundreds of people who can now irrigate and improve their lands that otherwise could not do so. We are glad to say that the dissatisfaction in the Alta District is among a few sore heads who pay no taxes and that all our people who derive any benefit from the products of the soil are satisfied with the district system, for without water our country is a desert.

Ten Years' Development, 1880-1890.

It is a matter of considerable interest to compare the capacity of irrigating systems in this great interior valley, in 1880, with the capacities of the same in 1890. We present herewith a table showing this contrast. It is not absolutely correct, for a correct table cannot be formed. No one knows just what the capacities for irrigating in 1880 were. Some of the systems allowed one inch to four acres, and others one inch to ten acres. In fact, in 1880, there was no real fixed data, these rules of a given amount of water to the acre having all been formulated during the past decade.

Again, the estimates given for 1890 are not absolutely correct. Pomona, for instance, is put down at 12,000 acres. It only requires 1200 inches of water to irrigate that much land at Pomona, while Riverside will use three times as much water for the same area.

Half of the systems on the list to-day had no existence ten years ago, and those which had an existence ten years ago have been improved and extended, and the water wasted then has been largely saved and utilized. The following table shows the capacity to irrigate land in 1880 and 1890. In most cases the waters have not as yet been fully utilized:

Water Systems.	1880.	1890.
Riverside	5,000	10,000
Gage Canal	.....	15,000
South Riverside	.....	6,000
Pomona	1,000	12,000
Ontario	.....	5,000
Etiwanda	.....	3,200
Cucamonga	2,000	10,000
Lytle Creek	5 000	10,000
North Fork Ditch	1,000	4,000
South Fork Ditch	1,000	4,000
Mill Creek	3,000	3,000
North Riverside Canal	.....	7 500
Vivienda Pipe Line	.....	5,000
Rincon Ditch	3 000	4,000
Chino Pipe Line	.....	3,500
City Creek	.....	500
Twin Creeks	500	3,000
Banning	.....	3,000
Colton Terrace	.....	2,000
Bear Valley Reservoir	.....	18,000
Totals	17,000	130,700

It will be noticed by this table that Bear Valley reservoir, with its present dam, can furnish more water for irrigation purposes than was being utilized ten years ago in all the irrigation systems of this great valley.

There are a few small systems not included in the above table, but the principal ones are given.—*Orange Belt.*

Public Lands.

Following is the text of the bill introduced by Senator Power for the purpose of securing additional data in the surveys of the public lands:

A bill requiring elevations and additional topography to be taken in all surveys in arid or mountainous country: Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That hereafter to the minutes secured in progress of making linear surveys of public lands in arid or mountainous country, and to the township plats thereof, there be added the elevations above sea obtained by precise leveling, of all the exterior corners on the lines of each township, including the section and quarter-section corners; in the subdivision of said townships, the elevations of all the interior corners to be established by an anerold barometer, leveling without expense, save that incurred in recording the notes; also that full description of the topographic and economic features, and the surface formation of the country surveyed be added to the field notes to be entered in the records of such Government surveys, thus enabling the location and selection of public lands to be made from the maps and records in the land offices with greater accuracy.

A Plan to Be Discussed.

Many schemes have been proposed for supplying water to irrigate the arid lands of the west side of the San Joaquin valley, but none has as yet materialized into anything practical. A correspondent of the Hanford *Sentinel*, after pointing out the necessity for some comprehensive system for reclaiming these lands, concludes by recommending the following, which he believes to be perfectly feasible.

1. Throw a strong embankment around Tulare lake, confining its water within an area sufficient to receive and hold all the surplus water that shall be made to flow into it during all ordinary floods.

2. Make a cut at the natural outlet of the lake (now filled up) of sufficient capacity to carry all the water flowing into the lake more than would be safe for the confined limits of the lake to receive.

3. Build across this cut a strong headgate in the form of a navigable lock by means of which the outflow of water can be regulated and make the navigation of the lake through the canal possible.

4. Dig a canal through to tide-water large enough to use all the surplus water that cannot be retained in the lake during the time of all winter and spring freshets.

5. Open the channel of the main sloughs, creeks and bayous through to the lake for drainage or navigation during the high water.

6. Turn all the unappropriated and waste water of Kings river and other lake-finding streams back into the lake, so far as possible, through the above-opened channels where such water properly belongs.

How the money is to be raised to carry into effect so comprehensive a scheme is left for future consideration. The scheme is practicable, and of an enduring nature. The navigable part of it will prove a teaser to the railroads and of incalculable advantage in the matter of freight charges.

It will permanently reclaim all that part of Tulare lake outside of the confining embankments, as well as the extensive overflowed lands lying between the lake and the San Joaquin river, or at least relieve the latter from the periodical overflow it suffers from. The water-logged land between the lake and the mountains will be relieved. The stagnant disease-breeding pools will be removed and this magnificent valley will remain for all time what it now is, the most prosperous and healthful part of the State.

The suffering, sun-burned West Side will get the water it so badly needs without the nightmare of damage suits for big embankments breaking, pipe lines collapsing, or a long, dry waiting for repairs.

TRACK AND FARM.

The Claims of the American Trotter.

ARMONA, TULARE CO., Jan. 6. 1892.

TO THE EDITOR:—In your issue of Jan. 2d, I observe an article entitled "Better Horses for California," to some parts of which I wish to offer a little friendly criticism.

I quite agree with the writer in his opinions regarding the superiority of imported stock for draft purposes over that of our own production, as the old countries of Europe, with their many large cities, have found it necessary for centuries past, to produce the largest and best draft horses possible for home use. While American breeders have, until within the last one or two decades, found the breeding of horses for the turf, field and farm the most profitable, as there has until recently been a greater demand in this country for these classes of horses, than for those of heavy draft. Every farmer who has tried him knows that the woolly-legged horse of 1600 to 1800 lbs. is not worth his feed in the plow or in the harvest field unless it be to look at, but the draymen of our large cities want him, there he is in demand, and with the building up of so many large cities in our country the demand for this class of stock is on the increase, and the imported stock is no doubt best suited to these purposes.

But I do deny that the German coach, the French coach horse, or the Cleveland Bay, is the superior, or even the equal of the American-bred trotter, for anything, no matter what it is, that a horse is wanted for, whether it be the turf, the field, the farm, or the carriage.

I do not mean the horse that is bred for speed alone, regardless of other qualities, but the fine, noble animal which is bred to combine speed and endurance with size, beauty and docility of disposition. Here in the Lucerne vale, the coach horse and the Cleveland Bay have been introduced. Some of the best specimens from fine registered stock across the water were brought here at a great expense, and they have in every instance been compelled to give way to our American-bred trotter. They had neither the beauty, speed or endurance of our trotter; nor were they superior to him in size and strength.

We live in a fast country, in a progressive age, and every young and middle-aged man among us, when looking for a carriage horse wants one with these qualifications. Even a clodhopper of a farmer is not at all satisfied to poke along with a European animal at the rate of six or eight miles an hour, when for less money and expense he can have a handsome, clean-limbed and spirited animal, strong and of good size, who can take him 12 miles an hour with equal ease to itself, and far less fatigue to its driver.

The American people, as a rule, are fond of new fads, but are too intelligent to be deceived long at a time, and many of our horse breeders have already discovered that the Cleveland Bay and the coach horses of Europe of whatever kind are not destined to remain popular long in America.

The American Standard Trotter possesses bone and muscle indicative of speed and power possessed by no other horse except the old-time thoroughbred from which he in most instances sprang. Of all the brute species, he is the greatest blessing known to civilized man, and will probably hold this place through succeeding centuries. A. F. JEWETT.

FLORIST AND GARDENER.

Propagating Plants.

[By Miss B. M. PRATT, before the California State Floral Society.]

The increasing of plants from seeds, cuttings, layers and grafting has been practiced as long as we have a history. At this season of the year, seeds of nearly all varieties of plants can be sown to the best advantage, cuttings and layers can be made, and, as no lover of flowers ever has pets enough of some kind, all are interested in some sort of propagating. Growing plants from seed is one of the most common ways, though many people, myself included, do not always succeed. In reading over one of the latest books published on this subject, some hints given seemed worth trying. After providing shallow boxes with cracks or holes bored in them to allow drainage, a layer of broken pots or stones was used, and over this another layer of moss before putting the earth in. This moss is to help keep the soil moist without such frequent waterings as are usually required.

The soil should be light, and not one that will bake or crack. Ordinary garden soil, with as much more clean sand added, will usually answer. Sand enough should be used, so that when a handful is taken up when moist and pressed, closely in the hand, it will fall apart readily when released, and not form a ball. Sift carefully to remove all lumps, then fill the boxes nearly full, and sow the seeds evenly over the surface, sifting over them enough more soil to just cover them. Water carefully and keep away from direct sunlight, or even in the dark, to prevent evaporation. Water when required. The principle difficulty seems to be to regulate the moisture, and to meet this, two flower pots are sometimes used. A pot of four or five inches is filled like the boxes and placed inside one at least an inch larger, the space between being filled with moss, and the moss only watered. Enough moisture is supplied through the sides of the inner pot to keep the soil in good condition.

The opposite extreme of too much water must be avoided, and as soon as the plants have their second leaves, they should be transplanted to other boxes, prepared in the same way. Very fine seed should be simply pressed into the ground and not covered. For this purpose, a pane of glass or smooth board will do. Two pots are also used for growing soft-wood-cuttings, but in this case, the outer one has clean sand, and the smaller one is placed inside and filled with water, the hole in the bottom being first stopped with plaster of Paris or a cork. Such a contrivance would be very easy to manage, and would answer most of us very well for rooting heliotrope, pelargoniums, geraniums and nearly any soft-wood-plant.

For hard-wood-cuttings of shrubs, roses, or other plants, use wood of the last season's growth that has ripened. Older wood will grow, but will not make so good a plant. Cut off square, leaving as little exposed surface as possible, and about five or six inches long. When convenient, plant where they are to remain, otherwise make a cutting bed of sand and put them in until rooted. Press the soil firmly around them. A California writer advises planting four or five slips or cuttings of any desired shrub or vine where the plant is wanted, and says his experience is, "they like company," and most of them are almost sure to grow. The surplus plants, if any, can be transplanted. Many plants not usually grown from cuttings will take root when the conditions are favorable, and it is a good plan to try them anyway.

One gentleman tells me he can grow anything he has ever tried from cuttings. His way is to make a hole about an inch in diameter and four or five inches deep with a dibber or sharp-pointed stick. This he fills partly with sand, then puts the cutting in, fills the space around it with more sand, packing it firmly with another stick and a mallet. Of course, it would not do to pack soil in this way. From our own experience I know that one of the most important items of success with hard-wood-cuttings is to have them so firmly planted that no air can get to the bottom. From the book, mentioned before, came another hint in regard to growing obstinate cuttings. They are made in the usual way and buried wrong end up, being covered with two or three inches of earth. In this manner bottom heat is supplied, root action hastened and the tops are kept entirely dormant. We intend trying this plan rooting Baroness Rothschild, Mabel Morrison, Mad. Gabriel Luizet and several other varieties of roses that are, to say the least, troublesome in the usual way.

Another way to deal with this class of roses is to root-graft them. Make a whip-graft taking care that the bark joins nicely and tie firmly with a cotton string. By the time a callous has formed and the parts have grown together, the string will rot off. A piece of root three inches long is about right. Treat afterward like cuttings.

Layering is one of the surest and easiest ways of increasing one's stock. It is usually done by taking a long shoot and bending it to the ground. A slanting cut is made about half through the shoot from the top, and it is then bent a little to one side and pruned down to the ground. A piece of wire can be bent like a hairpin to fasten it in place. The lovely asparagus plumosus nanus, or climbing asparagus, can be grown in this way, but takes time.

Budding can be done whenever the bark will slip or lift readily. Make a straight cut lengthwise of about an inch. Across the top make another at right angles with the first and carefully loosen and raise the bark. Then cut a leaf bud from the variety you wish to propagate, and, after removing any wood that may remain on it, slip the bud under the bark of the stock. Cut off the top of the bud so that the bark of bud and stock will join and tie firmly. In about two weeks, or when the bud shows signs of growth, cut the string on the opposite side from the bud. The top of the stock can be cut off or bent over, leaving two or more eyes to help draw up the sap and nourish the new bud.

Pruning Roses.

The pruning of tea roses should be attended to now. Nearly all of the tea roses can be grown on their own roots in standard or tree form by selecting a strong, vigorous shoot and not allowing any others to grow. Whether grown in this form, or as a bush, they usually need thinning out. Take out the fine, small wood, leaving the strongest and best branches. Many kinds will not bear cutting back much. Such varieties as Mad. de Watteville, Niphetos, Coquette de Lyon, Homer, Cels multiflora and many others will give lovely flowers if the fine wood is removed, but are almost worthless if not properly cared for. Their disposition seems to be to give branches instead of flowers, or else too many buds are formed, and only by cutting them off can we get perfect blossoms. Roses of stronger growth can be cut back, but all should be thinned enough to allow the air and sunshine to get through. Most of the Noisette roses are particularly sensitive about being pruned, and Cloth of Gold, Gloire de Dijon, Marechal Niel will never bloom so well as when left entirely to themselves. If they must be pruned, do it after their spring blossoming.

Cyclones in California and Elsewhere.

Cyclones of grand dimensions are frequently generated in the zones where the trade wind of the opposite hemisphere penetrates. They are caused by an augmentation or swelling in volume of air, proceeding from the opposite hemisphere, attending unequal distribution of the normal limits of the atmospheric circulation, and determined by the retardation which the trade wind or monsoon meets with in following the sun's movement.

The recent little touch of a cyclone in this city by which a house was demolished and two unfortunate lives lost, brings to the mind of the writer an incident which is said to have occurred near that same locality something over 40 years ago, and before the discovery of gold at Sutter's mill.

An American ship was riding at anchor off the Presidio, over which, at the time, the Mexican flag was flying. One morning, as a gentleman—a passenger—was standing upon the quarter deck, he was surprised by a sudden atmospheric disturbance which originated but a short distance from the ship and upon the water. It took the form of a tornado, or whirlwind, and commenced a movement landward, with a violent whirling motion, and struck the land just west of the Presidio, increasing every instant in violence, until it passed on and over the high ground near what is now Lone Mountain. In its passage, it actually tore up the surface of the ground, filling the air with sand and brush.

The circumstance was first made public by the observer, on a second visit to this State about 15 years ago, through a letter published in one of the city dailies. That letter came under the notice of the writer of this paragraph, who clipped and filed it away. The narrator expressed the opinion that if this city had been built up at the time, as it was at the time of his second visit, not a house could have stood in its track of a hundred feet or so in width.

This incident, and others of a similar character, which have occurred in several localities on this coast within the last 20 years, should be a reminder that California is not altogether exempt from those terrible atmospheric disturbances which occasionally work such havoc to life and property in our Eastern States. One of these California tornadoes occurred near the city of Nevada some 15 or 20 years ago, and passed for some three miles or more through a dense forest. As we now recollect the account, it twisted huge trees as though they had been mere saplings, tearing others up by the roots and making a clean path through the forest, something like a hundred feet in width. Judging from its destructive work, as no human eye saw it, no Kansas or Dakota cyclone ever reached greater violence or destructiveness.

PHOTOGRAPHS, IN COLORS, OF TINTED WINDOWS.—It is said that a Swiss doctor has succeeded, after a long series of experiments, in obtaining photographs of tinted windows in their original colors. His photographs contain red, violet, yellow, green and white. They were sent to Dusseldorf, after passing from hand to hand on the way, and the photographic journals speak favorably of their retention of the colors. These samples were taken in 20 seconds by the midday sun.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EXPECTED LARGE GRAIN CROPS.—Oroville *Register:* Butte this year ought to have the greatest grain crop it has ever known, for the grain has been planted early, there is an unusual acreage seeded this season, the rains have been timely and owing to the high price that is certain to prevail, every acre that will pay to cut will be harvested for grain, so we look to see a very large crop, if the spring and early summer are favorable.

Fresno.

WHEAT STATISTICS.—Fresno *Republican*: The acreage in wheat in Fresno county in 1891 aggregated about 400,000 acres. The average yield was about nine bushels to the acre, being an off year, or 3,600,000 bushels. This was sold at an average price of 96 cents a bushel, or $1.60 a cental, though prices have been ruling 15 per cent higher later in the season. This wheat was not all shipped. Only 2,557,305 bushels have gone to the market, according to the report of the railroad company. The mills of the county manufactured into flour for home consumption 450,000 bushels of wheat and exported nearly 7,000,000 pounds, or about 12,000 bushels. This would leave about 500,000 bushels on hand in the county. The splendid rains which have just fallen augur well for the wheat farmers next year, and there will be a considerable increase in the acreage. If is quite safe to say that 440,000 acres will be in wheat. This county raises also, much volunteer wheat. There are in this office specimens of third crop wheat from a ranch which yielded 20 bushels the first year, 16 bushels the second and 12 bushels the third year after sowing. The last two crops were raised without any expense to the grower, and each year the stubble affords an income in the way of pasturage for sheep and other stock.

Kern.

LARGE RABBIT DRIVE.—*Echo:* The rabbit drive on New Year's day was a pronounced success, 2363 dead jacks evidencing the prowess of the mighty hunters of Bakersfield and Rosedale combined.

FRUIT ACREAGE.—Bakersfield *Echo:* It is doubtful if any part of the State can show so large a proportionate increase in the area of fruit trees and vines set out within a year as in Kern county. The acreage planted and variety before 1891, and in 1891, are as follows:

VARIETY	BEFORE 1891.	IN 1891.
Almond	71	4
Apple	44	50
Apricot	2	115
Cherry	4	6
Fig	116	246
Orange	30	4
Peach	161	327
Pear	4	140
Prune	25	221
Walnut	35	22
Grape	1,360	1,965
Assorted Fruit	137	140
Totals	1,989	3,240
Planted before 1891		1,989
Grand Total		5,229

Los Angeles

TREE PLANTING.—Los Angeles *Express:* The past year has been a notable one for tree-planting in this county. The figures are interesting. Commissioner Scott has received returns from a number of points. The estimates are made by men who have gone over the ground and know what they figure on. Pomona is credited with 3000 acres, as follows: Orange trees 1250, lemon 250, prune 1000, apricot 300, peach 200. At Fruitland 3500 trees were set out—walnut 500, citrus 1000 and deciduous 2000. Vernon set out 5000 trees as follows: Citrus 2000, balance in deciduous. At Rivera the number of trees set out were as follows: Orange 24,000, lemon 800, walnut 2000, olive 500, plum and prune 1100, other trees 1200. At Burbank the trees planted are as follows: Apricot 18,000. prune 13,000, walnut 17,500, peach 1200, fig 4000, apple 8500, pear 12,000, orange and lemon 5000, olive 2000. At Azusa the following trees were set out: Orange 43 682, lemon 8405, prune 9944, peach 6669, apricot 750; walnut 300, fig 200. At San Fernando 90 acres were set out to citrus trees and 400 to deciduous trees. Glendale is credited to the following trees: Orange 6000, lemon 1500, walnut 5000, fig 1700, olive 700, peach 16,000, prune 1000, Kelsey plum 1200, apricot 1500, apple 300, pear 400. Monrovia set out 230 acres to orange and 70 acres to deciduous trees. Pasadena 250 acres—orange 100, lemon 50, deciduous 100. Sierra Madre acreage is divided as follows: orange trees 44 acres, lemon 22 acres, olive 1½ acres, other fruits 10 acres. Duarte's acreage is divided thus: Orange trees 60, lemon 30, deciduous 50 olive 2.

THE ORANGE CROP.—*Express.* Jan. 4: Reports to the weather bureau indicate that the late cold weather was more severe and more protracted than any before recorded in this section of the State. But the injurious effects were confined almost entirely to certain belts or localities. In some places—as, for example, the hill district of the city of Los Angeles—even tender flowers escaped unhurt, while on the low lands there was general havoc among the comparatively hardy geraniums and other plants. The high lands, as a rule, are much more free from frost than those of valleys and plains, the cold air flowing downward, as water would, to the lower levels and depressions between the hills. Some of the orange-producing districts suffered scarcely any loss of crop from the late cold snap, while in others there is a material reduction in the estimates for the present season. The *Citrograph* has cut down its estimates of the total orange crop to 3200 carloads. Early in the season the general estimate was that the shipment would exceed 5000 carloads.

UTILIZING CULLS.—S. F. *Call:* Dr. S. C. Woodbridge, of Los Angeles, has had in operation at Los Angeles during the past year a manufactory which is proving to be an important adjunct to citrus culture in Southern California—the extraction of the essential oils from these fruits. Wind-storms, frosts and accidents in picking and packing oranges and lemons reduce to the grade of culls a large portion of the annual product. For a long time there was no demand for fruit thus damaged, and for the lack of a market the orchardists were accustomed to bury the culls in the ground, using them as fertilizers. The establishment of the citrus essence factory opened an avenue for the sale of inferior fruit, at prices, which, though small, paid better than the burial process. The plant of the factory has a daily consumption of 5000 oranges or lemons. The latter are used in greater quantities than the former, lemon oil being in greater demand by druggists and grocers than any other essence. The essential oil is obtained by a process of distillation, and is taken only from the rind. Dr. Woodbridge is now securing pressing machinery, which will give better and quicker results, and a larger daily consumption of fruit than by the process now in vogue, will also result.

FRUIT PEST QUARANTINE.—L. A. *Times*: The regulations for the exclusion of diseased and infected nursery stock, are being rigorously enforced in the upper counties of this State. During the last week or two, consignments of young trees thus affected, to the value of $5000 have been seized and condemned. At Auburn a carload which was found to harbor several diseases new to this coast, went by the board, and the consignor or consignee lost $2000 thereby. At Mountain Vineyard 12 cases were inspected and found to contain the Eastern curculio, so deadly to plums and prunes. Two carloads of trees quarantined at San Jose have since been condemned. While Eastern nurserymen may think the California policy rather heroic and perhaps unjust, there is no doubt it is the only measure of self-protection left for our large fruit interests. The State at large will lose nothing by excluding the foreign stock. We already have about every variety of temperate and subtropical fruit that is known, and it is only a question of a little time to propagate at home all the nursery stock required. In this way we are reasonably secure against introducing new parasites and new diseases, while our attention may be directed toward exterminating those already here. The chances of wholesale losses to fruit growers from new enemies before we arrive at a proper understanding of them are too great to be tampered with. A consensus of opinion of those most interested would sustain the most rigorous quarantine measures,

SUCCESS IN FIG PACKING.—Pomona *Times:* C. A. Loud has successfully packed his figs this year. Others have done so. There are numerous reports of profits in figs. The difficulty in making money out of figs has been much the same as in lemons, that is, not handling them properly. In both cases our people have mastered all the points necessary to success, and the fig orchards will hereafter be sources of profit.

Mendocino.

WALKER VALLEY.—Ukiah *Republic:* Nestled in the mountains about the center of the county, lies Walker Valley, truly a beauty spot in nature. No painter's brush or writer's pen can justly picture this little vale. A beautiful valley of several hundred acres of rich land, with thriving orchards and smiling fields of alfalfa and other crops, with the green hills stretching away on every side, it is the picture of contentment and quiet beauty. Along through its center meanders Walker creek, a branch of Russian river. The valley, with some fifteen or sixteen thousand acres about it, was formerly the property of Rench Angle, and now belongs to his estate. The soil is very productive and produces abundant crops of all kinds of cereals, alfalfa, vegetables and fruits. It has some of the finest apple orchards in the county.

Orange.

COLD WEATHER AND RED SCALE.—*Anaheim Gazette:* It is said that the recent cold snap played havoc with the red scale. We saw a cluster of seedlings last week that were perfectly clean and bright, without a sign of scale on them, from an orchard that before the cold snap had been considered badly infested with the bugs. The frost had killed them and the subsequent rain had washed them off. The orchard is said to have been entirely ridden of its scale by the frost.

San Bernardino.

HIGHLAND FOR FRUIT.—S. B. *Times-Index:* Something like three thousand acres of land in Highland has been planted to orchards, principally orange and lemon. Nothing can be found anywhere surpassing the beauty and productiveness of the orchards of Highland. About 1000 acres of new orchards were planted last season, and the annual growth is steady and promises to continue for many years. Several hundred thousand dollars have been expended in building cement ditches for the distribution of water for irrigating and domestic purposes, and not a year passes without additions being made to the water system by the enterprising people.

A PINEAPPLE RANCH.—Mentone Cor. Pomona *Times:* Hon. C. F. Bicknell has sold his fine 16-acre ranch at Mentone to Mr. W. Scott Way, of San Jose. The place has a large variety of fruits growing upon it, and is in a fine state of cultivation. Mr. Way intends to engage extensively in the culture of pineapples. He has selected Mentone as the place which from his experience he believes will be best suited to his enterprise, and is confident that this fruit can be grown here successfully. He will also make experiments in growing other kinds of tropic and semitropic fruits that have not yet been grown in South California..

INJURY BY FROST EXAGGERATED.—Telegram to S. F. *Examiner*, Jan. 12: F. M. Keach, an orange expert, returned from a three days' visit to Pomona, Riverside, Colton and Santa Ana, where he made thorough inspections of the orange orchards with a view to determining the extent of damage by the recent frost. "The thermometer," he says, "went below 32 degrees in a number of places, and on the whole, the weather was colder than on the famous cold spell of 1886. That came, however, in November and December, at which time the juice had not gone into the orange, The frame and the pulp were there, but the juice was not in the meat, and the essential oil had not permeated the rind. The frost affected the little stem and prevented the juice from getting into the orange, and for that reason the fruit remained juiceless and cottony. The recent cold spell, coming as it did at Christmas time, was too late to shut off the juice and oil which had already filled the orange, and that this fact will result in showing that no damage has been done appears to be a reasonable idea, and it is a fact that so far the fruit shows no indication of being frozen. One thing is known and that is that after the orange has filled with juice and the essential oils are in the rind, it requires a lower tempature than 18 degrees to freeze the fruit."

SUGAR BEETS.—Interview with E. F. Dyer in L. A. *Herald:* I have been through the Cahuenga valley and took a good look at the land. The soil there is of a light, loamy nature; just what the beet requires. The land is much better than that of the majority of the beet-growing districts for the reason that the soil is of greater depth. The sugar beet could be cultivated to the highest degree on such soil, and the mildness of the climate gives the advantage of long seasons. I have been in France and Germany and studied their methods thoroughly. The industry sprang up in France, where it was fostered by Napoleon III, and extended from there to Germany. The excise laws in the latter country being more favorable to the industry, it grew to greater proportions than in France. In the countries I mentioned, they have to get the beets in the ground in about six weeks, and have about the same length of time to dig them after maturity. At Lehi, which is near Salt Lake City, where we have just completed a factory, the planting must be done in about thirty days. In this country the farmer can plant at any season of the year, and he need not hurry about taking the crop out. The factory at Alvarado, which was built by us and in which we are large stockholders was the first one in this country that operated in a satisfactory manner. Since it began running the price of land increased very materially, and is now worth from $300 to $400 per acre. Land close to the factory cannot be had for less than $400 per acre. There are now nearly 2000 acres under cultivation, and many owners rent their property at from $20 to $50 per acre. The average production is about twenty tons per acre. That means 4000 pounds of sugar. In Germany they figure it at twelve to fifteen tons per acre, but in this State there is no reason why the average should not be twenty tons and over. The sugar beet will grow with less moisture than any other crop. The plant has a tap root that goes down about six feet and finds moisture. The loose soil is therefore advantageous. The land surrounding the Lehi factory is dry and arid, and every acre must be irrigated. There is an idea that the beet is exhaustive to the soil. If properly cultivated it is not so. Most of the mineral constituents of the soil taken up by the beet are in the crown and the leaves. When the crop is cut these are left on the ground, and the mineral matter is therefore returned. The saccharine matter in a beet varies from 12 to 20 per cent. Beets of 14 per cent sugar, native purity, will give a yield of 10 per cent white sugar. This can be produced where fuel can be had at a reasonable price at from 3½ to 4 cents per pound. My visit is primarily for the purpose of starting a factory. I desire to see just what the opportunity is. Our attention was called to this section, principally by newspaper articles regarding the meetings which have been held."

San Diego.

ACREAGE IN GRAIN LAST YEAR.—*San Diegan:* During the year 1891, crops were reaped from the following acreage: Wheat, 26,038; oats, 5109; barley, 41,086; hay cut, 18,762; corn, 2635. The estimated crop of the season is 1,000,000 sacks of grain, as against 750,000 last season.

HORTICULTURAL STATISTICS.—*San Diegan:* The acres of bearing grapes were as follows: Table, 679; raisins, 4702; wine, 1022. The crop of raisins for 1891 was 200 carloads, as against 150 in 1890. Fruit Inspector Jones, in the course of his duties, has begun the taking of a thorough tree census of the county. From the figures at hand, and careful estimates, he places the total number of fruit trees in the county, as planted in orchard form, at 1,800,000—an increase over the Assessor's figures of 738,000. The Fruit Inspector further reports, from the actual figures furnished him by his assistants, an addition of 1,000,000 orange trees one year old and over, but still standing in nursery rows. The number still in the seed bed is estimated at from three to five millions. Grand total of trees as returned by Assessor, 1,062,745; total reported by Fruit Inspector, 1,800,000. The orange crop of the county last year was 68 carloads. A conservative estimate of this season's crop is 150 carloads.

San Luis Obispo.

A LARGE GRAIN GROWER.—Santa Maria *Times*: William Smith is managing over 1200 acres this year and will seed it all to wheat and barley. He has for many years farmed a portion of the Keifer tract but this year he obtained a lease for a portion of the Suey valley land which has been resting from grain for the past three years and should bring an extra yield this year. He will also farm the Miller place west of town and his home place of 160 acres three miles to the southeast where he has lived since 1875. He has never claimed to be anything but a grain farmer, still he was one of the first to plant fruit trees in this valley and has for many years produced the prize apples of his neighborhood. He also has a young prune orchard just coming into bearing.

Solano.

HOW THE LEVEE WAS BUILT.—Barnhardt Cor. Dixon *Tribune:* The ranch now has one of the best levee systems in the State. It is 11 miles in length. It is 14 feet in height and correspondingly broad. A level was run from the mound on which the buildings stand, and which is the highest point on the ranch, to the east levee, which is supposed to be the lowest point, and the levee was found to be two and a half feet higher than the top of the mound. I have heard some criticisms from the old school farmers on our methods of leveeing, saying that levees built entirely with the Chicago grader would never stand the wash of the waves. They are correct in the last statement but if they would investigate the system thoroughly they would see the error that they, in common with those who have given leveeing and drainage more study, have fallen into. Our levees are built up to the height of about five and a half feet with the scrapers. After this, earth is thrown up with the grader, and a team attached to a heavy harrow driven along the levees. Another layer is piled on with the grader and is again harrowed. This process is continued until the embankment reaches a height of 14 feet. I claim that a levee constructed in this manner is as near perfect as possible and will withstand any ordinary flood as well as the choppy waves caused by high winds on the body of water in the tule basin.

Sutter.

PLANTING ANOTHER ORCHARD.—Yuba City *Farmer:* C. N. Tharsing has rented from M. Marcuse 83 acres of land known as the Schutz place, north of the White House in this county, and lying along the river. The lease is for eight years. Part of the land is not cleared, but Mr. Tharsing will remove the trees and brush from the same and plant the entire farm to fruit.

INCREASED TREE-PLANTING.—*Farmer:* The tree-planting season will soon begin, and from the low prices received last season for fruit, one would be led to believe that there would be somewhat of a halt called in the planting of more trees and vines. This is not the case here, at least, as there will be a large acreage set out this winter. There is hardly a nursery in the county but what has the greater portion of the stock engaged, and as there are several extensive ones here, it represents no small showing as to the amount to be planted. Many of the large fruit growers will extend their orchards, and others will start in this year by planting extensively. They have full confidence in the future of the fruit industry, especially that fruit produced or to be produced here. Our fruits stand in the foremost ranks in excellency, and the question of overproduction cannot cut any figure in the case. The vigorous manner in which the people are now taking hold of the pest question and the active measures being instituted to prevent the spread of diseases, injurious to the fruit industry, has given the growers encouragement and they know now that their business is fully under the protection of the law in regard to such matters. More care is being exercised each year in the selection of varieties, preparation of soil, etc., which more fully insures the grower in his work against loss, and in the end lessens the expense largely. Our horticultural interest will show a large increase in the coming 12 months.

Tulare.

TO PRESERVE FRUIT.—Visalia *Times:* As the time for the opening of the World's Fair is not so very far off, it would be well for parties wishing to exhibit fruits or vegetables preserved to make the necessary preparations this year. Special care should be taken to use the proper liquid, so that the fruit will not spoil, as it did in some of the jars exhibited by Tulare county fruit growers at the State Board of Trade exhibit in San Francisco. I. H. Thomas,

the Visalia fruit man, is now experimenting with a preserving fluid, the invention of Prof. Wickersheimer of the University of Berlin, Germany. The German Government, for a valuable consideration, induced the Professor to abandon his patent and has made public a description of the process. The following is a correct recipe: In 3000 grammes of boiling water are dissolved 100 grammes of alum, 25 grammes of cooking salt, 12 grammes of saltpeter, 60 grammes of potash, and 10 grammes of arsenic acid. When cool it is filtered. To 10 litres of this liquid 4 litres of glycerine and 1 litre of methylic alcohol are added.

Ventura.

FINE FOWLS.—Ventura *Free Press:* Chas. Sewell has received a trio of white Indian games which are the best table fowls yet produced. They are imported from England and have only been out some three or four years. About seven years ago the breeder received a trio from India and found them so fine that a great many were bred.

Yolo.

TULE FARMING.—Tule farmer in Woodland *Mail:* There is more tule land in cultivation this winter than I have ever known of before in one year, and we only ask for a few moderate rains. Then, if prices remain as good as they are now, some of us fellows who have been struggling along so many years in poverty and ridicule, will be on our feet again in first-class shape. I don't believe we are going to have a very heavy rainfall this winter. The indications, as I read them, are good for enough to insure a good crop on the high lands, and that means all the water we need in the tule region. To tell you the truth, a whole lot of us fellows have got to raise a crop this year or we will go busted; but just give us the right kind of a season and you will see the liveliest times around here that you have seen for many a day.

FAVORABLE OUTLOOK.—Woodland *Democrat:* Farmers who have been in Woodland inform us that the effect of the late warm and gentle rains has been to sprout summer-fallowed grain and start it on a healthy growth. There has been less rotting of seed in the ground than usual, and in nearly every instance a good stand is assured. The farmers are well satisfied with the prospects. If the January rains fulfill the Signal Service predictions, there is but little doubt that the spring showers will mature one of the largest crops ever harvested in Yolo county.

FARMERS SAFE FROM FLOODS.—Woodland *Democrat:* Civil Engineer M. A. Nurse, who has charge of the construction of the new levee in Reclamation District No. 539, says that about 8½ miles of the levee has been completed, and the farmers are now safe from the floods. The new levee is 12 feet in width on top, has a three to one slope on each side, and is 29 feet high, which is 2 feet above the high-water mark. The entire levee will be completed by March 1st, and a large tract of fine land reclaimed. The farmers embraced in the district will pay an assessment of $12 50 per acre on all lands in the district, which will aggregate $40,000. The value of the land has been increased by reason of the levee from $40 to $100 per acre.

Yuba.

HOP NOTES.—Wheatland *Four Corners:* John Logan of Brownsville is delivering several carloads of trellis poles. The Rodden Brothers are planting about 20 acres of new hops and are putting up a new trellis on 60 acres. All the Bear river hops have been shipped, and all but a few carloads which Durst has in London have been sold. The last of the Rodden Brothers' crop was sold about Christmas day, and the last lo of Wood's consisting of 270 bales, was sold to Mebius & Drescher this week. The prices received for the last sales have been very good, ranging from 18 to 20 cents. Wheatland is rapidly being spoken of as a hop country. Mendocino, Russian river and Sacramento are synonyms for hop culture. Wheatland has produced a good hop for over seven years, but the other localities named have produced the hop many years more. It is but of late years that our growers made any effort to excel, and they have succeeded so well that Bear river hops command the attention of the buyers. We predict that in a few years it will be the Bear river hops first, Sonoma next and others following.

NEVADA.

LARGE CREAMERIES.—Reno *Journal:* Articles of incorporation have been filed for the establishment of three creameries in Mason Valley. The largest will be located at Greenfield. The milk of 6000 cows will be used daily in the manufacture of cheese and butter. The hay crop of Mason Valley has heretofore been largely in excess of the demand for it, and this excess will hereafter be fed to the Creamery Co.'s stock.

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The Most Terrible Volcanic Eruption on Record.

[By PROF. GRANVILLE F. FOSTER.]

Before the year 1883 physical geographers in speaking of the most disastrous volcanic eruption on record, referred first, in point of time, to the celebrated eruption of Vesuvius, in A. D. 79, when the cities of Herculaneum, Pompeii and several smaller towns on the slope of the mountain were destroyed by lava or buried under a mass of pumice stones and ashes; second to that of Hecla and Skaptar Jokull, contiguous mountains in Iceland, in 1783, when two enormous lava streams, one fifteen miles wide and over 100 feet deep and the other scarcely inferior, flowed, the first, fifty miles and the other forty, till they reached the sea, pouring a flood of white hot lava into the ocean, destroying everything in their paths and killing in the waters of the ocean the fish, the mainstay of the inhabitants, who were reduced by the disaster, directly or indirectly, to less than five-sixths of their former strength, and third to that of Galungung, in 1822, which devastated such an immense area in Java, but all the eruptions known besides were as mere child's play to the terrible one of Krakatoa in 1883.

If the reader will examine the map of the East Indies he will find represented in the straits of Sunda, which lie between Sumatra and Java, the little island of Krakatoa. In maps made before 1883 he will hunt in vain for the name, for like Bull Run before 1861 it was then unknown to fame, though navigators who passed through the straits knew it as a beautiful tropical isle, with an extinct volcanic cone in the centre. In the beginning of 1883, however, the little well-behaved island showed symptoms of wrath that boded no good to the larger islands in the vicinity. Noted for the fine fruits with which it abounded, it was a famous picnic ground for towns and cities even a hundred miles away, and when the subterranean rumblings and mutterings of wrath became conspicuous the people of the capital of Java, Batavia, put a steamboat into requisition and visited the island in large numbers. For a time the island was constantly in a slight tremor, and the subterranean roar was like the continued, but distant mutterings of thunder, but the crisis was reached August 23rd, at 10 o'clock, A. M. It was a beautiful Sunday morning and the waters of the straits of Sunda were like that sea of glass, as clear as crystal, of which John in his apocalyptic vision speaks. The beauty that morning was enhanced by the extraordinary transparency of the tropical air, for distant mountain ranges seemed so near that it seemed possible to strike them with a stone cast from the hand. Only the mysterious rumblings and mutterings of the pent up forces beneath the island, disturbed the breathless calm and silence that lay on nature—the calm before the terrible storm—the mightiest, the most awful on record! It burst forth! Sudden night snatched away day from the eyes of the terrified beholders on the mainland, but the vivid play of lightnings around the ascending column of dust penetrated even the deep obscurity to a distance of eighty miles. This awful darkness stretched within a circle whose diameter was 400 miles, while more or less darkness reigned within a circle with a diameter three times as great. Within this latter area dust fell like snow from the sky, breaking off limbs of trees by its weight miles distant, while in Batavia, 100 miles away from the scene of the disaster, it fell to the depth of several inches. The explosions were so loud as to be distinctly heard in Hindostan, 1800 miles away, and at Batavia, the sound was like the constant roar of cannon in a field of battle. Finally the whole island was blown to pieces and now came the most awful contest of nature—a battle of death between Neptune and Vulcan—the sea poured down into the chasm millions of tons only to be at first converted into vapor by the millions of tons of seething white-hot lava beneath. Over the shores thirty miles away, waves over one hundred feet high rolled with such a fury that everything, even to a part of the bedrock, was swept away. Blocks of stone of 50 tons weight were carried two miles inland. On the Sumatra side of the straits a large vessel was carried three miles inland. The wave, of course growing less in intensity, traveled across the whole Indian Ocean, 5000 miles, to the Cape of Good Hope and around it into the Atlantic. The waves in the atmosphere traveled around the globe three times at the rate of 700 miles per hour. The dust from the volcano was carried up into the atmosphere fully twenty miles and the finest of it was distributed through the whole body of air. The reader doubtless remembers the beautiful reddish or purple glow at sunrise and sunset for fully six months after August 1883—that glow was caused by volcanic dust in the atmosphere interfering with the passage of the sun's rays of the upper part of the solar spectrum, more manifest at sun-rising and setting than at other times during the day, because at these periods the sun's rays have to travel obliquely through the atmosphere and consequently penetrating a very deep layer, were deprived of all their colors except the red.

The loss of life was appalling. The last sight on earth to 35 000 people was that of the awful eruption. Engulfed in the ocean or covered with heaps of ashes, a few hours after the eruption commenced the awful work was done, and that vast multitude had vanished from off the face of the earth. The fact that in the neighborhood of the mountain there was a sparse population accounts for there not being even a far greater loss of life.

Notwithstanding the awfulness of volcanic and earthquake phenomena, there is some silver lining to the dark clouds. They prove that the earth is yet a *living* planet. Centuries must pass away before it will become like the moon—a dead planet—without water, air or life. Our satellite is a prophecy indeed of what the earth must eventually become when all its life forces, its internal energies, are dissipated into space.

Antioch, Cal., Jan. 4, 1892.

Fast Railroad Trains.

London *Engineer*, in commenting on the performance of the fast train on the New York Central road, says: Taking the American run as a whole, it constitutes a distinct departure in railway work. Not the least remarkable feature about it is that it shows that it is possible to attain very high speeds with comparatively small coupled wheels. It by no means follows, however, that it is advisable to retain them for very fast trains. On the other hand, we believe that very high wheels are equally out of place if very long runs are to be made, because on such runs it is certain that more or less steep inclines will have to be surmounted. If the average speed of a train is to be about 50 to 55 miles an hour, then banks may be ascended at 40 miles an hour, or even less, and descended at 60 to 65 miles an hour.

But when an average speed of 60 miles an hour must be made, we cannot rely on descents to compensate for ascents, because enormous velocities would be required, and the cost and wear and tear would be out of all proportion to the advantage gained. The engine must, therefore, be competent to maintain a high speed when running uphill, and this is almost impossible if very high wheels are used, unless the cylinders are too large for the rest of the road

As these high-speed, long distance trains can not be heavy, it appears to us that the best type of engine would be one with 18 inches cylinders, 26 inches stroke, 1400 square feet of heating surface, 20 square feet of grate, and single drivers carrying about 18 tons, and 6 feet 8 inches in diameter, provided with the sand-blast. Such an engine would be an admirable hill-climber, and would run about as fast as any locomotive made. When the runs are over comparatively level roads, then a big wheel, such as Mr. Stirling proposes, is no doubt good, because its use reduces wear and tear.

Whether any extremely fast running will be done in this country remains to be seen. Any speed that can be attained in the United States can, of course, be got here on our better roads; but it is more than questionable that these excessive speeds pay. Whether they do or not is really the whole question. The problem is not one for the locomotive superintendent, but for the general manager.

A Large Importation of Shropshire Sheep.

Mr. H. Mecham of Petaluma has just received a flock of 78 head of Shropshire sheep selected from the most noted families of England. They were personally selected by his son, who made an extended visit to England last summer, and under orders of Mr. Mecham, his father, selected from the most noted families, the best that could be bought, without regard to price.

Mr. Mecham has been a breeder and importer of fine blooded stock of sheep for over 20 years, and his success in this line has been without parallel in this State.

The prices paid for individual members of this flock would seem exorbitant to those unacquainted with the values placed on this new family of sheep. Mr. Mecham has found by experience that by the infusion of new blood and sagacious crossing, price was no object in comparison to results that followed judicious breeding. He therefore determined without regard to price, to select the best that could be bought in the known world; and it is sufficient to say that, after looking over the selection made by his son, he believes that he has the best flock of Shropshire sheep that ever crossed the Rocky mountains.

We have not been able to see this flock, but will take occasion to inspect them soon, and give a more detailed description of this very valuable importation to the sheep interests of California.

Skillman's Importation of Horses.

In last week's issue of the RURAL, we noticed the arrival of Mr. Skillman's latest importation of thoroughbred horses from England. This stock consists of five Suffolk Punch and two Shire stallions, all young horses. Four out of the seven head have taken first premiums in the Show Ring. Mr. Skillman has been a regular importer for the last ten years, and his large experience and knowledge of the best families in France and England has enabled him to bring into our State the best that could be had. It has been his policy to select from the best strains of blood without regard to price. Good judges have spoken very highly of his latest importation as one of the best ever made by him. Any one interested in this class of stock is cordially invited to make a visit to Reilly's Stables, Petaluma, and judge for themselves. Those who desire can have a catalogue sent on application. We will make a more extended notice of these grand young horses soon.

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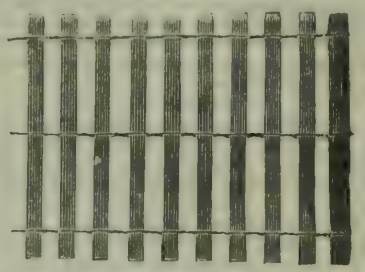
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TUNNEL.

SEALED PROPOSALS WILL BE RECEIVED BY THE Directors of the Bear Valley Irrigation Company at Redlands, California, until March 1st, 1892, for the construction of a Tunnel about 6600 feet in length through rock, in accordance with the plans and specifications on file in the office of the undersigned. Bidders may propose to furnish their own plant, or to use a complete power-drilling, hauling and ventilating plant to be furnished by the Company. Each bid must be accompanied by a certified check for not less than 2% of the amount of the proposal. The Directors reserve the right to reject any or all proposals. EDWARD M. BOGGS, Engineer, Banning, California.

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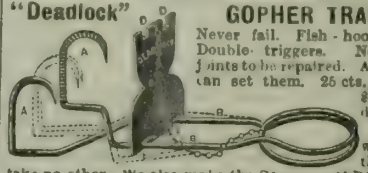
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FOR THE HALF YEAR ENDING DECEMBER 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits, payable on and after SATURDAY, January 2, 1892.

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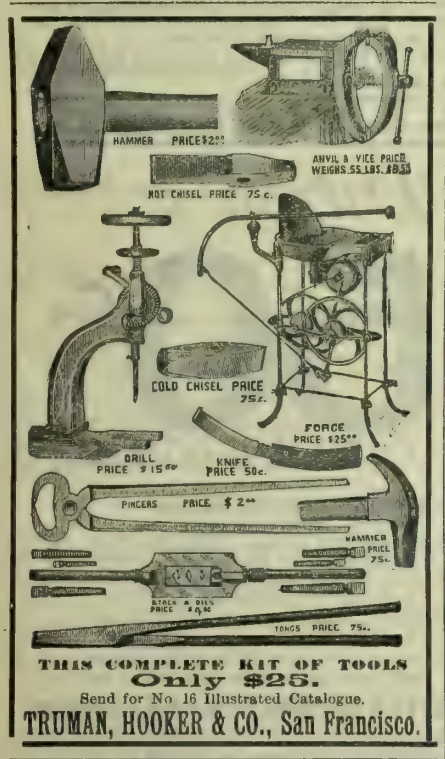
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NOBEL'S DYNAMITE, NOBEL'S EXPLOSIVE GELATINE, NOBEL'S GELATINE-DYNAMITE, AND THE JUDSON IMPROVED POWDER.

Best and Strongest Explosives in the World.

JUDSON POWDER.

The only Reliable and Efficient Powder for **Stump and Bank Blasting.** Railroad Contractors and Farmers use no other. **As others IMITATE our Giant Powder, so do they Judson, by manufacturing an inferior article.**

BLACK POWDER.

The Giant Powder Co. having built Black Powder Works, with all the latest improvements, at Clipper Gap, Placer County, known as **THE CLIPPER MILLS**, offer this powder and guarantee it the best.

CAPS and FUSE at Lowest Rates.

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GRANGERS' BUSINESS ASSOCIATION,

SHIPPING AND COMMISSION HOUSE.

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CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

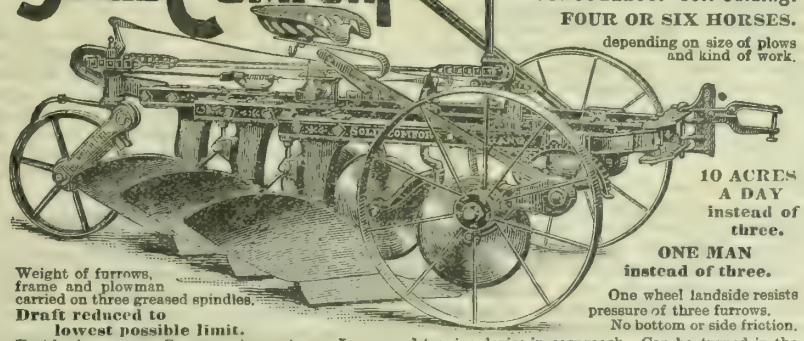
Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

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SOLID COMFORT — THE "WONDER ON WHEELS"

TONGUELESS. Self Guiding.
FOUR OR SIX HORSES.
depending on size of plows and kind of work.



10 ACRES A DAY instead of three.

ONE MAN instead of three.

One wheel landside resists pressure of three furrows. No bottom or side friction.

Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit.

Foot brake prevents Gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. Easier Driving; LIGHTER DRAFT than any Gang in America. Adjustable STRAIGHTER Furrows, and frame—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut.

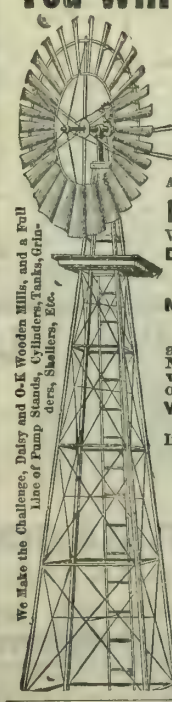
ECONOMIST PLOW CO., SOUTH BEND, INDIANA.

☞ Special prices and time for trial given on first orders from points where we have no agents. Our book, "FUN ON THE FARM," sent Free to all who mention this paper.

Be Happy While You Live, for

You Will Be A Long Time Dead

To Be Happy Buy a



STEEL MILL

AND A

Dandy Steel Tower.

With graphite boxes the **Dandy Wind Mill Requires No Oil for Years.** therefore **No More Climbing Towers No More Tilting Towers** to break down and injure you or your cattle. **Needs no attention** and is **warranted** to last longer than other mills that are oiled, and **Will Be Sent to Good Parties on 30 Days Test Trial** If not satisfactory freight will be paid both ways. The **Dandy Steel Tower** is a **Four Corner Tower**, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

We Make the Challenge, Daisy and O-K Wooden Mills, and a Full Line of Pump Stands, Cylinders, Tanks, Grinders, Shellers, Etc.

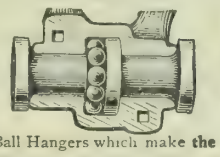
Challenge Wind Mill & Feed Mill Co.,
Batavia, Kane Co., Ill.



ASK YOUR GROCER FOR IT.

ENGRAVING—SUPERIOR WOOD AND Metal Engraving, Electrotyping and Stereotyping done at the office of this paper.

NOTICE THESE LITTLE BALLS!



They make the great Ball Hangers which make the

KEYSTONE DISC HARROW

The WONDER of all practical Farm People.

The same device which makes the Bicycle run easy, enables our Harrow to save one horse power in use, beside cost for repairs. It conquers toughest sod—fits uneven ground. *Examine it yourself.* Where time and horse-flesh are thought worth saving, the "Keystone" goes to stay.

Keystone Mfg. Co., Sterling, Ill.

BRANCHES: St. Louis, Mo. Kansas City, Mo. Council Bluffs, Ia. Columbus, Ohio.

Send for Harrow Book—"*The Reason Why*," Free.



WESLEY ROSE,

AGENT FOR THE BELOIT STEEL WINDMILL AND Manufacturer of the Rose Deep Well Pump. No. 1111 Ninth Street, SACRAMENTO, Cal. Catalogues Free.

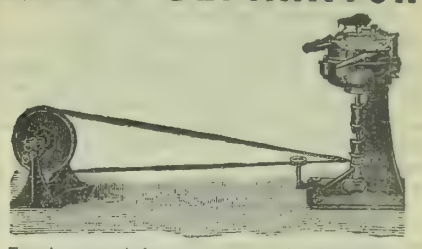
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All kinds cheaper than elsewhere. Before you buy, send stamp for Illustrated Catalogue to The Powell & Clement Co. 186 Main Street, Cincinnati, Ohio.

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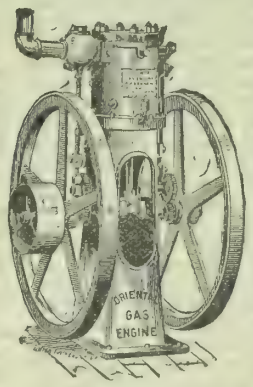
Sharples Improved CREAM SEPARATOR



Twenty per cent cheaper than any other Separator.
It is recommended by all commission houses.
Hegler & Johnson, Wm. Hatton and J. Warren Dutton have adopted it in preference to all rivals.
I now have on hand the small-sized Sharples Improved Separator and the Russian Steam Separator.
Second-hand De Lavals, good as new, for sale cheap.

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THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

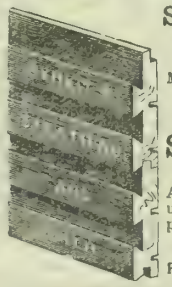
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Shingles, Posts, Pickets and Piling.



Manufacturer & Pacific Coast Agent of the Popular

BYRKIT-HALL

Sheathing Lath,

(PATENTED),

A valuable invention but recently used on this Coast. Send for Samples, Circulars, Price Lists, Etc.

42 Market Street,
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Malthine M'f'g Co.

FACTORY:

Cor. Jefferson & First Sts., Oakland, Cal.

MANUFACTURERS OF

ACID, ALKALINE AND WATER-PROOF PAINTS,

Superior to anything of the kind in the market for

IRON, WOOD AND TIN.

Unequaled for Submerged Timbers. Red and Brown Paints for Roofs, Warehouses, Stables, Fences, Etc., mixed Ready for Use. Also, Sheathing Paper, Portable California Mastic Roofing, the Best in the Market for

RANCH AND CITY.

AND UNEQUALED FOR

Teredo-Proof Pile Covering.

This Company also Manufactures a Malthine Compound for

RENDERING BOOTS AND SHOES WATERPROOF.

The same is a superior article for Preserving Harness rendering it Impervious to Moisture and keeping it always pliable and soft.

Send to Factory, Jefferson and First Streets, Oakland, for Samples and Prices.

WELL SUPPLIES

All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind & Steam Mach'y. Encyclopedia 25c.

The American Well Works, Aurora, Ill.
11-13 S. CANAL ST., CHICAGO, ILL.
ELM STREET, DALLAS, TEXAS. *Branch Houses.*

GOOD HEALTH.

Specks Before the Eyes.

Their Sudden Appearance—A Startling but Not Serious Affection.

People are often frightened almost out of their wits by the sudden appearance of flying specks before their eyes; sometimes they are only one or two, but often thousands of them can be seen, particularly when a person looks toward a white surface, as white clouds, white houses, white pavements, or toward water surface. These flying specks are mostly small points, connected one with another by fine lines, and the points often present a beaded appearance. At first, persons are likely to try to knock them away, thinking it is something before their eyes. They come usually in both eyes at the same time. They may diminish or increase in numbers at times, but rarely ever disappear entirely. They never interfere with vision by settling over objects looked at.

Dr. A. D. Williams explains, in the St. Louis *Medical Journal*, that the nature of the flying specks here described is not well understood, but badly focused eyes are most likely to be troubled with them. He says that they signify nothing serious so long as they are mere points connected with fine lines, and do not interfere with the acuteness of vision. Treatment is more than useless. If the eyes are out of focus, proper glasses should be selected. It is important that the patient should ignore their presence entirely; should avoid seeing them as much as possible and let them alone. Large floating masses before the eyes, which swim around and often obscure vision, are the result of serious disease, and should be promptly looked after.

CRIMINALITY AS A DISEASE.—"It is my opinion that the time will come when criminality will be recognized as an inherited disease and treated accordingly," said a man who has recently been studying this subject somewhat carefully from a medical standpoint. "Those persons who display in youth a tendency to commit crimes will then be placed in institutions very different in character from prisons, where they will be constantly watched and encouraged to employ their abilities in those kinds of labor for which they are best fitted. In this way society will be saved from the consequence of the vicious instincts of these people. In many cases careful treatment will doubtless cure criminals of their disease and enable them to return to the world and become useful citizens. In others, they will have to remain under surveillance during the whole of their lives. Of course, men and women not afflicted with vicious tendencies at birth will still be subject to temptations, and the law will be obliged to inflict penalties upon them for irregular proceedings; but the large class of inveterate lawbreakers will be recognized as irresponsible for their ill-behavior, just as people afflicted with hereditary diseases are never blamed for misdeeds.

CHANGE OF ACTION BETTER THAN REST.—As for the feeling that we need rest, rest, rest, it is often a fallacious one. It is action which makes muscle. The spirit of life enters into us when we take a vital part in to-day. Often we suffer from rest. A change of occupation is what we most need, as a rule, and the relief hours of an active person turn out to be very intelligent, says a contemporary. We must rest, but we must not lose our electricity, which the will, the thought can command at all times, and which ought to be on guard like an orderly, to summon us when we should become alert. Headaches evaporate if we must exert ourselves for those we love, or we almost forget the pain, which is the same thing; and ill-temper cannot flourish unless we have idleness in which to reflect upon the motes belonging to some one else. With energy leading the way, ennui lifts from the horizon, and we see color and distance again. There are women who labor day by day in hunger and despair. It seems as if others might labor in comfort and health, instead of sitting down to lassitude and sighs.—*Ex*

RUBBER FOOT FEVER.—If a man has a corn, says the *India Rubber World*, it can be removed, but if he is suffering from rubber foot fever, no chiropodist can help him, and the only thing to prescribe is liberal bathing of the feet and removal of the cause. Rubbers should only be worn to keep wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he had waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger and the cause of many more serious colds than they avert.

DISEASE FROM BIRDS.—One of the latest discoveries of the scientists is that the germs of yellow fever may be conveyed from tropical countries in the plumage of birds.

A NEW FIRE EXTINGUISHER is composed of a mixture of water and liquid carbonic acid gas, which, upon being discharged through pipes at high pressure, causes the rapid expansion of the gas, converting the mixture into a spray more or less frozen.

Robert Bonner's Start in Life.

"At the age of 15 I was an apprentice in the office of the Hartford Courant. The first year I received $25 and was advanced $10 a year during the five years I remained in the office. The paper was printed in the morning. There was a railroad between New York and New Haven (this was from 1839 to 1844), but there was no railroad between Hartford and New Haven. The type of the newspaper was set up the previous day for the morning's paper, leaving a space of four or five inches for a postscript in case somebody's barn burned down, or there was a meeting of the Common Council. During the evening the editor would write up a few paragraphs to fill this space. Two men were in the habit of getting at the office in the morning at 4 o'clock, setting up this matter, and, at 5 o'clock, they would put the paper to press and work off the edition. These men were paid a Yankee shilling (16⅔ cents) an hour. They arrived at the office at 4 o'clock in the morning and worked extra time until seven.

"As a boy, that was the only opportunity I had to get overwork. I was rather ambitious and I would get up early and go to the office in the morning. I was not paid anything for it, but I wanted to see the men work at the press and so get some knowledge of the presswork.

"One of the men would say to me: Wont you go and get a pail of water?' I would answer: Yes, I will get a pail of water for you if you will show me how to lock up a form.' 'Robert will you wash that roller for me?' 'Yes, if you will show me how to feed the press.'

"When I was quite young I read two lines written by Ralph Waldo Emerson, and I can say that they have had their effect on my character all through life: 'Oh, discontented man, whatever you want pay the price and take it.' (He, of course, referred to virtue and character more than to dollars.) I wanted to get a knowledge of the printing business, and I was willing to pay a price for the information. I would wash the roller for one, and for another get a pail of water at the pump outside on the sidewalk.

"After awhile one of these men (Wildman was his name) was going to leave and go to his brother's office in New Haven; his brother was one of the publishers of the *Palladium*. The proprietor of the *Courant* said to him: 'Henry, you cannot go until you get some one to take your place. You know that there is no one else but you that understands the press work.' Henry said to him: 'Robert understands it as well as I do.' The proprietor wanted to know how that could be, saying: 'He (Robert) never got any pay for doing such work.' Then Henry told him the circumstance of my being up there early every morning.

"The proprietor then sent for me and asked me if I would like to have the job and get a shilling an hour for extra time? As a matter of course I was delighted. In that way I could make about $3 a week overwork. That was a great deal more to me than $3000 a week is to-day.

"This is the way I came to leave the *Courant* office: I could set type and make up the forms. One day the foreman said to me, 'Come, Robert, let us hurry up or we will be late.' That was the first word of fault-finding that had ever been offered to me. I turned to him and said: 'Mr. Wetmore, I can set more type than you can, and make up the forms besides. I have done it every day.' I went down to the proprietor and complained of the foreman finding fault with me. I was very sensitive about the matter. He said: 'Oh, Robert, I know you are all right; you mustn't mind.'

"After my apprenticeship expired I worked for eight weeks as a journeyman. The foreman spoke to me again about something. The real secret of it was that he was a little jealous of me. I then went down stairs and informed the proprietor that I would not work any longer in the office, and then left for New York.

"In New York I was assistant foreman and proof reader on the *Evening Mirror*. Here I became invaluable for the taste with which I set up the headings for the news columns and display advertising. The editors would specially request me to do the first kind of work and the publisher was so well satisfied with the manner in which I set up the advertisements that when he left the paper to go on the *Merchants' Ledger* he induced the proprietor of that journal to employ me at $4 a week more than he was paying the man that he then had.

"Any success that has come to me has been due largely to the fact that I have always endeavored strictly to attend to business. Let me give an illustration: When I was a boy in a printer's office and it came along 3 or 4 o'clock in the afternoon, I would say to myself, suppose the proprietor should come up to where we are at work and say, 'Robert, what have you been doing to-day?' what would I answer? He never did such a thing, but I used to reason to myself, 'suppose he were to do it.' If I could not, with pride and pleasure, point to what I had been doing, I would pack up at 6 o'clock and leave the place.

"I consider that kind of spirit is an element of success, and there is always room for young men who show that kind of disposition. The indolent boy who shiftlessly goes through his day's work will never reach the goal of success. The youth who is continually watching the clock, waiting until it shall strike 6, and tries to 'kill time'—well, it will not be long before time will kill him, so far as business is concerned.

"And the business man must not bend his energies so much to the making of money as to making a success of the enterprises in which he is engaged. While I had worked at the printer's trade in Hartford and New York I had managed to save a little money. The proprietor of the *Merchants' Ledger*, on which I was employed in New York, became interested in a new kind of printing press, and I was able to buy the paper from him and eventually transformed it from a class or mercantile journal into a great family paper. I have told people that I did not try to make money, but I tried to make a success of my business. The miser who wants to clutch on every dollar he can lay his hands on would not say to a publisher, 'I will take your whole paper for advertising purposes next Saturday.' The miser or mere money-maker could not do that; he could not find it in his heart to part with the price of the advertising. You must spend money if you want to make money."—*N. Y. Voice.*

NEW DRESSES FROM OLD ONES.

"I have just made me a new dress for street wear," writes Jean Hunt in the *Housekeeper*, "out of what was once a mode colored traveling suit. The dress was rather the worse for wear, but I carefully ripped it up, washed, and dyed it navy blue with Diamond dyes. After careful pressing the goods were like new.

"I made it up with new dress lining, bones, and braid, and the whole cost was only one dollar and sixty cents. Any woman can do as well if she uses the Diamond dyes. I have used many of their colors, and if the goods are properly washed after dyeing, they will not crock a particle. These dyes are fast colors, and I have found them so from years of experience."

A NEW AND USEFUL MACHINE.—One of the most interesting practical inventions lately put upon the market, is from a knitting machine manufactory in Dresden, Germany, the apparatus in some respects resembling an ordinary knitting machine in its make up. It can be readily employed as such both on round and flat work, but is especially adapted for variegated patterns in their usual diversity. It is capable of working variegated patterns—cardigan stitch, purl cardigan, two-and-two rib, and embodies the peculiarities of a striping machine, producing in one piece of goods single, colored, striped and many-colored patterns, without changing the machine itself. By the simple placing in or out of the back thread in the slotted thread conductor, it is claimed any desired number of colors and shades can be produced, the effect being such as to give the impression that the patterns are the result of embroidery.

BAY VIEW STUD FARM.

O. G. Knight, Sup't above farm, remarks, "I have used Quinn's Ointment on Blood Spavin, Curbs and Windpuffs with great satisfaction. I consider it has but few if any equals." Trial box 25 cents, silver or stamps Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

A MAMMOTH TOMATO.

No vegetable ever introduced has created such a sensation as the Mansfield Tree Tomato.

It grows to a height of 12 or 14 feet and produces fine large fruit of a most delicious flavor. Many of the tomatoes weigh over three pounds each. The Tree Tomato is ornamental, and being useful as well, should be grown by every one. The true seed is being offered in this issue by L. L. May & Co., St. Paul, Minn., who are headquarters for it. This firm is giving away $3,000.00 worth of valuable premiums this year and no one should fail to accept their offer and secure a premium list, catalogue and package of this seed.

Educational.

A. Auchie Cunningham, F.C.S. &c.

ANALYTICAL AND CONSULTING
CHEMIST,

14 Chronicle Building.... ... San Francisco.

Prof. of Chemistry Hahnemann Hospital College, S. F. Evening Classes in Theoretical and Practical Chemistry. Instruction also given by mail. Terms on application.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,
723 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.
ESTABLISHED 1864 ☞ Send for circular.

Bowens Academy,

University Ave., Berkeley.
BOARDING AND DAY SCHOOL
For Boys and Young Men.
Special university preparation, depending not on time, but on progress in studies.
T. S. BOWENS, M. A.....Head Master.

HEALD'S

BUSINESS COLLEGE,
24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.
☞ SEND FOR CIRCULAR.
E. P. HEALD, President.
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FOR CHRISTMAS.

Ditson's 50c. Music Books.

Ne Plus Ultra Piano Collection.
160 pages Brilliant but easy pieces.
Ne Plus Ultra Ballad Collection.
160 pages. Latest and best songs.
Ne Plus Ultra Song and Chorus Collection.
Each song has a ringing chorus.
Ne Plus Ultra Dance Collection.
Every style of dance music; not difficult.
All these books are large sheet music size.
ANY VOLUME SENT POSTPAID FOR 50c.
OLIVER DITSON COMPANY, Boston

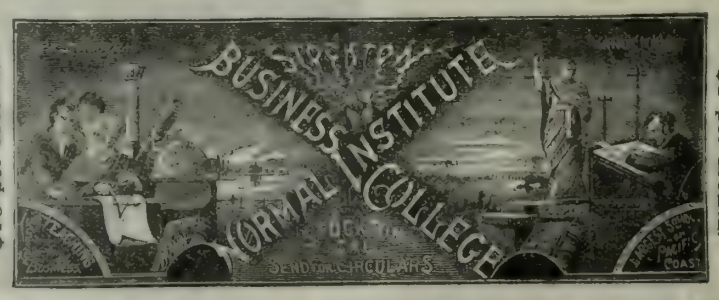
HELPLESS.



Chicago, Ill.
I was confined to bed; could not walk from lame back; suffered 5 months; doctors did not help; 2 bottles of
ST. JACOBS OIL
cured me. No return in 5 years. FRANCIS MAURER.
"ALL RIGHT! ST. JACOBS OIL DID IT."

Stockton-Fresno Business College.

EXCELLENT BOARD $10 per Month.



FURNISHED ROOM $3 per Month.

THE LEADING FEATURE OF THE SCHOOL IS ITS HOME.
Tuition One Year (52 Weeks), $75.
Sixteen Regular Teachers and Over Three Hundred Students attending. Courses Thorough, Rates Lowest Instruction the Best, and School the Most Reliable. Address W. C. RAMSEY.

Seeds, Plants, Etc.

Pacific Nursery.

ESTABLISHED 1871.

WELL GROWN AND SELECTED STOCK

—OF—

Fruit Trees, Olives, Grapes,
Ornamental Trees and Plants,
Roses, Magnolias, Palms.

—ALSO—

Azaleas Indica and Mollis,
Camellias and Rhododendron.

Send for New Price List.

F. LUDEMANN.

Baker and Lombard Streets, San Francisco.

100,000 EXTRA FINE

BARTLETT PEAR TREES.

Apple, Pear, Plum, Cherry, Peach, Apricot, Nectarine, Quince, Grape Vines and Small Fruits.

500,000 FRUIT TREES.

Orange, Lemon, Lime, Olive, Japan Persimmon, and all kinds of Nut-Bearing Trees. Shade and Ornamental Trees, Shrubs, Etc.

IMPORTED FRUIT TREE SEEDLINGS.

Ask for Prices.

James T. Bogue, Marysville, Cal.

500,000 OLIVE TREES.

200,000 DECIDUOUS TREES.

50,000 ORANGE AND LEMON TREES.

— FOR SALE BY —

J. L. HOWLAND,

POMONA NURSERY,

Pomona, Los Angeles County, Cal.

Write and get Prices.

OLIVE TREES!

PALMS!

—AND—

DECIDUOUS TREES

FOR SALE.

Price List mailed free. Address

CAÑADA NURSERY,

P. O. Box 86.....REDWOOD CITY, CAL.

—OR—

COX SEED & PLANT CO.,

411 SANSOME STREET.....SAN FRANCISCO.

OLIVE TREES

In Variety

FOR NURSERYMEN, DEALERS AND PLANTERS.

Prices and a Pamphlet on the Olive Mailed Free.

—ADDRESS—

John S. Calkins' Nurseries,

Pomona, Los Angeles Co., Cal.

OLIVE TREES

FOR SALE

—BY—

ALFRED WRIGHT, Pomona, Cal.

P. O. Box 382.

Manzanillo and Nevadillo Blanco Trees,

One and Two Years Old.

Every tree warranted true to label and free from scale. All orders will be carefully packed and delivered at S. P. Depot, Pomona, and Santa Fe, North Pomona, without extra charge.

GROW
Texas Thin Shell PECANS.

Growing the Texas Thin Shell Pecan pays better than Banking, Real Estate, Bonds or Stocks. One acre earns more than 10 acres in most farm products. Send for Circular.

Texas Pecan & Seed Co., Fort Worth, Texas.

PACIFIC HEIGHTS NURSERY

Nurserymen and Florists, Attention!

(WHOLESALE AND RETAIL.)

We have on hand and constantly arriving from Japan and China:

Camellias, Azaleas, Iris Kaempferi (over 150 varieties), **Ferns, Palms, Cycas Revoluta, Zamia, Japan Orange, Persimmon and other Fruit Trees, Lillies, Nerine Japonica, Chrysanthemums, New and Rare Evergreen and Deciduous Trees. New and Rare Plants, Shrub and Palm Seeds.**

All plants acclimated. Send us your Business Card and we will quote Trade Prices for 1000, 100, 10 or single plants.

KING BROTHERS,

2225 Jackson Street, San Francisco, Cal.

A LARGE SELECTION

—IN—

Citrus Fruit Trees!

LEMONS—Eureka, Villa Franca, Lisbon and Sicily.

ORANGE—Washington Navels, Mediterranean Sweet, St. Michaels Blood, &c., Mandarin and Tangeriene.

OLIVES—Mission and the Foreign Varieties—Spanish Italian and French.

With the largest collection of TROPICAL FRUIT TREES AND PALMS in the State.

Send for Catalogue and Price List to

Kinton Stevens,

PALM AND CITRUS NURSERY,

Santa Barbara, Cal.



HAVE YOU OUR
CATALOGUE?

We have the Largest Collection

—OF—

Fruits, Palms, Ferns,
Economic Plants,

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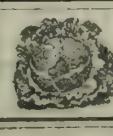
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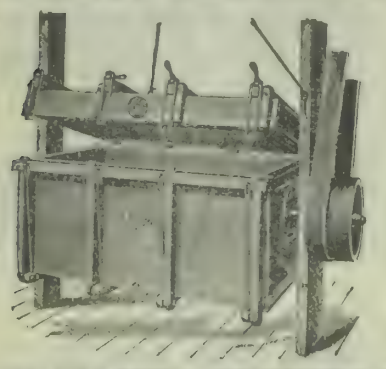
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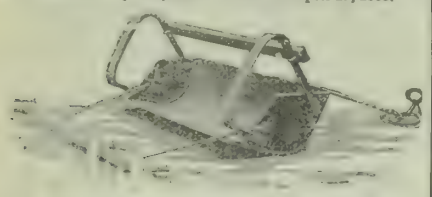
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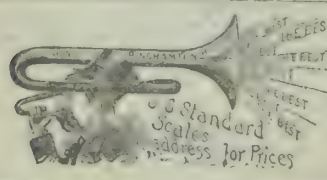
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Over 100,000 Blood's, Turney's, Warren's, or Baylis' best sewing needles at 2½ cents a paper, 40 for $1.00. all sizes except 6; also 4 to 8, 1 to 5, 5 to 10, and 3 to 9 mixed darners or yarn needles at same price.

Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price

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10,000 articles we have not room to tell about. Order a few by mail or express if not ready for a large order by freight. Add for postage. Ask for complete list. Address

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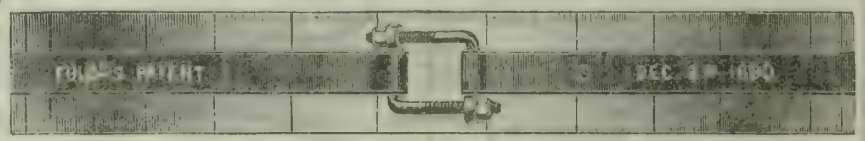
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THE DAIRY.

Dairy Progress at the North.

There is probably no section of the Northwest more preeminently adapted to dairying purposes than the rich, fertile valleys of Western Washington. The climate and general topography of the country seems designed for this purpose to a marked degree. The mild, open winters, coupled with the abundant range and luxuriant growth of grasses of all kinds, makes Wahkiakum county the ideal dairyman's home.

In dairying, as in everything else, the most improved labor-saving machinery that can be devised must be used in order to secure the highest quality of product with a minimum of labor. The old system of constructing a large milk room, with innumerable flat-bottomed pans, placed around on shelves to allow the cream to rise in due season, and then be skimmed in a haphazard and wasteful manner, has been changed, and the housewife's labor materially reduced. The pan era in butter-making has gone and the separator age has taken its place. It has been demonstrated to a certainty that butter made by a first class separator will produce a better article, and keep fresh longer than when made under the old plan. This is accounted for from the fact that all the impurities in the milk are carefully eliminated from the cream while undergoing the separating process. Another desirable feature in this improved method of butter-making that is worthy of consideration consists in being able to pass the milk directly through the separator after milking, and feeding while warm to young stock, which derive greater nourishment than when fed cold. Of late our prominent dairymen have come to the conclusion that the introduction of improved machinery would not only lessen their labors but enhance the quality of their product, so as to secure the highest market price.

A *Gazette* reporter interviewed the three gentlemen in the county who use DeLaval separators in their dairies, in order to learn what they thought of these machines. The first man seen was Judge Beal, who said:

"When I purchased the town site of Athens, it included a large dairy. Among the fixtures was a DeLaval separator. I found from a hygenic standpoint it was a treasure, as it eliminates all the impurities by centrifugal force."

The next man interviewed was Jacob Wilson, one of the old, successful dairymen of Skamokawa, who said:

"I would not be without a DeLaval separator for double the price of the machine, as it saves me about two hours work per day, and I think makes more butter to the same quantity of milk."

A. J. Constable, of the West Valley, Skamokawa, who has a large dairy and uses a De Laval separator, said:

"It performs more than I expected. It does good work, saves labor and makes better butter than I can make by setting in pans."

Wahkiakum county butter has always sold at the highest price in the market, and is noted for its purity and excellence, and our dairymen would do well to maintain this high standard by surrounding themselves with all the modern adjuncts now used in the business.—*Cathlamet Gazette.*

RETAIN THE INDIAN NAMES.—There should be a revision of many of the names of rivers, mountains, valleys, etc., in California. The outlandish names which have found their way by means of the early comers into this State, into our maps and books and talk, should be laid aside and a new nomenclature adopted, better suited to our present and future civilization. There are many names now in use which are unfit to be spoken or printed. We could probably do no better than to adopt the old Indian names. Whatever may have been the lack of taste and civilization in the aborigines of this State, and the entire country in fact, in their modes of life, they were certainly far in advance of the present inhabitants in their taste for nomenclature. Many of the names they employed may be lacking in euphony to English ears, but they all had either a beautiful or most significant appropriateness of meaning to the localities to which they were applied. The State of Georgia, more than any other State of the Union has retained the Indian names of its rivers and most of them have a musical sound, as, for example, the Ocmulgee, the Ohopee, the Ogeechee, the Cannouchee, the Oconee, the Chattahoochee, Saltilla, the Altamaha and others. These examples might be multiplied indefinitely.

Cox's Seed Annual.

The Cox Seed and Plant Co. have just issued their Seed Annual for 1892, a handsome publication of 75 pages, closely printed and fully illustrated. The publication has many marks of progressiveness and enterprise, and the offering includes many interesting novelties. The firm handles all kinds of field, forest garden and flower seeds; also a full line of nursery trees, horticultural books and supplies, etc. Their large store at 411 to 415 Sansome street is well worth a visit, but distant planters can get a good idea of the stock by sending for their "Seed Annual."

Root Knots and Their Treatment.

CAMPBELL, CAL., Jan. 11.

TO THE EDITOR:—The Campbell Horticultural Society held its regular monthly meeting at Campbell on Saturday evening, Jan. 9th. After transacting routine business, Col. R. P. McGlincy, President of the Society, called the attention of the members to a root covered with knots, which for want of a better name here is called black knot. The root was almond, upon which French prune had been grafted. There were probably a half dozen of these knots, and when first discovered, it was supposed that they were only to be found upon myrobolan root, but examination of the orchards show that almond, myrobolan, peach, walnut, chestnut and other varieties of root are affected. The knot can be removed with a sharp knife, but in all cases where they have been removed, they grow out again the next year. The inside of the knot is soft and spongy, and has the appearance of being rotten. We wish to know whether they are fatal to the trees. Some contend that they are, while others say not. In one or two cases where the trees are affected, the owner has dug them up. Does the PRESS think this advisable? Some of our orchardists say the knot is caused by a worm, and that the tree will not outgrow the disease.

Will the PRESS give us all the information it can on the subject—cause, cure and effect upon the trees. So far, these knots have only appeared on young trees from one to four years old.

At the next monthly meeting, we are to discuss the question of "Marketing Fruit," and we look for some interesting remarks on that occasion.

Can any reader of the PRESS tell whether any kind of a wash has been discovered that will destroy peach borers—that is, if the wash be placed around the body of the tree at or near its base?

We are seeking for knowledge, and hope some of our experienced horticulturists will unbosom themselves. UNO.

We shall be pleased to hear from readers on these subjects.

Concerning the root knots mentioned, it may be said that their cause has not been demonstrated. Knots are formed by nematode worms, but t' ey are not the knots which are most commonly seen in this State, which do not have such origin. We have submitted ample specimens to specialists on nematodes at the East, and this is their verdict.

These knots sometimes kill the trees, and sometimes they do not. Nursery stock with such roots should be burned, and nowadays it is usually burned—at least, by all nurserymen who are endowed with consciences. If young trees develop so much knot that the growth is notably lessened, we should pull out the tree and plant a healthy one. If knots have formed, but not in sufficient extent to interfere with a good season's growth of the tree, we should pare off the knots clean and paint the wound. If trees have grown several years in orchard, and make good growth and bear well, we should do the same. It is known that trees which have borne for a long time, and have not been suspected of root knots, have been taken out for some reason and have been found with roots infested throughout with these excrescences.

The above is in part personal observation and in part hearsay of the experience of others. It is a course the writer would adopt with his own trees. It is not altogether satisfactory. Until it can be demonstrated what is the cause of this diseased growth, a course of treatment can hardly be rationally prescribed.

INSTRUCTION IN ENTOMOLOGY.— Both our great universities are doing good work in educating students in entomology. At the State University, Mr. Woodworth has large classes, and the interest in class work and field work is very gratifying. Some students will engage in horticulture, others are educating themselves for teaching entomology in the public schools. Public interest will pertain also to the announcement of instruction in entomology at the Stanford University, which is made in another column of this issue. It will there be seen that Prof. Comstock, who has been doing such grand work at the Cornell University for a decade or more, will be this winter at Palo Alto. Prof. Comstock's services to this State while he was Entomologist of the Department of Agriculture in 1880–81 will never be forgotten. He laid the foundation of accurate knowledge of our scale insects upon which all our subsequent progress has rested. Prof. Comstock will receive a warm welcome, and we hope he may attend our horticultural meetings as supplementary to his work at Palo Alto.

RAIN-MAKERS AT TULARE.—It is reported that three of the Eastern school of rain-makers are at Tulare, and are under contract to produce 3½ inches of rain in as many days for as many thousand dollars—no rain, no pay.

A California Method of Egg Preservation.

During the late poultry show in Petaluma, which reflected much credit upon everyone who had anything to do with its management, one of the novelties which it brought forth was known to very few people.

Dr. E. T. Burnette of Haywards has invented and patented a new and entirely original process for preserving the freshness and fertility of the fruit of the feathered tribe. He claims that by his process eggs may be preserved for a period of eighteen months and their freshness and fertility kept intact. Dr. Burnette came up to our poultry show, bringing several dozen of his treated eggs with him. They were packed in small pasteboard boxes, bearing the affirmation and seal of a notary public who testified that they had been packed in his presence and sealed by him on the 18th of last May.

The eggs were very carefully examined and tested by Messrs. Byce, Armstrong and a number of other gentlemen, who were unable to detect in them any difference from eggs laid the same day in the coops at the exhibition. The appearance was exactly the same, both as to shell and contents, and the taste was that of a perfectly fresh egg.

In order to put the fertility of the eggs to a crucial test, Mr. Byce was given "a setting" of the eggs—in the original sealed packages, to keep three months longer and then put into one of his incubators for hatching. They will be "set" March 10, by which time they will be about ten months old. If even any considerable proportion of the eggs hatch, it will clearly demonstrate that a most wonderful and valuable new discovery has been made in the line of practical science, and the experiment will be watched with intense interest by a great many people,

A process which should perfectly preserve the virtues of eggs for even three months would be of enormous benefit. If they can be preserved for ten months or a year, who can estimate the advantage which the new discovery shall confer upon the poultry interests? *Petaluma Imprint.*

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JANUARY 5, 1892.

466,319.—GLOVE FASTENER—Wm. H. Bell, S. F.

466,453. — FRUIT-CUTTING MACHINE — John Burns, Los Angeles, Cal.

466,521.—PIPE COUPLING—Wm. L. Fitts, San Jose, Cal.

466,674.—WEED PULLER—Gaigens & Dowdin, Central House, Cal.

466,675.—VEHICLE SPRING BRACE—S. J. Graham, Colville, Wash.

466,538.—VEHICLE SPRING—J. Heilrath, Plymouth, Cal.

466,526.—GRAIN AGITATOR FOR SEPARATOR SHOES—C A. Kelley, Ripon, Cal.

466,716.—THILL-COUPLING—L. C. Rasmussen, S. F.

466,378.—IRONING TABLE—G. N. Simmons, Santa Cruz, Cal.

466,471.—CONDUIT FOR ELECTRIC RAILWAYS, C. P. Tatro, Spokane, Wash.

466,731.—POWER MECHANISM—G. O Vernon, Albany, Or.

21,286.—DESIGN FOR WATER-WHEEL CASING, A. P. Brayton Jr., S. F.

The following brief list by telegraph, for Jan. 12, will appear more complete on receipt of mail advices:

Charles Buckner, San Francisco, zither; James J. Culley, San Francisco, cuff holder; Robert H. Dixon, Santa Rosa, pruning implement; C. F. Gillett, Corvallis, Oregon, potato planter; Samuel N. Goldy, San Francisco, sash balance; Andrew S. Hallidie, San Francisco, clip for rope tramways; Emery I. Nichols, San Francisco, pulverizing mill; T H. Elesphar and A. Renard, Chehalis, Wash., stump extractor; John R. Russell, San Francisco, ore feeder; Augustus E. Scharff, Tacoma, Wash., brake for children's carriage.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

REMARKABLE SKILL AT STONE THROWING —It is supposed that we have no men nowadays who could compete on even terms with the old archers. A man named Uri Bailey, recently died in Pennsylvania, who was worthy of a place with the old-time soldiers. His skill in throwing stones was said to be marvelous. He was mentally deficient, but a giant physically. His aim with stones at any mark or game was as unerring as that of the most skillful handler of the rifle. He annually bagged scores of small game, pheasants, rabbits, quails and squirrels, which he killed with stones. He could kill a bird on the wing or a rabbit at full speed almost as easily as he could kill it at rest. He had a large leather pouch attached to one side of his coat, on which he on all occasions carried a good supply of carefully selected stones. An exhibition of his skill which was always a favorite with him, was to set up a scythe blade, edge toward him, and at the distance of 100 feet cut apples in halves by throwing them against the edge of the blade. He could almost exactly halve two out of every three apples he threw. Robin Hood's great feat of skill was to set up a peeled sapling at a considerable distance and split it with an arrow. We do not see that this is more difficult than splitting the apple o the scythe blade.—*Ex.*

A Typical Editor Gone.

Elijah Porter, founder, in 1841, of the Westfield (Mass.) *News Letter*, died recently in Cambridgeport, in that State, at the residence of his son, Linn Boyd Porter, known as "Albert Ross," the novelist. E. M. Waite, nephew of Mr. Porter of Salem, Oregon, E. M. Dewey of Tulare, Cal., and A. T. Dewey of San Francisco are among Mr. Porter's apprentices to the art preservative, the latter following Mr. Waite in the office in 1850, and to this coast in 1856. Asahel Bush, the wealthy Oregon banker and founder of the *Daily Statesman*, in Salem, while quite young, published the *Standard*, a Democratic competitor of Mr. Porter's whig paper. "Old Westfield" was a Democratic town, "two to one," but owing to the newsy style of Bro. Porter's "make up," the *News Letter* well distanced its local cotemporaries in circulation, until in the "Know Nothing" excitement of 1854. Then, the *Wide Awake American*, started by Dewey Brothers, attained a subscription list of over 2000, when the paper was moved to Springfield, changed to the *Independent American*, and finally merged with the *Daily American*, published by D. F. Ashley.

Elijah Porter was one of the truest, noblest-hearted and best-known men Westfield was ever blessed with. He was ever true to his family, his friends, his town, his country and mankind. All those who knew him aright both loved and respected him. We would honor his name as our early benefactor, and sincerely sympathize with those who mourn his departure into, we trust, a better and happier state. A. T. D.

A CURIOUS MINERAL.—Quite recently a large deposit of what is sometimes known as "fossil flour," has been discovered in the State of Maine, and that, too, of such purity as to arouse the wonder of the best analysts. In investigating the properties of this new earth, one is impressed at once by its wonderful faculty for resisting the action of acids, alkalies, oils, and especially by its remarkable quality as a nonconductor of heat. A simple test of this latter quality, made by one interested in the company, was to take an inch cube of the material and place it on a bar of iron. The iron bar was then put in a blacksmith's forge and heated until it was melted away from the cube of earth. So little did the heat penetrate this cube that one could easily place the fingers upon the upper part of it without inconvenience from the heat. Fossil flour is almost as white as oxide of zinc. It is so light in weight that a flour barrel of it in its natural condition will not weigh over 50 pounds. It is, as we have already stated, absolutely unaffected or unchanged by any sort of mechanical manipulation, by acids, alkalies or heat. As it is mined, it comes out of the ground a pure white powder, so fine that it cannot be ground any finer. A careful analysis of it shows about 95 per cent pure silica. This kind of earth has been used in Europe very largely for a variety of purposes; one of the most curious of which was in Sweden, where the poorer classes mined it and mixed it with wheat flour, in order to make bulky loaves of bread, not for sale, but for their own eating.—*American Miller.*

THE FLORAL SOCIETY.—The annual meeting of the State Floral Society was held Jan. 8, in the rooms of the State board of Horticulture. The principal business transacted was the election of officers, which resulted as follows: E. J. Wickson, President; L. O. Hodgkins, Vice-President; Mrs. H. L. Cross, Treasurer; E. E. Smith, Secretary; Miss Carrie Rixford, Accountant; Directors—Timothy Hopkins, E. Kellner; Committee on Spring Exhibitions—W. S. Smythe of Berkeley, Mrs. Sperry, Mrs. B, Harris of San Francisco, Mrs. S. C. Ross of Belmont, Mrs. E. F. Bailey of San Francisco. The papers read at the meeting will duly appear in our columns.

Notable Sale of Trotting Stock.

We have received a copy of the sale catalogue of a fine lot of standard bred mares, fillies and colts, the property of Dr. M. W. Hicks of Sacramento, which are to be sold by Killip & Co. on Jan. 23d, as per advertisement which appears in another column. Dr. Hicks has made a most valuable collection of horses, which he is obliged to part with because of ill health.

The catalogue is notable because of the excellent introductory essay descriptive of the stock, a part of which is in the words of Dr. Hicks. We can earnestly commend this offering to the attention of those seeking this valuable sort of blood. Catalogues can be had of the auctioneers.

HE KNEW WHEN HE WAS SUITED.

"Ma," said a certain school-boy, "Can't Sarah always put up my lunch? She's got a better appetite than you, and she puts more in."

The same sort of appreciation accounts for the wonderful "Roses by Mail" business of our advertisers, The Dingee & Conard Co. of West Grove, Pa. Flower lovers have large appetites, and like their orders filled where the best value is put in. This Company has long been recognized as the largest Rose Growers in America. Their handsome New Guide for 1892 describes upward of 2000 of the Choicest Roses, Bulbs, Hardy Plants and Flower Seeds. They offer this book and a specimen copy of their Floral Magazine, "Success with Flowers," to all our readers free on postal request. Mention this paper when you write.

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Breeders' Directory.

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COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

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M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

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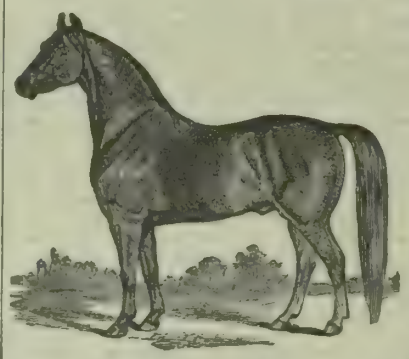
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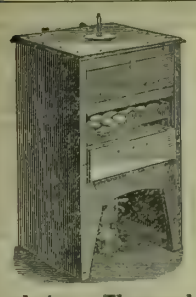
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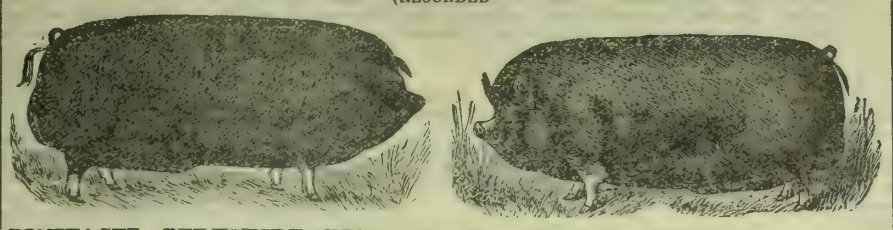
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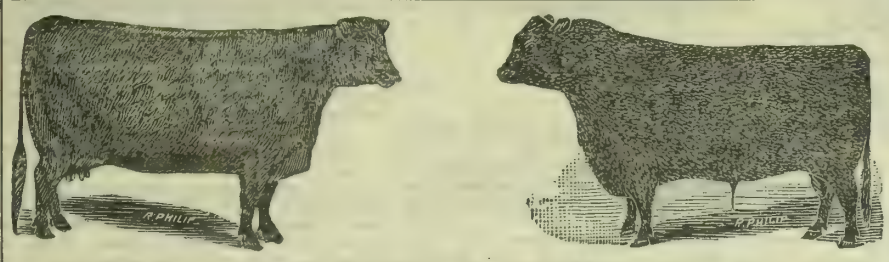
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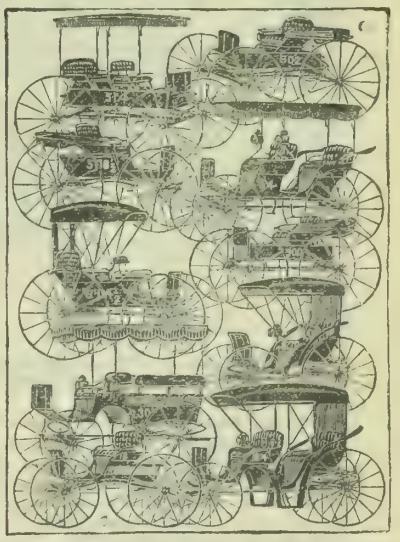
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MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

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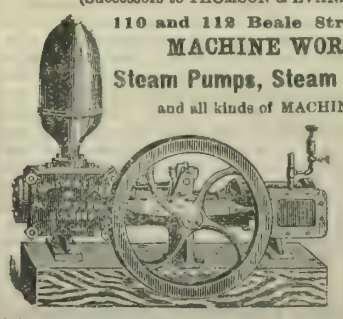


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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 13, 1892.

Absence of rains the past week was taken advantage of by farmers, orchardists and others to push outdoor work. Our advices from all parts of the coast are of a most cheerful character. With the usual spring rains, large crops of cereals and fruits are confidently looked for. In the local market, trading is generally light in farm products, owing to scant supplies. Money continues easy and in favor of borrowers having undoubted security. Silver is a fraction lower, which, of course, is against grain, owing to England being able to pay for her imports from India in the debased metal. Wheat would readily fetch two cents a pound in our market, if silver was par. The Eastern and European wheat markets have been settling. The following is to-day's cablegram:

LIVERPOOL, Jan. 13.—Wheat—Very heavy; California spot lots, 8s 4d; off coast, 4is 9d; just shipped, 4is 6d; nearly due, 4is 3d; cargoes off coast, inactive; on passage, very little demand; Mark Lane wheat, easier; French country markets, inactive.

Foreign Grain Review.

LONDON, Jan. 11.—The *Mark Lane Express*, in its review of the grain trade for the past week, says: English wheats are in buyers' favor at an average decline of 6d; foreign wheats are dull. At to-day's market English wheats were steady; American fell 6d and Indian 9d; English and American flours dropped 6d; corn was 6d dearer, new American ranging from 27s for immediate delivery to 24s for delivery within the month.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May
Thursday	8 5½ d	8 6½ d	8 6½ d	8s6 d	8s6 d
Friday	8s5½ d	8 5½ d	8 5½ d	8s4½ d	8 4½ d
Saturday	8s5 d	8 5½ d	8 5½ d	8 6½ d	8s5½ d
Monday	8s6 d	8s4½ d	8s4½ d	8s4½ d	8s4½ d
Tuesday	8s3½ d	8s3½ d	8s3½ d	8s4 d	8s4 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s3d	43s3d	43s3d	Firmer.
Friday	43s	42s9d	42s9d	Quieter.
Saturday	42s6d	42s6d	42s3d	Quiet but st'dy.
Monday	42s6d	42s6d	42s3d	Very little inq'y.
Tuesday	42s	42s	42s	Depressed.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Jan.	Feb	March.	April.	May.
Thursday	171	173	175	178	172½
Friday	171	172½	174½	177	174½
Saturday	171	172½	174½	....	174
Monday	169	170	172	....	171¼
Tuesday	166¾	168	170	172	169

NEW YORK, Jan. 13.—Wheat—$1.02 for February; $1.03 for March; $1.03½ for April; $1.02¾ for May and $1.00⅜ for June.

CHICAGO, Jan. 13.—Wheat—91½c for May.

Eastern Wheat Statistics.

NEW YORK, Jan. 11.—*Bradstreets*: Exports of wheat, including flour, are increasing again, as per special advices to Bradstreets, amounting to 5,352,000 bus. within a week, a gain of from 50 to 60 per cent over the two preceding weeks. The available stocks of wheat in the United States and Canada (both coasts) on Jan. 1st were 78,006,000 bus., 18,000,000 and 6,000,000 bus., respectively, more than were held Jan. 1, 1891, and Jan. 1, 1890. Five years ago, however, like stocks of wheat aggregated 18,000,000 bus. more than on Jan. 1, 1892, the excess being chiefly of spring wheat.

Wool.

NEW YORK, Jan. 11.—The year opens with a hopeful selling movement, and the inferences are favorable to some recovery from a long rule of low prices, especially for unwashed. Prospective receipts of foreign deadens high grade of domestic, but it is thought that at least the present rates will be sustained, if not improved in the event of a few active weeks. The sales here were 624,000 pounds of domestic and 327,000 pounds of foreign. New York's stock is smaller than a year ago, and is light in Texas wool. Samples of Montevideo are here. Boston reports a wholesome inquiry, but no better rates. The sales amounted to 1,869,000 lbs. of domestic and 529,000 lbs. of foreign. In Philadelphia trade is slow.

Raisins

NEW YORK, Jan. 8.—*Commercial Bulletin*: If current report and general belief as to purchases made of late are not at fault, there is practically no "headquarters" for California raisins at the present time. It would not be proper to mention names in this connection, and any remark calculated to create the impression that there is a corner will be greatly out of place, since all the goods in this city are not under one control, while New England and some Western distributing centers have more than a few pounds that might be spared in case of emergency. It is a fact, however, that a large proportion of the local supply is in a few hands, and held with confidence of a no uncertain character of a change for the better in prices should nothing occur to disturb the general business. The various distributing centers are fairly well supplied, but all accounts go to show that the bulk of stock is in good hands, whence distribution may be made as trade wants require and forced sales thus avoided. It is not to be wondered at that some people in trade are inclined to be bullish on the market since Valencia raisins of a desirable quality would have been let go for practically a song in the primary market to compete with California at the present prices, or a very fair advance on the same.

Hops.

NEW YORK, Jan, 12.—Hops are less active, but the situation is strong. The statistical position favors sellers. The English market is quiet, but is not shrinking. Common to best are quoted at 19 to 23c. About 30,000 pounds of State are unsold in the interior. Option dealing in hops opens tomorrow. The classification is choice, prime, medium or good, brewing or common. The commission for buying or selling is 25c a bale to members and 50c to outside parties in car lots. Contracts, limit of weight from 11,000 to 13,000 pounds gross. Deliverable weight for bales, 165 to 215 lbs., grades to be named at the exchange call, States of Washington or Oregon and California.

Miscellaneous.

NEW YORK, Jan. 10.—Honey—Several cars were placed at 7¼@7⅜c, very little in receivers' hands. The light amber market closes stronger.

Lima Beans—There is a fair demand at $1.85 to $1.95, spot, bushel.

Local Markets.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer 1892. H.	Buyer 1892. L.	Seller 1892 H.	Seller 1892 L
Thursday	186½	185⅝	....	....	153⅝	152½
Friday	185½	185½	....	....	....	....
Saturday	184½	184	....	....	....	....
Monday	182⅝	181⅝	....	....	....	....
Tuesday	181½	181⅛	....	....	150½	149⅜

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller Season. H.	Seller Season. L	Buyer 1892. H.	Buyer 1892. L.
Thursda	114½	114	107⅜	107½	....	....
Friday	114⅜	114⅜	....	....	....	....
Saturday	114⅜	113⅜	....	....	....	....
Monday	113⅜	112⅜	....	....	....	....
Tuesday	112½	111½	....	....	....	....

BAGS—The market is stiff, with holders firm at ground 7¼ cts for June-July delivery.

BARLEY—The sample market is fairly firm, but futures are lower, owing to bears' persistent hammering. The following is to-day's reported sale on Call:

Morning session: Buyer season—300 tons, $1.11; 600, $1.10⅜; 900, $1.10½; 800 $1.10½; 400, $1.10⅝. Seller season—200 tons, $1.05; 100, $1.05¼ ₩ ctl. Afternoon session: Buyer season—500 tons, $1.10¼; 100, $1.10½; 300, $1.10½; 1000, $1.10⅜. Seller, 1892—100 tons $1.04½ ₩ ctl.

BUTTER—The market is steady, but any increase in the demand will bring about lower prices. This opinion is grounded on the general information that buyers are offish and will not anticipate requirements. The market is virtually cleaned up of choice to gilt-edged pickled and Eastern creamery, which, of course, is in favor of fresh in round and square rolls.

CHEESE—Receipts are increasing, and as buyers restrict their purchases, the market appears to have a weaker tone.

EGGS—Free receipts and a falling off in the demand cause a weaker feeling, with some disposition to shade prices.

FLOUR—The market is barely steady. Concessions are reported.

WHEAT—The sample market begins to show more life, due to holders letting go. In futures, trading is light, with the number of bears increasing. Reported sales made on to-day's Call are as follows:

Morning Session.—Buyer Season—900 tons, $1.81¾; 2000, $1.81⅝ ₩ ctl. Afternoon Session—Buyer Season—100 tons, $1.81⅞; 800, $1.82; 500, $1.82½; 1300, $1.82. Seller 1892—100 tons, $1.50⅛ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 11, '92, were as follows:

Flour, qr. sks	71,098	Bran, "	3,448
Wheat, ctls	292,718	Buckwheat "	...
Barley, "	17,704	Middlings, sks	1,860
Rye "		Chicory, bbls	....
Oats "	717	Hops, bls	9
Corn "	2,921	Wool, "	110
*Butter "	393	Hay, ton	1,358
do bxs	154	Straw "	55
do bbls	....	Wine, gals	145,360
do kegs	30	Brandy, "	50,540
do tubs	....	Raisins, bxs	40
do ½ bxs	90	Honey, cs	161
†Cheese, ctls	278	Peanuts, sks	190
do bxs	70	Walnuts, "	....
Eggs, doz	16,200	Almonds, sks	....
do "Eastern	60,000	Mustard, sks	....
Beans, ctls	415	Flax, sks	....
Potatoes, sks	20,632	Popcorn, sks	....
Onions, "	1,195	Broom corn, bbls	....

*Overl'd 314 ctls. †Overl'd 327 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Jan. 10, '91.	July 1, '91 to Jan. 10 '92
Flour, ½ sks	143,956	283,490
Wheat, ctls	685,913	1,024,615
Barley, ctls	120,154	27,905
Oats, ctls	188 633	286,123
Wool, bales	5,745	5,637
Hops, bls	383	389
Rye, sks	....	3,299
Potatoes, sks	16 314	25,675

Cereals.

The local wheat market has ruled more in buyers' favor, due to speculative holdings coming on the market. Farmers who are still holding begin to show signs of letting go. The very large export movement at the Atlantic seaboard has an unfavorable influence on the market. With this country's crop of 619,000,000 bushels of wheat and 2,000,000,000 bushels of corn, a very large part of Europe's requirements will be met before next crop season. The weather abroad is reported favorable for crops.

In this State, Oregon and Washington, the outlook never before seemed so promising in the month of January as it now does. Rains have been not only quite liberal in the agricultural district, but they have come in such a way as to allow a very large increased acreage to be seeded. So far as our advices extend, there has been very little, if any, rotting of seeds, which is an unusual occurrence. The large deposits of snow on the mountain ranges not only promise an abundant supply of water for irrigation and other purposes, but it is calculated to give us cooler weather, and delay the time for decimating north winds until after harvest.

STOCKS IN LIVERPOOL, JANUARY 1, 1892.

	Wheat, qrs.	Flour, bbls.
1891	840,000@860,000	120,000@130,000
1892	360,000@380;000	120,000@180,000

As will be seen by reference to tonnage movement, the disengaged tonnage in port is increasing. This is to be expected, with outward charters low and the bright prospects for a large wheat crop this year.

Barley has ruled fairly firm in the sample market, notwithstanding the pronounced raids on Call in futures. It looks as if very few transactions reported are legitimate. The call for feeding grades is quite strong, showing a continued large consumption. Brewery hands' troables keep brewing grades quiet, but as the supply in this State is light, holders do not exhibit any fears of a decline in prices.

Oats are steady. Receipts are only fair, while the consumptive demand is fairly active. It is claimed that available supplies in Oregon and Washington are light.

Rye continues to rule in buyer's favor. There is no demand for export, while the home demand is more or less nominal.

Buckwheat is inactive.

Feedstuff

Bran and middlings are steady under lighter receipts and a fair demand. Buyers are trying to get concessions on ground barley and feedmeal.

Continued light receipts of hay, combined with a growing impression that the available supplies in this State are light, cause a strong local market. The demand, both locally and otherwise, is quite free, considering that feed on the ranges and in pastures is growing rapidly and available for range stock and dairy cows.

Live Stock.

Bullocks are in fair supply. The demand is increasing, owing to the cool weather and higher prices for mutton sheep. Improving range pasture has caused a falling off in selling offers of range stock. Mutton sheep are a shade higher. The advance is causing a lighter demand. Hogs are unchanged. Milch cows are fetching more money. The establishing of creameries is in favor of breeders.

Fruit.

Grapes, pears and persimmons are hardly worth quoting, owing to light supplies and a nominal demand.

Judging from the large deposits of snow on the mountain ranges, it is only reasonable to conclude that the deciduous fruit season in this year will open late.

Apples are in large supply. Only choice to extra choice Spitzenburg and Newtown pippin fetch outside figures. Receipts from northern counties and Southern Oregon are quite heavy. Considerable are coming to hand from Reno, Nevada. The quality of the latter is said to be of the best, but the fruit is small-sized.

In dried fruits, there is nothing new to report. The feeling appears more bullish. It is quite generally claimed that low prices have stimulated consumption to such an extent that the distributive centers are well cleaned up, which, if correct, ought to bring about a freer spring call. It is claimed that buyers have been and are still quietly looking around to find out when they can lay their hands on odd and end parcels, provided the spring trade justifies buying. Quotations are more or less nominal in the absence of business.

Raisins are inactive, with holders not disposed to press the market.

Limes and lemons are unchanged. Receipts are light and so is the demand.

The receipts of oranges are quite free. Some consignees report the bulk of their receipts wind fall and more or less frost-bitten, while others again report very few in their consignments. The market is in buyers' favor, with much difficulty met in placing consignments even in small jobbing parcels. The writer saw a sale made this morning of choice Riverside Navels at $3 a box. For Duarte and Riverside Navels, the market is quoted at $3 to $3.50 for choice to something fancy, while fair to good run from $2.50 to $2.75 a box.

Vegetables.

Truck farming is being actively pushed. A large increased acreage is reported in several of the principal garden truck farming sections. The southern part of the State continues to send us small supplies of garden truck, but the high prices at which they are held restricts their sales.

Onions are firm at quotations. The available supplies up north, it is said, while not large, will, together with ours, be ample to meet all requirements up to next season.

Choice, good-keeping potatoes are fairly firm, but off qualities are still in buyers' favor. The consumption is very heavy. This is due to low prices and the higher cost of flour, etc.

Miscellaneous.

From reliable advices up to Jan. 13, the following summary tonnage movement is compiled:

	1892.	1891.	In port. 1892.	In port. 1891.
San Francisco	240,802	278,816	*148,105	*49,426
San Diego	16,938	15,475	5,363	19,966
San Pedro	7,478	3,840	4,712	
Oregon	44,202	38,306	37,639	
Puget Sound	24,332	19,182	....	....
Totals	....	....	195,824	69,392

*Engaged for wheat, 1892, 77,678 1891, 42,228

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Jan. 4, are as follows:

	1891	1890.
Wheat, ctls	9,159,130	6,387,160
Flour, bbls	629,523	642,000
Barley, ctls	765,190	178,646

In poultry there is nothing new to report. Choice conditioned large-sized are wanted.

Beans continue to gain strength. The stronger tone to the market is largely due to quiet but persistent buying for the East. The consumptive demand at the East is increasing.

Honey is said to be scarce, which causes buyers of more choice grades to bid well up for their requirements.

Hops are doing better with gilt-edged quite scarce and for which 25 cts. might be secured. Yesterday's New York telegrams report a sale of 150 bales of choice from this coast at 23½ cts. to arrive.

In wool there is next to nothing doing. There are so many different influences bearing on wool, that it is very hard to report or quote the market correctly.

Nuts are slow but the tone is steady.

THE PACIFIC RURAL PRESS of San Francisco is as bright as ever, even though it has attained the twenty-first anniversary of its birth.—*Redlands Facts.*

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 13, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, City Mills	5 40 @ 5 50
Butter	2 20 @ 2 65	Do Country Mills	5 25 @ 5 50
Pea	2 40 @ 2 80	Superfine	3 40 @ 3 65
Red	2 00 @ 2 30	**NUTS—JOBBING.**	
Pink	1 75 @ 2 05	Walnuts, Cal. ₩	7 @ —
Small White	2 25 @ 2 55	Do Choice	8 @ —
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 25	Do Chili	7½@ 9
Wld Peas, blkeye	1 50 @ 1 75	Almonds, sft shl.	11 @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	8 @ 7½
Do NLes	1 35 @ 1 45	Brazil,	6½@ 8
Split	4 @ —	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, ₩	15 @ 30	Peanuts	3 @ 4
Do good to choice	32½@ —	Filberts	11½@ 14
Do Giltedged	— @ 35	Hickory	7 @ 8
Do Creamery rolls	— @ 35	Chestnuts	11½@ 16
Do do Giltedge	— @ 37	**ONIONS.**	
Eastern	20 @ 34	Silver Skin	50 @ 1 00
Cal. pickled	23½@ 25½	**POTATOES.**	
CHEESE.		Early Rose, ctl.	30 @ 45
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling,	40 @ 65
Do gilt edged	14 @ —	Do do Salinas	95 @ 1 20
Young America	12 @ 15	Sweet's	2 00 @ 3 00
EGGS.		Garnet Chiles	40 @ —
Cal. ranch, doz.	30 @ —	River Reds	30 @ 45
Do do selected	35 @ —	**POULTRY AND GAME.**	
Do store	25 @ —	Hens, doz	6 00 @ 9 00
Eastern	25 @ 30	Roosters, old	6 00 @ 7 50
FEED.		Do young	6 50 @ 9 50
Bran, ton	17 00 @19 00	Broilers, small	4 50 @ —
Feedmeal	26 00 @ —	Do large	5 50 @ —
Gr'd Barley	24 00 @27 00	Fryers	6 50 @ —
Middlings	20 50 @22 00	Ducks	6 50 @10 00
Oil Cake Meal	25 00 @27 00	Geese, pair	1 75 @ 2 50
Manhattan Food ₩ cwt.	7 50	Turkeys, Gob'r.	12 @ 14
HAY.		Turkeys, Hens	14 @ 16
Wheat, per ton	14 00 @ —	Do Dressed	15 @ 19
Do choice	15 50 @ —	Manhattan Egg Food ₩ cwt.	11 50 @ —
Wheat and Oat	13 00 @ —	**PROVISIONS.**	
Wild Oats	12 00 @ —	Cal. Bacon, he'vy, ₩	9½@ —
Cultivated do	12 50 @ —	Medium	11 @ —
Barley	11 00 @ —	Light	12½@ —
Alfalfa	10 00 @ —	Lard	9 @ 11
Clover	12 00 @ —	Cal. Sm'k'd Beef	11½@ —
Straw bale	50 @ 60	Hams, Cal salt'd	10 @ —
GRAIN ETC.		do Eastern	12½@ —
Barley, feed, ctl	1 05 @ 1 10	**SEEDS.**	
Do Choice	1 12½@ —	Alfalfa	7 @ 8
Do Brewing	1 13½@ —	Clover, Red	10 @ —
Do do Choice	1 17½@ —	Do Chevalier	17½@ —
Do do Giltedge	1 21½@ —	White	17½@ —
Do Chevalier	1 15 @ 1 45	Flaxseed	2 50 @ 2 80
Do do Giltedge	1 48½@ 1 52½	Hemp	3½@ 4½
Buckwheat	2 00 @ 2 25	Mustard, yellow	2 85 @ 3 00
Corn, White	1 35 @ —	do Brown	3 00 @ 3 25
Yellow, large	1 26½@ 1 31½	**WOOL.**	
Do small	1 33½@ 1 38½	SPRING, 1891	
Oats, milling	1 45 @ —	Humb't & Mend'cino	20 @ —
Feed, Choice	1 42½@ —	Sac'to valley	16 @ —
Do good	1 35 @ —	Free Mountain	19 @ —
Do fair	1 30 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain	18 @ —
Black Cal	1 60 @ 1 90	Oala'v & F'th'll	16 @ —
Do Oregon	1 45 @ 1 55	Oregon Eastern	14 @ —
Gray	1 32½@ 1 41½	do valley	21 @ —
Rye	1 55 @ —	So'n Coast, def	11 @ —
Wheat, milling. Gilt edged	1 85 @ —	So'n Coast, free	13½@ —
Do Choice	1 82½@ —	FALL, 1891	
Do fair to good	1 78½@ —	San Joaquin	9 @ 12
Shipping, choice	1 78½@ —	Mountain	10 @ 15
Do good	1 76½@ —	Humb't & Mend'cino	14 @ 18
Do fair	1 73½@ —	**HONEY.**	
Common	1 70 @ —	White Comb, 2-lb	10 @ 13
Sonora	1 71½@ 1 80	do do 1-lb frame	12 @ 14
HOPS.		White extract'd	6½@ 7
1891 Choice to Ex.	22 @ 23	Amber do	5½@ 6½
Fair to Good	17½@ —	Beeswax, lb	22½@ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pr'd, prime, bl.	10 @11
Do do prime	3½@ 4	Do do choice	11 @12
Do do choice	4 @ 4½	Do do fancy	12 @13
Do sliced, common	3½@ 4	Evap, peeled, in boxes,	
Do do prime	4 @ 4½	choice	15 @ —
Do do choice	4½@ 5½	Do do fancy	16 @17
Evap. bleached, ring, 50-lb boxes	7 @ 8	**PEARS.**	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl. com	3 @ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	8 @ —
Do do choice	6 @ 6½	Do ring do	10½@—
Do bleached, prime	7 @—	**PLUMS.**	
Do do choice	7½@—	Pitted, sun-dried	4½@—
Do do fancy	8½@ 9½	Do evap, boxes, choice	@—
Evap, choice, in boxes	9½@10	Do do do fancy	@—
Do fancy, do	10 @10½	Unpitted	2 @ 2½
PRUNES.		**FIGS.**	
Cal. French, unграded	5 @ 5½	Sun-dried, black	3 @ 3½
Do graded, 60 to 100	5½@	Do white	3½@ —
Do do 40 to 60	6½@ 7½	Do do washed	@ —
Fancy sell for more money		Do do fancy	— @—
RAISINS.		Do do pressed	— @—
London Layers, choice ₩ bx	$1 50@ —	Smyrna boxes	— @—
Do fancy, do	1 75@ —	Do sacks	— @—
Layers, ₩ bx	1 25@ —	**GRAPES.**	
Loose Muscatels, common, ₩ bx	1 00@ —	Sun-dried, stemless	3 @ 3½
Do choice, do	1 20@1 30	Do unstemmed	2½@ 3
Do fancy, do	1 50@ —	**NECTARINES.**	
Unstem'd Muscatels, in sacks, ₩ lb	4@ 5	Red, sun-dried	3½@ 5
Stemmed do do	5@ 6	Do Evap., in boxes	6 @—
Seedless do do	6@ —	White, sun-dried	5 @ 6½
Do ₩ 20-lb bx	1 15@ —	Do evaporated	6½@ 7
Sultanas, unbl, bxs	1 15@1 40	**PEACHES.**	
Do bleached, in bxs	1 30@1 60	Sun-dried, unpeeled, common, bleached	3½@—
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes		Do do prime, do	4½@—
		Do do choice, do	5½@—
		Do do fancy	6 @ 6½
		Evap, unpe'd, choice	6 @—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 13, 1892.

Limes, Mex	5 50 @ 6 50	Do choice	1 00 @ 1 25
Do Cal	75 @ 1 00	Do extra choice	1 50 @ 2 00
Lemons, box	1 25 @ 3 50	Do Lady Apples	75 @ 1 25
Do Sicily	5 50 @ 7 00	Pears, box	50 @ 1 25
Oranges, Winter small box	50 @ 1 00	Beets, sk	— @ 1 00
Do Seedlings Riverside	1 25 @ 2 00	Carrots, sk	50 @ —
Los Angeles	1 00 @ 1 50	Okra, dry, lb	15 @ —
Do Navels— Los Angeles	1 50 @ 2 50	Parsnips, ctl	— @ 1 25
Riverside	2 00 @ 3 50	Peppers, dry, lb	12 @ 25
Duarte	2 00 @ 3 50	Turnips, ctl	50 @ —
Apples, box	40 @ 75	Cabbage, 100 lbs	60 @ 75
		Garlic, lb	3 @ 4
		Squash, Mrft, tn	7 00 @ 9 00
		Pumpkins, ton	7 00 @ —

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	6½@ —	Wethers	9 @1
Grass fed, extra	6 @ —	Ewes	8½@
First quality	5½@ —	Lamb, yearling	3½ @
Second quality	4½@ —	Do Fall	12½@1
Third quality	4 @ —	**HOGS.**	
Bulls and thin Cows	2 @ 3	Light, ₩ lb. cents	4½@
VEAL.		Heavy	4 @
Range, heavy	4½@ 5½	Feeders	5½@
Do light	6 @ 8	Stock Hogs	3 @
Dairy	7 @ 8		

RAMIE DECORTICATION.—The new chemical ocess for cleaning the ramie plant is about to introduced in San Francisco by the inventor, r. Walter T. Forbes. On special invitation the Department of Ramie Culture, this gen- man has come to California. He it is who troduced a new process in Montzorango, exico, last spring. A building has been rented 18th and Folsom streets, in which the fiber ill be treated chemically in digestors. Sam- es of fiber exhibited by this Department are e, strong and in a suitable condition for the inner. The experiments made will be pub- hed by the State Board of Agriculture, De- rtment of Ramie Culture, in the forthcoming port for 1892.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the use of practical knowledge and science, by assisting gents in their labors of canvassing, by lending their in- ence and encouraging favors. We intend to send none t worthy men.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
GEO. WILSON—Sacramento Co.
J. H. CROSSMAN—Perris, Cal.
CHAUNCEY A. DAYTON—San Lucas, Cal.
G. R. GILL—Cambria, Cal.
A. DUNLAP—Hollister, Cal.
J. T. AUSTIN—Tulare County.
WM. T. HEALD—Cloverdale, Cal.
SAMUEL B. CLIFF—Creston, Cal.
S. A. DOYLE—Santa Clara Co.
W. W. MASON—Nevada.

Supervisors versus Ground Squirrels.

The result of the ordinances passed in Ala- eda, Contra Costa and some other counties st year, though not accomplishing all that as expected at first, stirred up the farmers to nusual exertions and large numbers of ground quirrels were slaughtered which would other- ise have been left alone to increase and de- troy crops. Wheeler's Carbon Bisulphide— he remedy most extensively employed—was rawn upon to the utmost capacity of the orks operating at Melrose, and a large in- rease in the output was required. A material dvance was certainly made in western farming hen the University of California and the De- artment of Agriculture at Washington discov- red and called attention to this valuable de- troyer of pests.

New Price Catalogue of Fruit and Ornamental Trees.

Trumbull & Beebe have just issued a price list of fruit and ornamental trees, shrubbery, flowering plants, etc. It will be found to cover pretty much everything in these lines that is adapted to the soils and climate of this coast.

Those who are intending to add to their orchards, or beautify their grounds this season, would do well to send for the new price list to Trumbull & Beebe, 419 and 421 Sansome St., S. F.

BERKSHIRE MEETING. — The 16th annual meeting of the American Berkshire Association will be held in the Illinois National Bank, Springfield, Ill., Wednesday, Jan. 20, 1892, at 10 o'clock A. M. Among other important mat- ters to be considered at this meeting will be the exhibition of Berkshires, and the special premiums to be offered by this Association at the World's Columbian Exposition. This meet- ing promises to be one of the most important held by the Association.—JNO. G. SPRINGER, Secretary.

NEWSPAPER AGENTS WANTED.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to so- liciting subscriptions and advertisements for this journal. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents. DEWEY & Co., Publishers, No. 220 Market St., S. F

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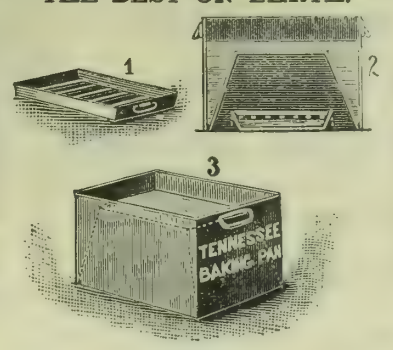
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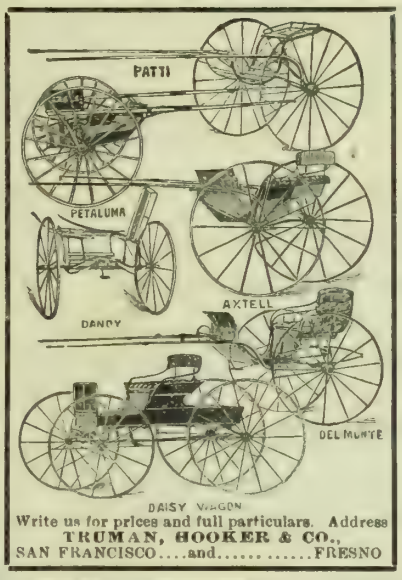
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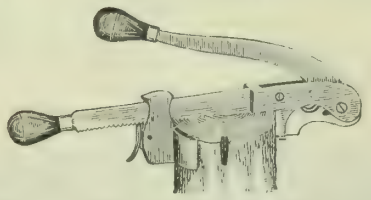
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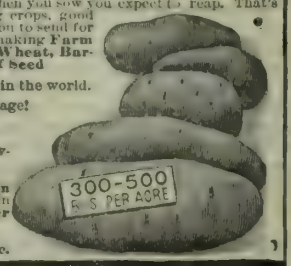
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The ONLY TRUE TREE TOMATO

Offer No. 10. This is the only variety that can lay claim to the title of "TREE TOMATO." It grows to a **HEIGHT OF 10 or 12 FEET,** and produces fruit of an IMMENSE SIZE and of the FINEST FLAVOR. At an enormous price we purchased the true stock of this tomato from the originator, and this seed CAN BE PROCURED ONLY FROM US. It is ORNAMENTAL as well as USEFUL. Two or three of these plants will make a wonderful display, and if cared for, will produce all the tomatoes one family can use. Single specimens **often measure over 6 inches in diameter and weigh over 3 lbs.** The demand for this rare novelty last season was greater than the supply. SEND IN YOUR ORDER EARLY THIS YEAR.

FLOWER and VEGETABLE SEEDS FREE.

TO READERS OF THIS PAPER. In order to induce every reader of this paper to test Northern Grown Seeds, we will give, free of charge to every person who sends us 25 cents in silver or postal note for a packet of this rare tomato, and names this paper and number of offer, a COUPON that entitles them to a collection of either flower or vegetable seeds, which at our catalogue prices amounts to 75 cents. WE MAKE THIS LIBERAL OFFER SIMPLY TO INTRODUCE NORTHERN GROWN SEEDS into all sections. The seeds will be sent to you post-paid on return of the coupon to us.

GRAND UPRIGHT PIANO VALUED AT **$650**

and thousands of valuable premiums will be distributed among our patrons this year. Our catalogue will tell you how to get them.

OUR CATALOGUE for this season is by far the most complete ever published, containing colored plates and hundreds of illustrations. It is a thoroughly reliable guide, and a book that no person who uses seeds or plants should be without. Price, 25 cents. This book will be sent FREE to all who order a package of the **Mansfield Tomato.**

"THE CHICAGO INTER-OCEAN" says: We are in receipt of a basket of Tree Tomatoes; not one weighed less than a pound. The fruit is solid, flavor delicious. Many weigh 2 lbs.

THIS OFFER WILL NOT APPEAR AGAIN.

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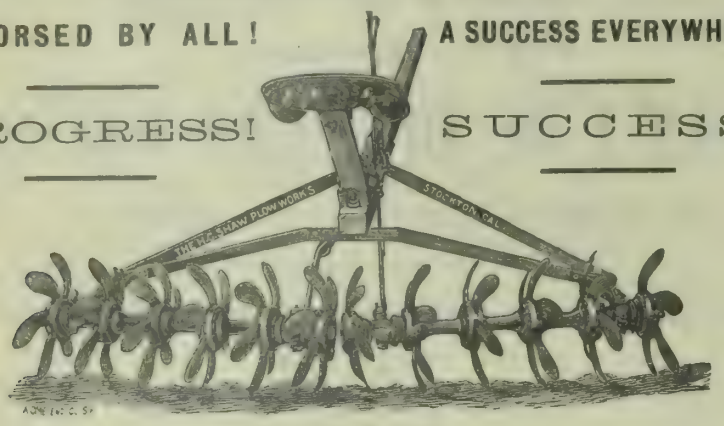
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DO NOT BE DECEIVED BY IMITATIONS.

TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

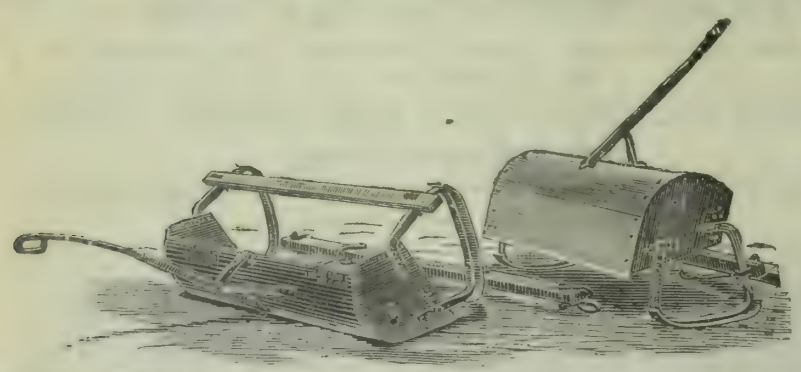
SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

H.C. SHAW PLOW WORKS

361, 363, 365, 367, 370, 389 and 390 El Dorado Street,
STOCKTON, CAL.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours, J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

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Every practical farmer is especially interested in any implement that will tend to lessen the amount of his labor and increase the production of his crops and is constantly on the outlook for such implements. During the last few years the methods of cultivation of crops have become almost entirely revolutionized. The deep root pruning process is going out. Surface culture is going to become universal. For this purpose no implement equals the BREED WEEDER. Investigate. Send for circulars.

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No [illegible] told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited [illegible]cific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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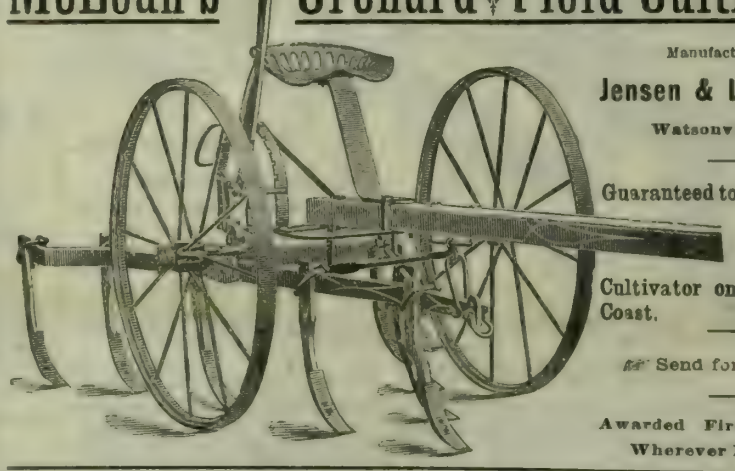
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THE ROCHESTER STEEL FRAME ORCHARD and VINYEARD GANG.



LIGHT WEIGHT! EASY DRAFT! AMPLE STRENGTH!

STEEL FRAME OUTSIDE OF WHEEL

Prevents Injury During Close Cultivation.

LEVER ADJUSTS DEPTH WHILE PLOWING.

Steel Frame, Steel Molds, Steel or Chilled Shares and Lands, Tongueless, Self-guiding, Simple, Strong.

A simple adjustment permits plow nearest vines or trees to make shallow furrow, say two inches, thus avoiding danger to the roots, the others plowing required depth.

Weight of Three-Gang 7-inch only 200 pounds, and amply strong for hard soils. Price complete, $38.00.

The only implement with advantages of both Plow and Cultivator, thus satisfying the advocates of either.

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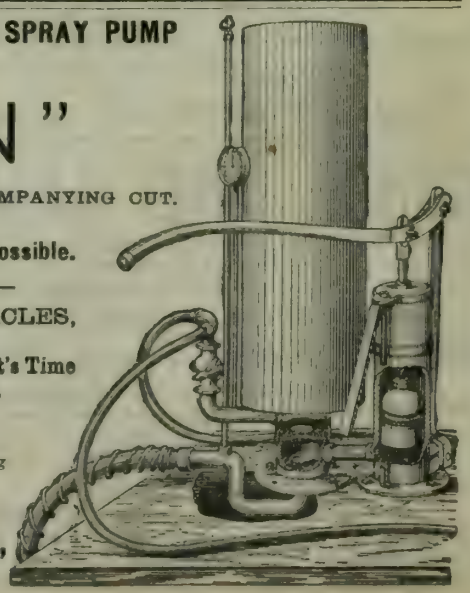
346 N. Main Street, Los Angeles. 141 Front Street, Portland.

IF YOU WANT A FIRST-CLASS SPRAY PUMP

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.



Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

SAN JOSE, CAL.

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PACIFIC RURAL PRESS

Vol. XLIII. No. 4. SAN FRANCISCO. SATURDAY, JANUARY 23, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

Advance in Sulphur.

Winter spraying for scale insects is now in progress over a great part of the coast, and as the most popular application is the lime, salt and sulphur wash, the result has been a largely increased consumption of sulphur in winter, in addition to the large amounts used at other times of the year in vineyards and in fruit-drying. One of the large handlers of both the ground and refined says that within the past two years the demand has about doubled, due largely, if not entirely, to its use by fruit growers. In consequence of the latter's growing requirements for sulphur, any increase in its market value is severely felt.

The price of ground sulphur, which has been ruling at $1.35 a barrel, was the past week marked up to $1.75 a barrel, with a strong probability that a still higher price will be reached in the near future. The advance in the price is said by Mr. Durand, agent for the grinders, to be due to a recent combination of the mine owners in Sicily, who for several years past have been fighting each other. Their competition enabled New York grinders to secure the raw material at very low prices; but under the combination the price was advanced to $40 a ton delivered in New York. This rise caused Eastern grinders to look to Japan for supplies, and bid as high as $25 a ton on board ship. As Japan is the source of supply for this city, San Francisco grinders found themselves unable to buy at $20 a ton delivered here, and in consequence are paying in Japan the same price bid by New York buyers. Even at the advance, Japan sellers or miners will not enter into a contract for future delivery, except at the price current when required for shipment, which is accepted as indicating higher prices soon.

A Fine Grape Display.

We like to present engravings of fruit displays which show tasteful style in arrangement, as well as intrinsic merit in the materials exhibited. We have not recently seen a grape display which pleases us more for style than the one shown on this page. It represents a pyramid of grapes exhibited by W. W. Waterman of Laurel, Santa Cruz county, at a recent district fair at Santa Cruz. It received a first premium for display and eight first premiums for single varieties. The base of the pyramid was six feet, and its height three feet eight inches. It contained 500 pounds of grapes of ten varieties.

It seems to us that the exhibitor succeeded in adopting a very good form of pyramid, and in covering it so as to preserve symmetry. The intrusion of leaves is just emphatic enough to produce a good effect, and the immense clusters in the foreground are very effective. The engraving will serve not only to impress distant readers with the elegance of California grapes, but will be suggestive to local exhibitors in arranging other displays.



PREMIUM EXHIBIT OF GRAPES AT SANTA CRUZ FAIR, BY W. W. WATERMAN OF LAUREL.

REPORT OF THE UNIVERSITY EXPERIMENT STATIONS.—Prof. E. W. Hilgard has just issued his report as director of the experiment stations of the University of California. It is the largest, most varied in its contents and the most valuable report which has been issued from the agricultural department of the University at Berkeley, and our readers should make application for it while the supply lasts. It is sent free of postage. The scope of the report can be seen by a brief reference to its contents. There are 50 pages on soil analyses, 30 on water analyses, 18 on alkali topics, 28 on fruit and vegetable products, 10 on fertilizers, 26 on olives and olive oil, 15 on fiber plants, 20 on grasses and forage plants, 16 on various industrial plants, 28 on California weeds, 30 on the outlying culture stations, 25 on economic entomology, etc. Readers interested in any of these lines of investigation and experiment should certainly apply for this report.

PARTISANSHIP in the politics of this Government is a very great evil, and there are times when it appears as if there was no sentiment sufficiently earnest or patriotic to overcome it. But it is gratifying to notice that when anything like a serious national emergency arises, not only the people but the politicians are ready enough to put partisanship aside and remember only the honor of their country. The national capital is now given up largely to Chilean war talk. There is no other question, apparently, in the public mind there. And in all this talk there is not the first hint of partisan spirit, not the first apparent effort to turn the situation to partisan advantage. It is a mistake to believe that the spirit of patriotism is dead or even declining in the American people.

THE POOR SHEEP MEN.—The poor sheepowners who lead their flocks upon the sides and summits of the Sierra Nevada, are still catching it lively at the hands of the forest conservers. The latest infliction is a long article in one of the dailies entitled "The Huns of California," which means of course, the devastating sheep men.

A Movement Among Raisin Producers.

Steps were taken at a Farmers' Institute recently held at Fowler, Fresno county, toward a corporate or cooperative movement among raisin producers of the State to secure a better marketing of the product. The Tulare raisin men had previously met and authorized N. W. Motheral to proceed on a mission to Fresno to enlist cooperation. His address on the needs of such action was well received, and in the discussion which followed, as has previously been shown in the RURAL, those Fresno raisin producers who marketed their fruit this year through their own organizations had done better than those who sold to the old line of packers and shippers. There was noticeable in the meeting, which was a large one, a strong sentiment in favor of a general effort on the part of producers to do their own business, and there was finally appointed a committee to issue a call for a general meeting of raisin producers in Fresno, as is described in the report on the Fowler Institute reported on page 79 of this issue. We expect this call will soon be issued and given full publicity.

Evidence accumulates that the low prices for dried fruits last fall was due directly to a concerted bear movement among Eastern dealers, the method being to refuse to buy futures, force the product upon the market and get possession of it at the lowest possible price. The game succeeded better even than the dealers dared to hope. They got possession of the fruit at lower prices than they expected and now congratulate themselves that only three months have passed, prices are advancing and they have still nine months in which to enjoy advancing values before another crop is ready. It will be the producers' fault if they are caught twice in the same trap. The remedy is cooperative packing and selling; putting a fair price on the goods and holding for it. This the producers can accomplish by pulling together.

NOT QUITE.—The reports from the rain makers at Pixley, Tulare county, are that they succeeded in giving the barometer a lot of trouble and sent it tumbling downward, but that it persistently refused to go quite far enough and nothing appeared in the sky but a few clouds, which finally flew away in disgust. Evidently the material was set for a wetter spot than the upper San Joaquin and didn't have power enough. A heavier dose should be tried next time.

ANGORAS.—Next week we shall publish the memorial which the Angora Goat-Breeders' Association of California has addressed to Congress in the interest of their industry. It will be found a very important document. We regret to learn that Julius Weyand of Colusa, the well-known secretary of the association, is considerably out of health this winter. His old associates in goat circles will wish him speedy recovery.

THE BOTANIST.

Concerning English Names for Our Western Forest Trees.

[Written for the RURAL PRESS by J. G. LEMMON.]

OAKLAND, CAL.

To botanists, naturalists, writers, travelers and tree lovers generally, greeting:

Let us institute and maintain a much-needed reform in the use of English or vernacular names for our Western trees.

Let us insist, first of all, upon decent names for our trees.

Let us insist upon suitable names.

Let us insist upon descriptive names.

Let us insist upon distinguishing names.

Let us insist upon having but one name for each kind of tree.

Let us habitually use the one proper name until it is taken up by the public and made the popular name.

Of course, it is admitted that the only really distinguishing names are those conferred and duly published by scientists having full knowledge of an object and all its relations. These are the technical names—those of last resort—for they only may infallibly distinguish any object in nature.

These names are written in Latin, so as to be read and understood by the learned of all nations, but the ordinary English reader often hesitates about dealing with them, not knowing that they are generally easily pronounced, for all the letters are given their proper sound, none are silent, and every vowel is in a separate syllable.

However, I am not now advocating the popular use of the scientific names—that will come about in due time. The youths of America will soon be ashamed not to be as familiar with our principal botanical names as with household words.

But the conferring of English or vernacular names is often left to the indiscriminate fancy of thoughtless persons—those first meeting with the object.

For instance, in one short range of California mountains, there are seven different species of pine. Three of these pines are called by the same name, and that, the unintelligible, indecent one of "Bull Pine."

Now, one of these species—*Pinus Coulteri*—bears the largest and heaviest cones in the world, often weighing five to eight pounds each. What better name for this tree than BIG CONE PINE? A second—*P. Sabiniana*—has pea green or grayish foliage, distinguishing the trees from others at a distance. GRAY LEAF PINE is suggested for this tree. The third species—*P. Jeffreyi*—has dark, often black bark, finely checked, in strong contrast with the lighter colored YELLOW PINE—*P. ponderosa*—with which it is often associated. What better name for this tree than BLACK BARK PINE?

I submit the following list of names for our Western Cone-bearers, selected mostly from the confusion of names in local use, where such were found at all suitable or even passable. In a few instances, a new name has been coined which it is thought aptly describes or designates a given tree, while all indecent or totally inappropriate names, however common or popular they may be, are rigorously ignored.

I invite criticisms or suggestions from all interested, and hold this list open for correction for one year or longer if desired.

The subject is of much more importance at this time than may be apparent to the reader, because lately, attention has been directly called to our forest trees by the publication of extended descriptions accompanied by illustrations in our late Cal. Forestry Reports.

Also collections of specimens of all our trees are to be made this season for exhibition at the Quadricentennial Celebration of our country's greatness, and the English names will necessarily come in for a large share of attention.

Vernacular names with all their unfitness are *sure* to be suggested. Shall we see to it that only appropriate ones are used? Example is a potent teacher.

Let us lead the public mind!

Let us select the best names!

Let us magnetize the good names!

Let us fix the right names!

Cone-bearing Trees of Northwest America, including California.

In this descriptive list, just enough of detail is given to bring out the characters for certain identification, and upon which are based both the Latin and English names of tribes, genera, groups and species. It will be seen that the English name is often but the translation of the Latin one.

CONIFERÆ,

THE CONE-BEARERS.

Resinous, mostly evergreen trees and shrubs of cool, mostly northern regions; fruit mostly cone-shaped and scaly; leaves mostly needle-shaped; flowers diclinous.

Three sub-orders with ten tribes.

PINACEA, pines and their allies.

CUPRESSACEA, cypresses and their allies.

TAXACEA, yews and their allies.

PINACEA, includes three tribes: One, the *Araucarias*, in the Southern Hemisphere, the second the *Cunninghamias*, small dwarfed trees of China; the third, the one that concerns us most—the very important

ABIETINEÆ, OR PITCH-YIELDING TREES.

Very resinous trees; fruit a woody or leathery cone or burr of spirally overlapping scales on an elongated axis, each scale bearing two usually winged seeds.

Two large sub-tribes.

Sub-Tribe I., Fasciculares.

Trees with the conspicuous secondary leaves in fascicles or bundles of 2 to 5 each, or in elongated tufts of many leaves in each. Three genera, viz.: PINUS, CEDRUS AND LARIX.

PINUS—True Pines.

Very useful trees with leaves in fascicles of 2 to 5 each (one species single-leafed) sheathed at base with scaly wrappings. Fruit, a cone or burr of diverse forms and requiring two years to mature (two species require 3 years). Cone scales with protuberances usually tipped with spines or the like. Two Classes.

Class I, Smooth-Coned. Short Leafed White Pines.

Cones smooth, the protuberances on the ends of the scales devoid of prickles or hooks; seeds large, leaves in 5s. Wood usually lighter-colored, softer and less resinous than that of the other class. Five species in two groups, a trio and a pair.

GROUP 1. LONG-CONED LUMBER PINES. Cones long, narrow, cylindrical, 8 to 22 inches long and 1 to 4 inches thick, on long stems becoming pendent and breaking at maturity. Trees usually very large, with grayish, finely-checked bark, large and long, upper-bearing limbs and light green foliage.

1. *Pinus Lambertiana*, Dougl., "Great Sugar Pine." Trees of the largest dimensions, 120 to 300, or, favorably situated, 250 to 300 feet high and 10 to 20 in diameter; scattered among other trees of the Coast and Sierra mountains at middle elevations. Cones very long, 10 to 22 inches long—the longest known.

2. *P. monticola*, Dougl., "Mountain Pine."—Smaller, lighter-barked trees than the preceding in sub-alpine regions of the Sierra, but northward in Oregon and Washington found at lower elevations; cones narrow, 6 to 12 inches long; scales thin, weak, reflexed at maturity.

3. *P. strobiformis*, Wislizenus, "Arizona White Pine."—Large trees of Ariz. and Northern Mex. with cone scales long and strongly reflexed—(hence once named *P. reflexa* by Dr. Engelmann).

GROUP 2. SHORT-CONED ALPINE PINES. Dwarfed, often depressed trees forming the upper fringes of the forests on the Rocky Mts. and the Sierra Nevada.

4. *P. flexilis*, James, "Limber-twig Pine."—Small or depressed trees of the Rocky mountains and a few on the peaks of certain mountains in the Southern Sierra.

5. *P. albicaulis*, Engelm., "White-bark Pine."—Very white-barked, often repressed trees forming the timber line on certain peaks of the Sierra. Cone globular, set close upon the short, stout, erect, white, annual stems.

Class II. Rough-Coned, Diverse-Leafed Pitch Pines.

Cones rough, armed with conspicuous knobs, prickles or hooks. Wood usually darker, harder, more resinous than that of the first class. Fourteen species in two sections of two groups each.

SECTION A. SUB-TERMINAL, MOSTLY DECIDUOUS-CONED PINES.—Cones arising near the terminal leaf bud, deciduous at maturity. Eight species in two very unequal groups.

GROUP 3. COHERENT-CONED, SHORT-LEAFED, CLOSE-GRAINED PINES.—Cones small, at maturity separating from the stem and remaining entire. Four diverse pairs of species.

1ST PAIR: OBLONG-CONED, PLUME PINES. Cones oblong, cylindrical, 3 to 5 inches long, pendent from the long plume-like branchlets; leaves in 5s. Sub-alpine trees of the Rocky mountains, with a few trees only on the Sierra.

6. *P. Balfouriana*, Jeff., "Fox tail Pine."—A few trees in sequestered nooks near Shasta and in the vicinity of Mt. Whitney. Cones with very small prickles.

7. *P. aristata*, Engelm., "Bristle-Cone Pine."—Similar, but smaller trees on a few peaks of the Southern Sierra, but chiefly in Arizona, New Mexico and Colorado. Cones with long, conspicuous, bristle-like prickles.

2ND PAIR. CALIFORNIA GLOBE-CONED, NUT PINES.—Cones subglobose 1½ to 2 inches thick; scales few; very protuberant, without prickles, widely opening at maturity, loosely holding the large, delicious seeds.

8. *P. monophylla*, Torr. and Frem., "Single-Leaf Pine."—Small, branching trees of the Great Basin, the eastern slopes of the Sierra and the Tehachapi mountains; leaves solitary, terete, pungent-pointed; seeds large, soft-shelled.

9. *P. Parryanna*, Engelm., "Parry Pine."—Small trees in the peninsula of Lower California, with a few specimens extending into San Diego Co., California. Cones smaller than the preceding, with soft-shelled seeds; leaves in 5s.

3D PAIR. SOUTHERN PINYONS OR NUT PINES.—Cones globose and seeds edible, like the preceding. (Not strictly in our Northwest development, but partly included.)

10. *P. edulis*, Engelm., "New Mexican Pinyon or Nut Pine."—Small trees, with small, few-scaled cones and very nutritious seeds; largely collected for export to California and Eastern markets.

11. *P. cembroides*, Zuccarini. "Stone Seed Pinyon or Nut Pine."—Small, round-headed trees of Arizona and Northern Mexico, with small cones, but very large hard-shelled seeds, largely used in Mexico for food.

4TH PAIR. THIMBLE-CONED, THIN-BARK PINES.—Cone very small, 1 to 2 inches long, strongly declined; leaves in pairs. Trees with exceptionally thin bark and small cones.

12. *P. contorta*, Dougl., "Scrub Pine." Very small, scrubby trees, on and near the northwest coast of California and Oregon, the very small cones often remaining on the trees for many years.

13. *P. Murrayanna*, Balf., "Tamarack Pine."—Tall, slender trees in wet, subalpine swamps of the Sierra and northward; also in the Rocky mountains. Cones ovate-conical, 1½ to 2½ inches long. Trees usually discharging pitch or gum. Bark only one-fourth to one-half inch thick. Wood tough and light.

GROUP 4. BROKEN-CONED, LUMBER PINES.—Cones breaking away at maturity from the short stem by an irregular, transverse fracture within the base. They are of medium size, ovate-conical, 4 to 8 inches long, and half as broad at base; leaves in 3s, 5 to 8 inches long. Large trees, with thick, deeply-fissured bark, and yielding lumber of great value. Trees widely distributed at middle altitudes.

14. *P. ponderosa*, Dougl., "Yellow Pine."—Trees of the largest size 200 to 300 feet in height; the largest often 250 to 300 feet high and 5 to 15 feet thick; bark in the typical form, yellowish or whitish, mostly very thick and deeply-fissured into large plates; cones conical-ovate, 2 to 5 inches long; male flowers, long and flexuous. The broken branchlets exhale an odor of turpentine.

Var (*a*) *nigricans*, "Brown-bark Pine."—Trees of medium size, flourishing usually in moister situations than other forms and longer retaining their lower limbs; sapwood usually of many layers; cones, largest of the species, 3 to 6 inches long.

Var (*b*) *Benthamiana*, "Foothills Yellow Pine."—Medium-sized trees in the coast mountains and Western Sierra foothills, usually spire-shaped; cones, smaller and narrower than the preceding.

Var (*c*) *brachyptera*, "Southern Yellow Pine."—Trees of Northern Arizona and New Mexico; cones small, ovate, 2 to 4 inches long.

Var. (*d*) *scopulorum*, "Rocky Mt. Yellow Pine."—A small, spire-shaped tree of the Rocky Mts.; leaves often in pairs and remaining on the limbs several years.

15. *P. Jeffreyi*, Murr., "Black Pine." Chiefly distinguished from the *ponderosa* species (with which it is often associated) by the trees affecting usually more elevated regions and having darker, finer-checked bark; the young branchlets and leaves are colored by a whitish powder; also when broken they exhale a pleasant, aromatic odor like that of orange; cones large, 6 to 10 inches long, ovate, with strong prickles.

Var. (*a*) *deflexa*, "Red-bark Pine."—This form constitutes one of the principal timber trees of the high Sierras, notably near Truckee. The bark is usually reddish brown, thick, coarsely-checked and braided, especially toward the top of the tree; cones, large, 6 to 10 inches long.

Var. (*b*) *peninsularis*, "Peninsula Pine."—On the San Rafael mountains of Lower California; bark, grayish brown, thick, deeply-furrowed; cones, remarkably abundant and large, 6 to 8 inches long.

Var. (*c*) *ambigua*.—A tree of the lake region of Western Montana, "with purple cones and long glaucous foliage."

GROUP 5. NEW OR LITTLE KNOWN PINES OF ARIZONA AND SOUTHWARD.—Small coned trees resembling our Northern Yellow Pine.

16. *P. Arizonica*, Engelm., "Arizona 5-leafed Lumber Pine." In the highest mountains of Arizona and Northern Mexico.

17. *P. latifolia*, Sargent., "Arizona Broad-leafed Lumber Pine." Rare trees in the Santa Rita mountains of Central Arizona.

18. *P. Chihuahuana*, Engelm., "Chihuahua or Top-Coned Pine." Mountains of Southern Arizona and Northern Mexico.

SECTION B.—LATERAL, MOSTLY PERSISTENT-CONED, LONG-LEAFED PINES.—Cones arising laterally, *i. e.*, along the bearing stems, usually at some distance from the apex; mostly not falling at maturity, but persisting, and either becoming inclosed by the later layers of wood, or the peduncle is stretched and at length broken by the enlargement of the tree, while the cone is often carried outward confined in the bark, leaving a channel behind it to the heart of the tree. Leaves large and long, 6 to 12 inches. Six species forming a pair of trios, or groups.

GROUP 6. HEAVY, SPINE-CONED, LONG-LIMBED PINES.—Cones of the heaviest, largest and hardest description, on long, stout, spreading peduncles, opening at maturity, but often remaining until forced off by the enlargement of the tree. Scales of the cone very large and thick, often terminating in long, stout, curved spines or hooks; seeds very large, black, thick-shelled. Leaves in 3s or 5s, very large and long, 8 to 14 inches. Picturesque trees remarkable for their usually divided trunk or very long limbs and for their heavy, spine-bearing cones.

19. *P. Torreyana*, Parry, "Torrey Pine."—A few small trees, not to exceed a few hundred in all; buffeted, often prostrated by the ocean winds at Del Mar, San Diego Co., with a few on Santa Rosa Island. Leaves in 5s, very large and long, 8 to 12 inches. Cones broadly ovate, 4 to 6 inches long, weighing 1 to 2 pounds, and armed with short, stout spines.

20. *P. Coulteri*, Don., "Big-Cone Pine."—Trees of medium size, with dark green, abundant, three-leaved foliage; composed of very large and long leaves, 8 to 14 inches long. Cones elongated, elliptical, of matchless size and weight, 15 to 20 inches long and often weighing five to eight pounds. The outer hooks are often two to four inches long, and curved like a nail grab. Trees of limited range in the Southern coast ranges and San Bernardino mountains.

21. *P. Sabiniana*, Dougl., "Gray-Leaf Pine."—Usually small, round-headed trees of the hot, sloping foothills with divided trunks and scant foliage of grayish color, all but the leaves of the season drooping downward, or early falling away. Cones broadly ovate, weighing 2 to 5 pounds, armed with stout, short hooks; seeds very large, one-half to three fourths inch long, with a thick, narrow wing. Leaves in 3s.

GROUP 7. CLOSE-CONED, SLENDER PINES.—Cones in verticils or clusters, usually strongly declined and gibbous; usually long-persistent, and remaining long-closed, holding the seed. Small trees mostly crowded into dense groves, hence tall and slender; maturing fruit when quite young. Leaves in 3s or 2s.

22. *P. Banksiana*, Lambert, "Canada Horn Cone Pine."—A small tree, with its peculiar, persistent cones curving and pointing toward the apex of the branch like little horns (the only instance in the family). Reaching the Selkirk mountains in British Columbia.

23. *P. Californica*, Loiseleur (until recently called *P. insignis*, Dougl.), "Monterey Pine."—Beautiful trees on Point Pinos, near Monterey, and abundant in cultivation. Leaves in 3s.

Var. (*a*) *radiata*, "Spreading-Cone Pine."—The large-coned form near Monterey Bay.

Var. (*b*) *levigata*, "Nearly Smooth Cone Pine."—Cone small, nearly smooth. Trees on the outskirts of the forest farthest from the ocean.

24. *P. attenuata*, Lemmon (until recently called *P. tuberculata*, Gordon, and in English, "Knob-Cone Pine") "Narrow-Cone Pine."—Usually small, early bearing, slender trees on sunny slopes of the Northern Sierra, and rarely on the coast ranges. Cones strongly declined, narrow and pointed, 3 to 7 inches long. Remaining on the trees and unopened for an indefinite number of years. Leaves in 3s.

25. *P. muricata*, Don., "Prickle-Cone Pine." Small, slender trees usually in swampy places along a limited portion of the Coast Range, mostly northward from San Francisco. Cones clustered, ovate, 2 to 3 inches long, with small, sharp, persistent prickles. The cones have been known to remain unopened for 20 to 30 years, then to release good seeds. Leaves in pairs, usually long, 3 to 6 inches.

OTHER FASCICLE-LEAVED TREES.

The other two (or three) genera—TRUE

CEDAR, LARCH and FALSE LARCH (?)—have their leaves in fascicles of few to 60, tufted on the ends of short branchlets.

CEDRUS LINK, TRUE CEDAR.—Trees with cones erect, large, depressed at the ends; the leaves persistent several years. Cultivated in California.

26. *C. Libani*, Barrelier, "Cedar of Lebanon."—Leaves dense, grass green; branches flat, fan-shaped, on long, drooping limbs.

27. *C. Deodara*, Loudon, "Tree of God, Indian Cedar."—Leaves glaucous or whitish in larger fascicles on fewer, more irregular branches.

LARIX, LINK, LARCH OR TAMARACK.—Trees with cones pendent on branches of the previous season's growth; leaves promptly deciduous.

28. *L. Lyallii*, Parlatore, "Woolly Larch." Small trees of the Cascades and eastward to the Rocky Mts., the branchlets and cones clothed with whitish hairs, the cones promptly deciduous.

29. *L. occidentalis*, Nuttall, "Great Western Larch."—Large, usually tall trees of the Northwest, on high or dry situations, peculiar for their thick bark and the cones bristly with long-exserted bracts.

[*To be concluded.*]

HORTICULTURE.

The Mango.

MELBOURNE, FLA. DEC. 15.

TO THE EDITOR:—The mango ranks with the orange, pineapple and banana, the four choicest fruits of the tropics which compare very favorably with the peach, pear, apple and grape, the four typical temperate fruits.

The fruit is oblong, roundish or kidney-shaped, flattened, and contains a large flat seed or pit, to which the flesh adheres by a tough fibre after the manner of a clingstone peach. The skin is thick, peels off much like that of a banana and the pulp is orange, salmon or red and of a peculiar rich, spicy flavor, very luscious and juicy. Different varieties differ from each other greatly, but as a general thing they may be compared to clingstone peaches with a pineapple flavor. Like oranges and peaches, they sport from seed to some extent and thus new varieties can be produced. The tree bears at four or five years from the seed, therefore only seedlings have been planted; but by following the analogy of the orange industry we are trying budding by a peculiar process which promises well so far.

The tree yields enormously; seven year old trees having been known to bear five bushels per tree. The fruit will bear transportation as well as peaches or grapes.

The rind varies in color through all shades of pink, carmine, red, orange, yellow, salmon and green in different combinations and is very showy. The leaves are long and narrow and leathery and the new growth a brilliant wine color, which in contrast with the deep green of the mature foliage combined with its wonderfully symmetrical habit of growth, render it one of the most desirable of ornamental trees. The tree delights in a deep soil, but will thrive in sand, clay, gravel or rocks. While young, frost will injure it, but if protected for the first two years it will endure hard frosts without harm and nothing but a heavy freeze which will encrust the ground will injure a bearing tree. Even if killed to the ground as they were with us in January '86 they will sprout again from the root and bear, like the guava, the second year after.

It is said that Columbus named the guava by exclaiming in Dago-English when the natives brought him some as a present and the peculiar aroma smote his olfactories, "Go offa! go offa!" The same authority has it that the mango was thus named by a Yankee peddler who was taking a trip through farther India with a stock of buttons, needles and looking-glasses. Writing back to his wife in Brookline he spoke of a fruit with "an unpronounceable native name which makes a *mango* wild with delight when he first tastes it."—JOHN B. BEACH.

Injury to Citrus Fruits.

We hoped that the injury by wind and frost to citrus fruits of Southern California had been exaggerated in the early reports, but it seems that serious losses have been sustained. The Los Angeles *Times* of Jan. 9th, after taking time for full inquiry, arrives at the following conclusion:

This is undoubtedly the most destructive frost that Southern California has experienced for eight years, and perhaps equals in damage the hard freeze of eight years ago. The loss is of course much greater because there are so many more orchards to suffer. Experts in the orange trade are unable to give any accurate estimate of the scaling down of the product. In the early part of the season, it was thought that Southern California would be able to export this year from 4500 to 5000 carloads of citrus fruits. It is now doubtful whether half that quantity will be available. If this be the case, then the loss to the citrus industry of Southern California is more than $1,000,000 in fruit alone.

Transportation of Diseased Trees May Be Prohibited.

It is telegraphed from Washington that Congressman Caminetti has prepared a bill of great importance to the horticulturists of California and he will introduce it to-morrow, if possible, with the intention of having it reported next week, thus giving it a place on the calendar. It will prohibit the interstate transportation of trees, plants, vines and all nursery stock infected with scale-insects, codlin moth or other pests, with their eggs or larvæ.

The bill provides heavy penalties for violations of the law and covers every loophole of escape so well that violations will be extremely hazardous. Owners or agents who ship infected trees or plants are liable to a fine of $1000 or imprisonment for one year, or both. Railroad, ship, steamship, express or other transportation companies, if caught in the act of shipping such trees or plants from one State or territory into another, are also liable to pay a penalty of $1000. It is not necessary to convict them of a specific act of carrying from one State to another, but if dangerous trees are found in their possession, consigned to another State or Territory, sufficient proof will have been acquired to convict. The penalty will be recovered by a civil action brought in the United States Circuit Court. Foreign railroad or steamship companies are equally liable.

To add to the stringency of the law, conductors, masters, captains, or agents in whose care infected plants are found can also be fined $250 each or imprisoned for three months, or both. The Department of Agriculture is empowered to prepare rules by which transportation companies and their officers and agents, as well as United States officers, can guard against the violation of the Act. The Department may also appoint agents whose duty it shall be to enforce the law where States—as in the case of California—have boards or commissions empowered to guard against the introduction of horticultural pests. The Department of Agriculture may appoint some board or commission, provided no expense is incurred by the United States in so doing.

This bill carries no appropriation and the correspondent who sent the above outline thinks it may pass.

THE APIARY.

A State Bee-Keepers Association.

A meeting of the Southern California Bee-Keepers' Association was held last week at Chamber of Commerce hall, Los Angeles. President Abbott was absent on account of illness, and Vice-President J. F. McIntyre of Fillmore, occupied the chair. Remarks were made by Prof. A. J. Cook of Michigan Agricultural College, who referred to the wonderful climate of Southern California. "The Causes of the Failure of the Honey Crop" were considered by several members. John G. Corey said that an unusually low temperature was very discouraging to bees. As soon as warmer weather comes, the bees go to work with renewed activity. The year 1877 was very disastrous, and there was a lack of feed. The best temperature is from 80 to 100. The same subjects were discussed at length by other speakers.

The question of organizing a California Bee-Keepers' Association was discussed and such an association was decided upon. A constitution and by-laws were reported and adopted with slight amendments. The jurisdiction of the association includes the entire State.

Every county represented by membership is entitled to a vice-president. At 11 o'clock a recess of 30 minutes was taken, to give members a chance to sign the constitution and pay their dues.

The association proceeded to elect officers as follows: President, J. F. McIntyre; secretary, J. H. Martin; treasurer, G. W. Broadbeck; vice-presidents—L. T. Rowley, Los Angeles county; F. H. Hunt, San Bernardino county; T. F. Arundell, Ventura county; J. A. Odell, San Diego county; executive board—J. W. Strong, Allen Barnett.

Professor A. J. Cook, A. I. Root and Mrs. A. I. Root were elected honorary members.

Bee Culture in California.

TO THE EDITOR:—It was gratifying to one who has made a study of the honey product on this coast to find at least one voice raised in your columns against Mr. H. E. Hill's wholesale denunciation, in the *American Bee Journal*, of California beemen and their methods in the apiary. Mr. Hill's extravagant statements are certainly not without some foundation of truth, though his conclusions are evidently drawn from visiting a few old time "bee ranchers," whose ignorance and shiftlessness are deserving of censure. An investigation of any one of the large apiaries of Ventura, Los Angeles and San Diego counties must impress the most cursory observer with the fact that apiculture in California is now in the hands of intelligent, practical men who are unmistakably up in the science of the subject, and who stop short of no reasonable expense and labor to promote the best possible results from their colonies.

In consequence of California's unequaled advantages for honey-making, beemen here are not obliged to put into practice a hundred details which are absolutely essential to secure any degree of success in Eastern apiaries. An owner of two hundred swarms of bees in this State finds he can compass their best interests with no greater outlay of time than three months' work among them every season. A novice in California bee culture, as Mr. H. E. Hill undoubtedly is, would readily make the mistake of supposing such easy bee-farming must indicate reprehensible carelessness on the part of the apiarist.

Speaking of hives, the correspondent of the *American Bee Journal* is again in error. The writer can state from personal knowledge that either the Langstroth or the Harbison hive is almost universally adopted by prominent beemen throughout Southern California. They also use the various machinery which in late years has made the honey industry quite as scientifically carried on as the generality of modern pursuits.

The Southern California Bee-Keepers' Association has efficient men at its head, and their prompt introduction of ways and means to promote the advancement of apiarists deserves the general recognition of all interested in apiculture upon this coast. Inspectors are sent out to visit all the apiaries in the principal honey counties, and their efforts to exterminate foul brood in hives are so rigorous and effective as to make possible the ultimate extinction of this dread disease.

Mr. C. N. Wilson, of Los Angeles, an able writer on California bee matters, says: "The object of the Bee-Keepers' Association is the advancement of apiculture generally, in all its branches and interests; to bring the producer and consumer of honey closer together; to effectually enforce the laws of this State as to foul brood among bees; to get exact information as to where the best supplies, hives, sections and apiarian appliances can be obtained; to secure a more uniform price for honey; to cooperate with all other societies and organizations of progressive bee-keepers throughout the world."

The same gentleman, in a recent letter to the writer, has this to say of the present outlook of Southern California bee men: "This has been a slow year from start to finish. The early part of the season was cold and cloudy, much fog and too little sun to induce swarming among the bees. The abundant rains insured good growth of the sages and those trees, shrubs and plants that make up bee pasturage, but owing to the dark weather, little nectar was secreted in the blooms. In some places, directly on the sea coast, bees had to be furnished sugar for subsistence, a very unusual thing, as you know, in this country. All inland apiaries had sufficient pasturage for the daily use of the bees, and many colonies stored more or less honey. The bees in Antelope Valley and on the outskirts of Mojave desert gathered a large surplus of honey, averaging more than 50 pounds to the stand. In fact, in a few instances, over 300 pounds of honey were taken out of a single hive.

The price of honey this year has been somewhat affected by the low price of sugar. Nevertheless, in my opinion, the future of California bee-keepers has a fair prospect. As they gain in experience they do better work year by year. And then it is the pleasantest occupation in the world."

A day spent last May at Twin Oaks, one of Mr. Wilson's apiaries in the San Fernando foothills, is one of the happiest and most profitable memories of your correspondent.

NINETTA EAMES.

THE RAVEN is said to be the only bird known to entomologists which is a native of every country in the world.

FORESTRY.

Eucalyptus Ficifolia.

PASADENA, CAL.

TO THE EDITOR:—This showiest of the Eucalypti "makes a distinct forest belt in the coast region of Western Australia, from the western side of Irwin's Inlet to the entrance of the Shannon, though never actually approaching the sea shore."

"The specific name of this gorgeous tree was chosen before the brilliancy of its flowers was known, and alludes to the similarity of its leaves to those of the fig trees of Ficus elastica, the principal caoutchouc tree of India."

It bears a strong resemblance to E. calophylla, but there is a marked difference in the seedlings of the two species, the seedling leaves of the latter never being "inserted above their base to the stalk," as they are in ficifolia.

Dr. Mueller says of this, in the number of his great work when it was first published: "This eucalyptus is one of the most splendid of recent acquisitions to horticulture, and was introduced by the writer of this work into the Botanic Garden of Melbourne in 1860, where it flowered already a few years afterwards while yet only in a bushy state. Soon subsequently he commenced to introduce it abroad. Hardly anything more gorgeous can be imagined, than forests of E. ficifolia about the end of January or beginning of February, when the brilliant trusses of flowers diffuse a rich red over the dark foliage of the whole landscape occupied by this tree. It should have a place in every select ornamental arboretum in zones free of frost and excessive heat."

It is further remarked that the "trade in seeds of this species has proved already extremely profitable to the vendors," and that they are constantly sought by the birds.

Fig. 1, in the plate shows the unexpanded flower, natural size, with the lid lifted. Fig. 7, a transverse section of the fruit. The numerous stamens indicate the enormous productiveness of a single flower.

There is another charming little eucalypt, a small shrub or minature tree, discovered in 1849 by Dr. Herman Behr of San Francisco. My specimens were presented to me many years ago by Henry Edwards, in a valuable collection of Australian plants. Dr. Mueller says of Dr. Behr: "His prior travels had shed much light on the flora and fauna of this country, and his ardor for scientific research has been unabated for 30 years in California where he has more particularly contributed to the entomologia of that country. JEANNE C. CARR.

The Forest Reserve System.

The grand object of the proposed National forest reserve, set forth in a memorial recently presented to President Harrison by the American Forestry Association, is:

Not to withdraw these lands absolutely from occupation or use, but rather to increase their usefulness and the sum total of the productiveness of the territory, by making each acre do its utmost for the benefit of our people.

In the case of these reservations it is the purpose—

To minimize the destruction of forest areas by fires and the wasteful and erroneous methods of forest use prevalent.

To maintain and increase the lumber industry by a permanent and continuous yield of forest products on non-agricultural lands which, under the present methods, are laid waste by fires and made less productive.

To promote railroading and wood manufacturing industries by providing constant and increasing supplies of the raw material from cultivated forests, and creating a home market for labor and supplies at these manufactories.

To cultivate and develop new growths of valuable timber wherever the matured trees are cut for the market.

To specially guard and protect the sources of our main rivers and lakes and thus continue their flow for the benefit of the people at large.

To prevent these lands from being taken for timber only and abandoned after cutting the best, and also to secure *bona fide* settlements on the agricultural sections.

Nor is it the purpose to prevent prospecting for minerals, opening of mines, or other legitimate and rational use and development of these lands.

To attain these objects the American Forestry Association urges not only the reservation system, but at the same time the enactment of *administrative* laws which will secure these objects and in a simple manner satisfy all local wants.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST by addressing the publishers.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

If the wise prophets of our nation are not mistaken, the farmers of America are about to enter on a new era of prosperity. From many men and from many sections come the announcements that agriculture is going to pay. We rejoice, with millions of men, that the daylight of agricultural prosperity seems to be breaking. But it is well, at this time, to be careful. It may be there is an effort on foot by those who have axes to grind to deceive the soil cultivators. We all know what money and politics will do. There is a terrible struggle on hand, and the hothouse politician and the money broker have seen their foundations trembling, and they have seen and realized that the American farmer is the man who is making the confusion. Now these cunning fellows do not want to be thus overthrown. They do not want to be so quickly thrown out of a lucrative employment. Perhaps they have seen the handwriting on the wall, and know, if the conflict continues, they must sink. Hence, these politicians and millionaires may have concluded to pacify the farmer. They may have concluded to pay a trifle more for farm produce, and to temporarily reduce the rate of interest, and so forth, on purpose to have the farmer withdraw his forces from the field of the present conflict, and again expend all his strength (mental, moral, social, financial and political) on the farm. Nothing would suit the ordinary politician, the railroad president, the banker and the most of the lawyers better than to have the farmer leave all else and attend to his farm, and nothing but his farm. But a word to the wise is sufficient.

It is right that the farmer should attend to his farm. That is his business. But it is also right that he look to the schools, to the courts, to the boards of supervisors, to the city councils, to the legislatures, to banks, to railroads, to the acts of Congress, and to the treaties being made; and, last, though not least of all, to primaries, to conventions, to platforms, to end. best of all, to *men*. Don't be deceived, fellow farmer! We must keep up the fight. Be ever vigilant, for that is the price of your liberty. Keep up your organization. Stand by the Grange. Always keep the powder dry, even though you may not want a fight. We are on safe ground now; let's hold it. Let the prices of farm products advance; let agriculture prosper; let politicians tremble; let millionaires work; let right prevail, and, by all means, stand by the Grange.

Masters of subordinate Granges, send your recommendation for County Deputy. The Master of the State Grange wants you to act at once. No time should be lost in useless labor.

Send your petition to Congress asking for free rural mail delivery.

"United we stand, divided we fall," is a truism as applicable to Grange work as it is to anything in this world. In all ages, at all times, with all people, results are brought about by concert of action. Individual effort, backed by intelligence, is all right. It is a prerequisite to the most successful line of cooperation. But to make the greatest success of success, we must have harmonious, intelligent union, association, combination.

There is no danger of concentration of power in the National Grange. Each State has two votes and no more. New York is no bigger in a session of the National Grange than South Carolina. Nor is Rhode Island any less than Texas. Each State is the equal of every other State, so far as votes are concerned.

Have you ever tried to see how much you could say for the good of the Order? Try it!

Do write for the RURAL PRESS.

If you want to belong to a charitable, economic, educational, social, energetic, fraternal organization, join the Grange.

Send name for County Deputy. Name a worker. Then help him to extend the Grange.

Congress has "sessioned" for almost two months. What has been done?

The subordinates will soon get an official letter, concerning public meetings on special days. Let prompt answers be returned. If you want a State Grange officer to meet your people and talk to them of the Grange and matters that affect their situation, you will surely vote to hold a special meeting. The Executive Committee will do all they can do to scatter good Grange seed on fertile, well-cultivated soil. How much will you do toward maturing and gathering the the crop?

If you have anything on your farm, or if you can make anything that is a world beater, send it to the Columbian Exposition. Help the fair.

Send a charter list for a Grange, and get one dollar for each name up to 25. It will pay you. Try.

Three old Granges are now seeking information of how to get into camp. Seek and ye shall find. Knock and the Grange door will be opened unto you.

Send good Grange news and notes to the RURAL. Don't be afraid of overdoing the work, but be sure to give fresh, progressive ideas. This is a thinking age.

Who will canvass Stanislaus county in the interests of the Grange?

Wanted—a man who will organize the farmers of California into subordinate Granges. There are many farmers not yet in the Grange.

San Jose Grange.

CAMPBELL, CAL.

TO THE EDITOR:—Once more I come with my budget of items to let the fraternity know that we are not only alive, but are kicking—that is, we are at work, hoping that our work will prove beneficial to all interested in the Order.

When the Grange convened to-day, a number of the members were buried in their PRESS looking for the report from the Corresponding Secretary, and lo, it was easily found and quickly read.

To-day we conferred the first and second degrees on two candidates, received one petition from an applicant, and are looking earnestly for more.

After the work, some little time was devoted to a brief literary program; and here let me say that if Granges desire to make their meetings interesting, let them try a short program embracing music, readings and off-hand remarks, but long, set speeches, never! Nothing will so effectually kill an organization of this character as too frequent indulgence in set speeches.

To-day's program opened with a piano solo by Sister Jefferds, followed by a select reading by Sister Jennie Saunders; then came a paper by Bro. Amos Adams entitled "The Grange and Its Relation to Class Legislation." In his paper, Bro. Adams controverted the idea that the Grange is opposed to class legislation, and cited many instances, in both State and National assemblies, wherein the Grange advocated class legislation, but then it was not that harmful kind, to which every Grange should be in earnest opposition. The Grange wants an equal share in the class legislation enacted in this country. The writer favors the two per cent loan bill.

Following the paper came a brief discussion of its salient features, which, so far as expression was had, met the approval of the members.

Bro. Pomeroy read an extract from some paper, which roasted political bosses and declared that Wall Street ruled the bosses, and that the latter, to a great extent, controlled legislation. This closed the program.

Our Grange is making an effort to form a branch traffic association to work in unison with the association lately formed in San Francisco.

I beg leave to offer a suggestion to the Granges of the State, which is, that when any business other than that of a routine nature is transacted, make it known through the columns of the PRESS and your local papers, so that the world at large may see your light and know that what you are doing is not altogether done in the dark.

R. P. MCGLINCY.

The Late C. J. Cressey.

On motion of E. W. Davis, the following preamble and resolutions were unanimously passed at the annual meeting of the stockholders of the Grangers' Bank of California, held January 12, 1892:

WHEREAS, The stockholders of the Grangers' Bank, in 18th annual session assembled, have heard, with profound sorrow, of the death of C. J. Cressey, one of the founders of this bank and one of its true, faithful and respected directors and former executive head; therefore be it resolved by this body of stockholders:

That we bow in submission to the will of Him who doeth all things well.

That, in the death of C. J. Cressey, this bank has lost a valuable, honest and safe adviser; a man at all times loyal to the bank's, and, at the same time, to the people's best interests.

That a copy of this preamble and these resolutions be spread on the minutes of this annual meeting, and a copy, duly attested, be forwarded to the family of our deceased colaborer.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same

An Alliance Talk.

Jesse Poundstone:

Who is the most dangerous man in this country to-day? Is it the ward politician? Is it the political boss? Is it the corrupt office holder, the thieving monopolist, the boodler, the briber, or the bum?

No, all these are bad enough, but we have a man more dangerous, more to be dreaded, more to be despaired of than any of the above. He is the man who is so selfish, who has so little regard for the welfare of his country, who is so insensible to the sacred trust reposed in him by his forefathers that he is willing to sit quietly back, take his ease and allow an institution like Boss Buckley to flourish. Yes; we raise our hands in horror at such men as Buckley and his gang, never thinking that they are the legitimate offspring of the citizens who fail to do their plain duty. Just so long as we have such citizens, who consider themselves above taking an interest in public affairs, just so long will we have bribery, corruption and boodle to contend with.

The Farmers' Alliance is doing more than any other party or organization to change this condition of affairs. Until recently the farmer kept out of politics from natural modesty and the impression (created and encouraged by political schemers) that he was not smart enough to understand the principles upon which the Government was founded, or intelligent enough to take a hand in making the laws. Stern necessity forced the farmer to *think*, and as far as politics is concerned, from the moment he began to *think* from that moment the farmer "was in it."

So don't be a "stay at home man." Don't stay at home all the year and then go to the polls and vote a ticket that a few bosses have arranged for you and in which you have had nothing to say. You will be just as good a farmer and a much better citizen if you will consider that you have a personal interest in the way public affairs are managed and your taxes spent. If the farmers will do their duty (and their most important duty is to join the Alliance) at the coming elections the disgraceful scene enacted at Sacramento last winter will not be repeated again.

Resolutions of Orange Alliance.

WHEREAS, We are bound together for self-protection against fraud and usurpation of the money power,

Resolved, That we most heartily endorse the action of Judge Wallace in his noble effort to ferret out crime and punish criminals, be they rich or poor, and commend him to the voters of California as a lover of truth and justice and a man worthy of our confidence and support.

Resolved, That we are most emphatically opposed to the Government issuing bonds to build the Nicaragua canal on any other conditions than that the Government shall own and control the canal.

RESOLUTIONS OF SYMPATHY.

WHEREAS, Death for the first time has invaded our ranks and taken from us our friend and brother, Charles Henry Young: therefore be it

Resolved, That we deeply mourn his loss and hereby offer our heartfelt sympathy to the bereaved wife and family,

That the charter of the Order be draped in mourning for thirty days.

That these resolutions be spread upon the records of the Alliance as a perpetual memorial, and that the same be published and a copy be sent to the family of the deceased.

By order of Orange Alliance No. 160, F. A. & I. U.

HIRAM HAMILTON, S. J. GOODRICH, C. R. BUSH, Committee.

Orange, Cal., Jan. 8, 1892.

San Miguel Convention.

To the People's Party Convention of San Luis Obispo County, Assembled at San Miguel: We, your committee appointed to present a platform for the People's party of this county, beg leave to present the following report:

WHEREAS, The affairs of the country show in the administration of government so many evils, in forms of oppressive monopolies, as national banks, gigantic railroad corporations, and unjust taxation, subverting all the powers of government, and destroying the elective franchise, thus overthrowing the dearest rights and principles of the American people; therefore, be it

Resolved, That we, the people of San Luis Obispo county, in mass meeting assembled in the city of San Miguel, California, on this the 7th day of January, 1892, firmly convinced that the time has come for independent political action, do hereby affirm the principles set forth at the Cincinnati Convention, and reiterated at Los Angeles on October 22d last, believing that the right will prevail, and that the freeman's ballot will rectify all the evils of government, which is herewith submitted.

The following supplemental report was adopted:

WHEREAS, As the last sample of "Simon Pure Justice," we have the disgraceful decision of our Supreme Court in the "boodler" cases in San Francisco;

Resolved, That the so-called justice of the day, as given to the people by their servants clothed with authority by themselves, is something that should bring the blush of shame to the cheek of every honest man and woman.

Government by the Many.

FRESNO, JAN. 18, 1892.

TO THE EDITOR:—The Farmers' Alliance in this State is reputed to have some 30,000 members; yet the decision as to what political declarations it should make was given, and its laws were made, in 1890, by about 45 persons, and this last year by not over 130, I think. A carefully prepared proposition to give the membership of the order a chance to pass upon the political demands and the State laws of the order before they became authoritative—a proposition to put the power to make them authoritative into the hands of the membership of the order in this State—was widely published previous to the State Alliance meeting the year past, was presented to the Committee on Amendments to the Constitution and Bylaws at the meeting, but was not even reported by the committee to the State Alliance so that the delegates could pass upon it. The changes in the State Alliance constitution recommended by President Cannon, approved by the committee and adopted by the State Alliance, were mainly in the direction of depriving the membership of the order of power over their own welfare, and of putting that power into the hands of one man, the President. This may have been wise; time will tell.

The putting of the control of questions affecting the welfare of all, into the hands of a few has been the main cause of the failure of the various reform organizations which have sprung up in this country in the last 30 years; and it will continue to be a cause of failure so long as it is retained and wherever retained. It is not so much that the few to whom power is delegated do wrong, as the danger that they may do wrong—the fact that they have the legal power to do so—which renders the public distrustful of reform organizations; loth to enter them, and makes persons distrustful of each other after they are in them.

The farmers of the United States are as keenly alive to the benefits of organization as any class of men; but many of them are instinctively distrustful of the efficacy of an organization—a political organization—the control of which, and particularly of its political function, is put into the hands of a few. Can you blame them? The existence of giant monopolies in the State and nation proves that organization controlled by minority does not bring that equal and greatest good to all for which we pray. Can it be that a form of organization which proves so faulty, which proves productive of monopoly, when applied to the State, will prove any different—will change its nature and become a mother of plenty—when applied to a reform organization? Will it not rather promote the growth of little monopolies within the order?

In the foregoing considerations there is, I think, no cause for discouragement; but much cause for a great awakening on the part of the people of the United States to the need of reform in the political system. In this class of reform we are behind England and France, and even Switzerland—Switzerland, which, with its three million people of different nationalities, is to-day the most peaceful, prosperous and happy nation of Europe, and the only democracy, or real government of the people, *by the people*, on the face of the earth, of any size! What our Government needs to make it that beneficent thing which a Government by the people would always prove, I believe, is not so much a new party (though I am for the new one) as new measures; not so much new men (though we need some badly enough) as a new order of doing business.

The matter rests with us. There will be a new order of things in a hurry when the people once raise their voices unitedly in a demand for one. Will we do so? When?

F. P. C.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

The Montana Convention.

As promised last week, the RURAL PRESS is now able to give its readers a full report of the proceedings of the Irrigation Convention held at Helena, Montana, on the 7th, 8th and 9th of the present month.

There was a very full attendance of delegates and Ex-Governor Hauser was elected permanent chairman. After the usual routine business had been transacted, the platform of the Salt Lake convention was read as follows:

Resolved, That this congress is in favor of granting in trust upon such conditions as may serve the public interest to the States and Territories needful of irrigation, all lands now a part of the public domains within such States and Territories, excepting mineral lands, for the purpose of developing irrigation to render the lands now arid, fertile and capable of supporting a population.

Resolved, That it is the sense of the convention that the committee selected to propose and present to Congress the memorial of this convention, respecting public lands, should ask as a preliminary to the cession of all the lands in the Territories in accordance with the resolutions of the convention, a liberal grant to said Territories and States to be formed therefrom, of the public lands, to be devoted to public school purposes.

WHEREAS, Large areas of arid lands and semi-arid lands, situated upon the great plains in the Dakotas, Western Nebraska, Kansas and Oklahoma were settled upon in good faith by homeseekers, under the supposition that they were entering agricultural lands; and

WHEREAS, The settlers upon such lands have expended much time and money upon the same, and paid into the United States treasury therefor only to discover that irrigation to a greater or lesser extent is necessary in making homes for themselves thereon; therefore be it

Resolved, That the representatives of all the States and Territories directly interested in irrigation, do hereby pledge their unwavering support to the just demands of such settlers, that the General Government shall donate at least a portion of the funds received from the sale of such lands toward the procurement of the means necessary for their irrigation.

It was agreed to take the platform up in detail for discussion. Senator Power was the first speaker, and he opened the discussion by denouncing the Salt Lake platform, saying it was a prearranged scheme, carefully prepared before the meeting of the Congress at Salt Lake, for the purpose of having all the arid lands in the United States ceded to the States and Territories. This would put a quietus to all future expected Government appropriations. A map was hanging on the wall, which Senator Power had had prepared showing the States in the arid region, including Montana, Nevada, Colorado, Kansas, Nebraska, Idaho, Utah, Washington and Wyoming. The Dakotas and California were not indicated on the map as lying in the arid belt. The Dakotas had been left out, he said, because the people of those States, recognizing the value of Government appropriations, had refused to ask for the ceding of all the arid lands to them. California had been left out because it was a country owned by the railroads—by the same men who ran the Salt Lake Congress. The Senator's speech was loudly and enthusiastically applauded.

Judge Strevell proposed the following amendment to the first section of the platform:

Resolved, That in the judgment of this convention it is the duty of the General Government to aid in the development of the arid lands in the several States and Territories where such lands exist; and while we do not deem it desirable that the control and title to such lands should pass from the General Government to the several States containing them, we do, nevertheless, urge that at least the proceeds arising from the sale of such lands shall be applied to the supplying of water for their development for the purpose of agriculture, and we urge our Senators and Representatives in Congress to use every effort to accomplish such legislation as will bring about this desirable result, not only for our own State, but for all other States and Territories similarly situated.

Judge Strevell proceeded to back up his resolution in a strongly worded and eloquent speech. He referred to the wonderful prosperity of Illinois, which emerged from obscurity into the front ranks of the United States as soon as the legislature offered every other section of land to the first corporation that would construct a line across the State. He referred to the development of the Western States by the advent of the Union Pacific road, notwithstanding the millions of dollars stolen from the people by those connected with that project. He did not favor the ceding of the arid lands to the several States, and he did not believe the Government would cede them if asked to do so. It was and is the duty of the General Government to provide every poor man with a homestead, if he wants it, and it is the duty of the General Government to provide water with which to cultivate these lands. He was strongly opposed to the adoption of the platform of the Salt Lake Congress. The States were not prepared to take these lands and the responsibilities and expenses connected with that act. It would be necessary to organize courts and State Land Offices, and the cost would, for a long time, be greater to the several States than it is at present to the General Government.

W. A. Clark replied to Judge Strevell and Senator Power in a long speech in which he strongly favored the ceding of the arid lands to the several States. He did not think the expense would be enormous and he knew the almost utter impossibility of securing appropriations from Congress for the purpose of irrigation. He paid his respects to Major Powell, of the United States Geological Survey, who, he said, had wasted appropriations of several hundreds of thousands of dollars, in making topographical maps, which, he said, were necessary for the proper location of reservoir sites, but which were in no way necessary for the purpose. He was in favor not only of asking the General Government to cede the arid lands to the several States, but also to cede the timber lands.

After a very warm discussion the Strevell resolution was adopted by an almost unanimous vote, and the Secretary of the Convention was instructed to transmit copies thereof to Montana's representatives in Congress, aud to ask them to present the same to the consideration of that body.

W. H. Sutherlin then offered the following resolution, which after considerable discussion was adopted:

Resolved, That the next Legislature of the State of Montana be memorialized to enact a law, similar in its provisions to the Wright irrigation law of California, for the furtherance of the interests of the farmers in the matter of constructing reservoirs and canals, and for the government of the distribution of the water.

Another resolution to the effect that all ditches, canals, etc., used for irrigation purposes be taxed for the amount of revenue derived from the sale of the waters and not according to actual cost or appraised valuations, was the subject of a long and somewhat heated discussion. It was finally decided to recommend that the resolution be rejected.

The following preamble and resolution was unanimously adopted:

WHEREAS, There will be held in the year 1892 a National Irrigation Congress, to be attended by delegates from all the States and Territories interested in irrigation, and

WHEREAS, The place where such congress shall be held has not been fixed and is to be designated by the Executive Committee of said congress, consisting of one delegate from each State, and

WHEREAS, Montana has within her borders more acres susceptible of irrigation and more water available for the purpose,

Resolved, That the State Irrigation Convention assembled in the city of Helena extend to the Irrigation Congress a cordial and unanimous invitation to hold its annual session in 1892 in Montana.

A resolution asking that the legislature be asked to appoint a State engineer to inspect irrigation canals, ditches, etc., and gather data was rejected.

The Secretary was instructed to transmit copies of the invitation to the National Irrigation Congress to Governor Thomas, of Utah, and to W. A. Clark, of Butte, for presentation by him to the Executive Committee. The President also appointed the Committee on Permanent Organization, a committee to select the town or city in Montana in which the congress shall be held in the event that the invitation is accepted and report to the convention at once.

It was moved and carried that the efforts of the people of Utah and other Territories to secure cessions of lands for school purposes from the general Government has the hearty sympathy and cooperation of this convention.

Donald Bradford presented the following, and a committee of five was appointed to memorialize the legislature on the subject:

WHEREAS, Montana contains 93,349,200 acres, and 38,000,000 acres comprise our ranges; interspersed with these are 30,000,000 acres of farming lands, and

WHEREAS, Montana has limitless latent wealth, the fact must be recognized that we are face to face with a vast problem, that we must prepare now to solve and not procrastinate till too late to properly and economically master it, and

WHEREAS, It is fair to assume 15,000,000 acres to be the area subject to all practicable means of irrigation; fifteen million acres, properly watered, means 1,000,000 additional rural population; canals for 1,000,000 population mean not alone irrigation, but demands for water power, for manufactories, water for houses, for cities and villages, and consequently a well-balanced law, prepared in the light of the experience of the countries of Europe, of Egypt and of India, that have, in a measure, overcome the difficulties in the proper distribution of water; a law anticipating the need of reservoir sites in every locality possessing irrigable lands, to prevent their occupancy and ultimate enlarged outlay in condemnation; a law that will place under the control of the people of each district or drainage area their water supply and will reduce the cost to a minimum; that will prevent discrimination as between all landholders, and

WHEREAS, The constitutional life of the legislature will not permit of an investigation or the research the importance of the subject demands; therefore be it

Resolved, By the Convention, constituting representatives from the several counties of the State, that a committee of one from each county be appointed by the President of this Convention with power to prepare a bill and present to the next legislature, which bill shall embody the following general points, to wit.

The creation of a State Irrigation and Immigration Commission, which shall be appointed by the Governor, together with a State Engineer, which Commission shall have the power, through the State Engineer, to divide the State into districts, according to natural slopes; to prepare plans for the construction of the necessary canals and reservoirs or other works of any district; to have sole control of construction; to cause the organization of any such district by the election by the legal voters of such district of five trustees, who shall exercise control of such canal, reservoir or other works after construction; issue bonds of such district for construction; levy taxes and otherwise provide for sinking fund, interest and repairs, subject in all cases to the laws of the State.

A resolution was also adopted, directing Montana's representatives in Congress to exert themselves to have appropriations made for public land surveys in the State. Another resolution which was adopted looks to surveys for reservoir sites in Montana, not under the direction of Major Powell. The State weather bureau was endorsed, and the members pledged themselves to aid in its extension in their respective localities. The proceedings of the convention are to be printed in pamphlet form, each county pledging itself to pay one-sixteenth of the cost. The remaining planks of the Salt Lake convention, which were passed on Friday, were, on motion of W. A. Clark, indorsed. They refer to Utah school lands and the arid lands in Nebraska and western Kansas.

It was decided to invite the National Irrigation Convention to hold its session at Anaconda, after which the meeting adjourned sine die.

District and Other Work.

The directors of the Anaheim district have received a proposition to sell $600,000 of their bonds at 90 cents, and a commission of $10,000 to the brokers. The board decided that they only wanted to sell $300,000 of the bonds, and they submitted this ultimatum to the parties who desired them. No answer has yet been received. Director Ryan reported that the State Association, the regular meeting of which he had attended at Tulare, had decided to send General Willey to New York to confer with prominent bond buyers and money borrowers in reference to the placing of irrigation bonds in general. He had seen General Willey previous to his departure for New York, and was satisfied the bonds were now in better shape than ever before. General Willey would be received with respect and confidence by the most prominent financiers of the country, and it was agreed that irrigation bonds were more salable now than ever before. Further, it was recognized the Anaheim district offers better securities for their bonds than any district in the State.

At the last meeting of the directors of the Selma district the only business transacted was to instruct the secretary to advertise the sale of lands in the district that are delinquent for the assessments of 1890.

The Directors of the Poso district have awarded a contract for constructing irrigation works, following plans of the Chief Engineer of that district, to J. M. Thompson of San Francisco, and J. H. Smith of Seattle. The entire work, including the construction of the canals and laterals, flumes, reservoirs, dams, etc., is to be completed within one year from date, and, upon satisfactory completion of the work, the contractors are to receive $440,000 in district bonds at par in full payment for construction. The contractors give a bond in $110,000 for faithful performance. There are about 65 miles of main canal and distributing ditches, several miles of flumes, two immense dams and two or three large reservoirs. The contractors intend to begin work within 30 days and will employ a large force in order to complete the contract within the limits of time. Poso district was organized in September, 1888, and subsequently election bonds in $500,000 were voted. Poso creek has been carefully studied by able engineers, who pronounce it amply sufficient to irrigate a much larger region than the district now covers. The stream has a water shed of 468 square miles, and with a system of reservoirs an abundance of water can be collected for irrigation. The land to be irrigated only needs water to become fruitful to the highest degree, says the Delano *Courier*, and much of it is located in a thermal belt where frosts are unknown and the earliest vegetables and fruits of the season can be raised. With the completion of this irrigation system these lands will be rapidly improved, hundreds of homes will dot the fertile plains.

At the last meeting of the Directors of the Sunset district, it was decided to hold a special meeting at Selma on the 27th, to hear the report of the engineers on the proposed canal system.

The Directors ot the San Jacinto and Pleasant Valley district expect to receive their Engineer's report at their February meeting, and will thereafter at once proceed with the determination of the bond question.

The Secretary of the Perris district has sent out notices asking for reports as to the number of acres to be put under cultivation this year, for the purpose of fixing the rate.

A most important convention was held at Fresno during the past week in answer to the following call: "At a special meeting of the Fresno Board of Trade, called December 14, 1891, the proposition of dredging the San Joaquin river and the building of a ship canal from the point where navigation ceases was brought up and discussed by the Board. S. N. Griffith offered a resolution that the Fresno County Board of Trade call a convention to be held in the city of Fresno on Thursday, January 21, 1892, to consider ways and means for the building of a ship canal through the San Joaquin valley to tide water, and that the counties of Fresno, Kern, Tulare, Merced, Stanislaus, Mariposa, San Joaquin and Contra Costa, are hereby requested to be represented by five delegates each, to be appointed by the Board of Supervisors of each county or by the chairman thereof, and that the secretary of the Fresno County Board of Trade notify the Boards of Supervisors that they are authorized to unite and extend a formal invitation to all citizens, including members of the press of their respective counties, to be present and participate in said canal convention." A full report of this convention will be given in the next issue of the RURAL PRESS.

The South Riverside Land and Water Company contemplate the early construction of an upper ditch south of and parallel to the present irrigating system and nearer the mesa or high lands close to the Temescal mountains. This ditch will carry water enough for more than 3000 acres and will employ many men in its construction.

The managers of the Sharon lands in Fresno and Merced counties propose to construct a large reservoir for irrigation purposes. A fine site has been found on the Chowihilla river and a dam can be built that will supply water for 21,000 acres.

The Duty of Water.

The question is often asked: "How much water is needed to each acre of farm land?" The question is too indefinite to admit of an intelligent answer, says the Denver *Field and Farm*. In the first place, crops differ with respect to moisture requirements. For example, oats and wheat will require more than rye and barley; and buckwheat, amber cane and corn, still less than the other grains. Again, so many conditions are to be taken into consideration in determining how much water may or may not be needed for any given crop, and so little thought has, until quite recently, been devoted to the matter of economizing water, that little data that is at all reliable can be given.

Broad generalization, bordering closely on to "guess work," has been the rule. That there are difficulties in the way of arriving at accurate conclusions in these investigations, must be seen at a glance. Local conditions, character of the soil, slope of the land, cultivation, humidity, evaporation, precipitation, drainage and capillary action, are so widely at variance in different localities, that there is small hope of getting any formula that will admit of extended application. Then, too, the demands of plant life are variable.

The cubic foot a second is the unit of measurement usually adopted in the distribution of water from or by the large canals of Colorado. A quantity of water equivalent to a continuous flow of one cubic foot a second, during the irrigating season of one hundred days, will usually irrigate from 50 to 60 acres of land. It will often do more than this.

The duty of water is constantly increasing in nearly every portion of the country where irrigation is practiced. To-day in Colorado, some engineers and canal companies are making the standard of duty nearly double what it formerly was here. But the crops grown, the system used, and the means of applying water, all cut a very important figure. Where flooding takes thousands of gallons, the furrow system only requires hundreds, and subirrigation tens of gallons for a similar area.



My Two Suitors.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

"'Tis settled; Jack has lost the prize he sought;
I heard him speak to her words of rebuke.
That he dared do such thing I never thought,
Knowing so well her pride could never brook
Even the gentlest chiding from a friend."
So spoke the one who thought he knew me well,
Unto his wife, who said the final end
To Jack's courtship no one so soon could tell.

I knew my neighbor thought his cousin Ned
Would find "clear sailing" now in wooing me,
And that ere long we two would sure be wed,
Fearless that we should ever disagree,
As Ned, all knew, had much too kind a heart
To think or say a woman could do aught
But right, and boasted he could not depart
From that belief by his good father taught.

Ned had a pleasing way and manly form,
And handsome face and kind dark eyes, and yet,
Though Jack's soul might cloud up and even storm,
And though a plainer face I'd scarcely met,
Or simpler, franker spirit than was his,
He had, unknown to self, had stronger hold
Upon my heart and all my sympathies
Than Ned had with his goodness and his gold.

Ned was to me like a book richly bound,
And filled with nothing but an idle chatter,
Whilst Jack was one in which a wealth I found
Of earnestness, and even, when in battle,
So wisely and so scrupulously just
That every page in him breathed nobleness
So broad and deep that I knew I could trust
Him 'gainst myself, and e'en his chiding bless.

Yet I could not relinquish my own strength
Of will and purpose. So it seemed to White,
My neighbor, that we'd quarrel'd; but at length
It came to pass his wife was nearest right.
Whilst feigning anger, all the while I knew
Jack's words had fan'd my love to a deeper glow;
His storms are like the sky's when it is true
Unto the thirsting fields and bids them grow.

"I told you so, Bob White," I heard May say,
In a half whisper, as she saw me greet
Jack with my usual smile, when yesterday
He joined our company upon the street.
Four could not go abreast so well, we thought,
And so, whilst homeward bound, we wisely paired,
And Ned, I think, a glimpse of us had caught,
As it was Jack alone my evening shared.

Plucky Postmistresses.

The postmistress is a considerable factor in the United States Government, and she has a personal interest in every presidential election, although she has no vote.

During the last year, the Postmaster General has issued an order that the postmasters at the county seats must visit the postoffices in their counties. In some districts this is an easy matter, but in others it is almost impossible. The Washington correspondent of the *Cincinnati Gazette* has examined the reports of the women who are postmasters at the county seats, and has brought out some curious facts. So far, 61 women have reported. An Idaho woman rode in her visitations 254 miles on horseback. A Kentucky woman rode over a hundred miles, and spent $15 for horse-hire. A Mississippi woman made her visitations in a sail-boat. Another woman from the same State made her trip through dreary pine woods alone, without fear. A Vermont woman visited the offices in her county, although it was composed of five islands. A Pennsylvania woman visited all her offices although there were 128, and many of them among the Allegheny Mountains. An Alabama woman said she would not be able to execute her commisson, as she could hire no horse in her county that could make the trips. A Louisiana woman reports that she keeps bankrupt willingly in order to improve the service in her own village. A New York woman visited 44 postoffices with a horse and carriage, travelling 291 miles. A North Carolina woman was so courteously welcomed by all the postmasters that she promised another visit next year. A Texas woman omitted to visit one office because it required a horseback ride of 35 miles. Virginia and California post mistresses visited every office in their counties. A West Virginia woman wrote that some of her offices were almost impossible to be reached, but she reached them just the same.

It is often said that if women vote, some women must hold office. Many women are already holding office under the Government as postmistresses, without creating scandal or surprise. If they are equal to duties so arduous as those here described, it seems as if they might be capable of filling any post to which the common sense of their neighbors would be likely to elect them.—Woman's Column.

Mr. B's Opinion of Character.

[Written for the RURAL PRESS by DUANE MORLEY.]

Mr. B., a staid citizen, having been appealed to for his opinion concerning a certain peculiar exhibition of character, said:

"My views are conservative, they having undergone great change within a decade of years, and chiefly from one circumstance which I will relate. Many years ago, while, at an early morning hour, my family were yet sleeping, I took, as was my usual habit, a street stroll. I passed outside my own grounds, which were quite extensive, and toward the suburbs near which I then lived. Going by an evergreen hedge in which, or beside which, stood an old stable, I heard voices. The fact of the building being unused, aroused my curiosity, and I halted to listen. The conversation proceeded from two tramps who had, in their need of better accommodations, appropriated the barn to their own use.

"And they were mutually considering their necessities and airing their grievances, though one of them took so reasonable a view of the latter that his words were, to a degree, fascinating. That was why I continued within hearing of his voice. He uttered no railing accusations against the rich; neither declared that the world was in his debt respecting the matter of breadstuffs, believing, as he averred, that the bettering of his condition was plainly a personal matter. But one critical remark fell from his lips, and that aroused a keen desire in me to meet and make acquaintanceship with him. 'Clean, social privileges,' said he, 'are denied the common workingman upon this coast; he is barred out as undesirable, with no resort open to him save that of the billiard hall or grog shop.' From other remarks, I learned that he purposed securing employment at the best pay possible, and through a course of economy and perseverance, work upward out of his low estate.

"My business was box-making, and though I was then in no especial need of more help, I got a few dodgers struck off at the printers', and rightly conjecturing that the fellow would continue his use of the stable, I, that evening, scattered about the streets and lanes in that vicinity a number of them.

They were worded as follows: "One or two good men can find employment at the Fifth Street box factory by applying early in the day." Two mornings later the man was snared; and having noticed him the morning before as he left his retreat, I knew him as he made application at the factory office. Of course there were some evidences about the man of the fraternity he had mingled with, but much about him was manly and inviting. I gave him the work of sorting out and stacking up the cut box lumber in the covered yard, and a better green hand I never set to work, never. Order was a faculty so largely developed in him, that soon what had been chaos in the yards was overpast, and, with memory active, there was no size ever called for that was not instantly forthcoming. But once did any difficulty occur. Then there were high words in the yard, and as I passed out to investigate, his voice sounded above that of another: "I tell you I will not be put upon! I'll resign my place sooner." Such were his words, and I discovered that a mean imposition was being practiced upon him. As I had much business of a noncorporate nature, I had, in my chamber, a home office where the books were kept pertaining to it. And this man's business qualifications, especially his order and unfailing memory, so appealed to me that I determined to appoint him my secretary or business manager; so I removed him from the one place to the other, thus bringing him into my own family circle and at my own table. I do not speak of this in any self-laudatory way, for the best and most we can do is inconsiderable and little worth mentioning.

Always a keen observer of men and manners, I noticed this man's constant struggle toward a cleaner and better life. Eventually he became a patron of the public library, a subscriber to lecture courses, and a frequent attendant upon church services, growing into my regard with each upward step. To-day he is managing a flourishing business of his own. The incident of that morning, when I overheard his sentiments as expressed to his tramp companion, I ever withheld. Telling a man when you have seen him down does not tend to his elevation. Kind estimation and right treatment are to the unfolding of man's better nature aud should be readily recorded."

—A Frenchman was asked if he liked hunting. His reply was pithy, and much to the point: "Ven de horse jomp easy, I like very much; mais ven he jomp 'ard, I do not remain!"

San Francisco Fashion Letter.

[Written for the RURAL PRESS.]

SAN FRANCISCO, Jan. 11, 1892.

DEAR DAISY:—I have spent the morning in examining the latest fashions, and have arrived at the conclusion that January is not the most satisfactory month in which to indulge in new apparel. The winter fashions have lost the charm of novelty, and the spring fashions have not yet come to gladden our hearts and lighten our purses.

I will however tell you absolutely the latest Paris fashions, so that you can take time by the forelock, for what Paris wears to-day the rest of the fashionable world will wear to-morrow. It would be an exaggeration to say that the world has gone into mourning, but it is nevertheless true that black has never been so popular as at present.

Dresses of black velvet and satin, which have, particularly the latter, been principally worn by elderly ladies, are now adopted, even by quite young girls.

Black velvet coats promise to become very fashionable, and certainly they are extremely becoming, as velvet always has a softening effect on the complexion.

The great drawback to possessing several black dresses is that they look alike, and unkind people are apt to exclaim, "The same old gown." In order to obviate this difficulty a little color is often introduced into the waists, a fashionable trimming being black, brocaded with a color. A brocade of pink rose buds, or of sprays of lilac, on a black ground has a very pretty effect for the collar and cuffs of a black dress. One pretty model I saw was black, with a delicate gray waistcoat and cuffs.

It is sad to contemplate how energetically the dress reformers lift up their voices and preach to deaf ears. In vain have they attacked trailing skirts, demonstrating the uselessness and folly of three inches of good material being dragged through the winter mud and snow.

Far from heeding, women wear their skirts longer than ever, positive trains being worn on the street. Some of the fashionable wraps even, have the backs shaped in a pointed curve, which lies several inches on the ground. The skirts are worn clinging and plainer than ever. The edge may be trimmed with a band on the bias, a tailor hem or a band of velvet, fur or feathers; but drapery is absolutely out of fashion.

A good way to lengthen an old fashioned, but still serviceable skirt, is to edge it with a band of velvet a quarter of a yard in depth, upon which you can stitch three or four rows of fur, fancy braid or feather ruching.

Princess gowns are struggling into favor. Some are made with Princess fronts and basque backs and vice versa.

In waists there are few changes. Lappels are still worn, but waists with belts bid fair to become as popular. Belts are worn both pointed and straight, of cloth, silk, variously tinted leather, and even of jet.

I saw a pretty costume the other day of cigar-colored cashmere, with a long clinging skirt edged with jet trimming, about three inches wide. The belt, which was very deep, was of jet, the collar and cuffs being composed of jet trimming also.

There seems to be a great tendency toward masculine, and even military attire. Not content with pique vests and four in hand ties, ladies are beginning to adorn their dresses with military froggings, hanging cords, metal braid, and even epaulettes, in imitation of those worn by officers. A pretty innovation is the military cloak, similar to the cloak worn by Italian officers. To make this correctly, a piece of cloth should be cut into a complete circle. Round the geometrical center of the circle, the collar should be placed, with an opening to the edge of the cloth. A cloak made in this lavish manner will hang in most graceful folds, but to be deep, it requires a ruinous amount of very wide cloth, so dressmakers are making their models much less full than the picturesque Italian originals. These circular cloaks are worn of all lengths, from mere capes to mantles that sweep the ground; in wraps they are the newest thing. Like everything else in the way of dress, buttons are subject to the caprices of fashion. Just at present they are rather at a discount on waists, for many of the best dressmakers make a point of carefully concealing the fastening.

To compensate for this neglect, buttons find favor on skirts, the sides of which have often simulated button holes, and either tailor made buttons, or else ones of pearl or colored bone.

A writer in a French magazine observes: "The crowing of the rooster is transformed into doleful wailing, and the clucking of the hen into lamentation. Terror reigns supreme in the poultry yards, for fashion, that so long has only used the plumage of rare birds, at length condescends to admire the domestic fowl, and holocausts of poultry must be sacrificed to satisfy her demands.

"Roosters' feathers are the rage for dress trimming, boas, muffs, millinery. The cheapest kind of feather trimming is made by fastening the feathers with glue, on to strips of cloth, but this lasts little longer than the flowers of the field, and a shower of rain instantly destroys it. A newer and more durable trimming is made by weaving the feathers together."

In millinery there are few novelties. A new trimming is composed of bands, crowns or aigrettes of overlapping spangles of various colors, which flash and sparkle in the sunlight. Jet and tinsels are in great favor, as are also the heads of birds and animals. Shaded and brocaded ribbons are beginning to be worn, the latter being frequently made more gorgeous by tiny pieces of jet, or glass jewels.

A novel appendage to the bonnet is a long veil of colored crape, or nun's veiling, reaching to the hem of the dress; but so far, in San Francisco at least, these veils have been more talked about than actually worn.

MARIE EVELYN.

Chaff.

—Master: Did the gentleman leave his name? Servant: Yes, sir. When I asked his name, he said, "It is immaterial."

—"I feel it just as much, my dear little boy," said papa, after he had spanked Billykins. "Y-yes," sobbed Billykins, "b-but not in the same place."

—Penelope: Don't! Stop! Jack: I can't help it (kisses her). Penelope: How dare you when I forbid it. Jack: You merely said, 'Don't stop.'

—Sumway: Is this Miss Scadds you speak of beautiful? Hunker: Is she beautiful? Why, sir, I never saw a car so crowded that she couldn't get a seat in.

—Mr. Smike: Willie, when you get to be the head of a family, what will you say to your sons? Willie (thoughtfully): I will tell them how good I was when I was a boy!

—Wife (returned from a visit): How is darling baby, George? Husband: I'm afraid he's not well. "Oh, dear! Whatever makes you think so?" "Why, he hasn't cried for a whole hour!"

—"So you haven't made Smudger your partner after all, eh?" "No, and I'll tell you why. Smudger was engaged to my wife before I married her, and I don't believe in becoming too friendly with a man who has proved himself more wide-awake than I am."

—"Why should you refuse Charlie on account of his not being your equal? Your grandfather certainly was a member of Parliament, but don't you believe that all men are born equal?" She: Oh, yes, of course I do; but some men deteriorate after birth, you know.

—A thoughtful spouse: I've a great notion to go and jump into the river, said Mr. N. Peck at the end of a little domestic discussion, as he picked up his hat and started out. "You come right back here," said his wife. "If you intend any such tricks as that, just march upstairs and put on your old clothes before you start!"

—A Cairns man tells of a lady in that city who had employed a Chinese servant who had quietly observed that all the lady callers at the house deposited a visiting card. One time when a Chinaman had been sent to answer a ring of the door bell, the mistress of the house was astonished shortly afterward to see from her window one of her nearest and dearest friends leaving the house without having come in. On investigation, she discovered that the Chinaman had shut the door in the caller's face. "Ble-clause she no havee ticketee." John had supposed that the visiting cards were tickets of admission, and the caller had not offered a card.

QUEENS AND THE WORLD'S FAIR.—Mrs. Potter Palmer, President of the Board of Lady Managers, has made a brilliant move to forward the interests of women at the World's Fair. She has secured the transmission through the State Department at Washington of letters addressed to the Queens of the leading countries of Europe, asking that Women Commissioners be appointed, and that the sanction and patronage of royalty be accorded them. The Chicago *Tribune* says: While the Exposition management has sent the second commission to Europe, and has been endeavoring to arouse the United States ministers and consuls to action, it has remained for the President of the Board of Lady Managers to send a polite and earnest letter to the Queens of Europe, and have it dropped into their laps, dignified by the great seal of the United States and invested with all the dignity of diplomatic correspondence.

YOUNG FOLKS' COLUMN.

A Rabbit Hunt.

[Written for the RURAL PRESS by C. M. CARRINGTON.]

Knowing, or at least believing, that a large percentage of the readers of this column are boys, and that most of them live in the country, and in consequence enjoy the very word "hunt," I venture to offer for their benefit an account of one of the many enjoyable hunts I had last summer.

When at home I reside in a city where the law forbids such amusement, and so, when last May I received an invitation from a country cousin to spend a few weeks at his home in Amador county, I very readily accepted and found myself a week later safely at the end of my journey, and after a day's rest was ready for business or rather pleasure.

One Friday afternoon my cousin, who I shall call Will, another boy, who shall be known as Elmer, and I, met together and decided on a grand rabbit hunt, to take place on the following day. After some discussion we agreed to sleep that night at Elmer's house, and thus, being all together, we would avoid delay and be able to make an early start. So after thoroughly cleaning our respective guns, i. e., two shotguns, one each for Will and I, and a small rifle for Elmer, and putting up enough eatables to serve for breakfast and lunch, Will and I repaired to Elmer's house for the night.

"Now, boys," said Mrs. M———, our hostess, "Wake me in the morning and I will have a warm breakfast for you before you start. You wont want to leave here before six o'clock, I think."

Will and I were about to protest that six o'clock would be too late, but on catching Elmer's eye which he was screwing up into an elaborate yet surreptitious wink, we remained silent and with a general "good night" Mrs. M——— left us to seek our bed for the night and to talk over the incidents that would probably happen next day.

"You see," said Elmer, "If we told mother that we wanted to start at half-past four she would want to get up and help us off and might delay us, and anyhow there's no use in rousing her up so early just to get us a little breakfast. Let her sleep."

We admired his thoughtfulness and agreed that his plan was the best. Then he brought out an alarm clock, set it for four o'clock, and soon after we all went to bed and to sleep. Just as I had reached the climax of a very exciting dream, in which a wounded rabbit, as big as a bear and with three awful heads, was in the act of devouring all three of us, one in each great mouth, a voice awoke me, saying:

"Get up, C—, its almost five o'clock."

"Eh? How do you know?" I asked sleepily.

"Cause, see how light it is outside," answered Will. I sat up and looked out of a window.

"That's moonlight. Lay down and go to sleep," growled I, with an utter disregard of grammar, as most boys would be under the circumstances. But Will wasn't satisfied, and after getting Elmer and me wide awake, he crawled out of bed and looked at the clock.

"Only one o'clock, he announced, and with a few more growls we got to sleep again. Scarcely had I closed my eyes, seemingly, when some one shook me into a state of consciousness and said we had overslept.

After many remonstrances, I was persuaded and pushed out of bed and told to look at the clock. It was too dark, and I could find no matches, so Elmer had to take the clock out into the pantry, where he could procure a light. Soon he returned and whispered that it was only half past two. Greatly disgusted, we crept back into bed and dropped off into another slumber.

Thr-r-r-r-r-ring! went something presently, and I heard Elmer jump out of bed and clap his hand over the clock bell. Soon we were all up, and after assuring ourselves that Mrs. M— had not been awakened by the alarm, we gathered up our clothes and stole cautiously out into the kitchen. Then, shutting the door noiselessly and lighting a candle, we hastily dressed, shouldered our guns and eatables, and sallied forth.

After walking nearly a mile, we called a halt in an open field and ate our breakfast.

"Seems to me its more like night than morning," said Will, glancing up at the sky, where the stars sparkled and looked down upon us as if surprised at our early pilgrimage. The same thought had struck me previously, and Elmer appeared to coincide with Will's opinion, so, merely for curiosity's sake, we asked Will to consult his watch. It was just three o'clock! We looked blankly at each other and then the comicalness of the situation struck us simultaneously and we broke out laughing.

"Well, what a go!" commented Elmer, and we agreed that it was.

We sat around and talked till four o'clock, then started on again. At daylight, by which time we had reached what we thought a good hunting ground, we fixed upon a suitable rendezvous where we were to meet at lunch-time and compare luck.

Leaving my companions, I struck off through the woods. I walked for about a mile, and although keeping a sharp lookout on all sides, I failed to find anything until almost an hour had passed. Then, suddenly, right across my path ran a cottontail rabbit, and as he disappeared in the brush, I struck out after him as fast as I could go. Through the bushes I went, but the rabbit, of course, went ten rods while I went one, and it wasn't long before I had to give it up. Then I heard the report of a gun nearly a quarter of a mile ahead. "Some one has got him," thought I, as I trudged at a more moderate pace. About half an hour later I heard another report, not so loud as the first, and it began to dawn upon me that the other fellows were getting all the game and I was in a fair way to go into camp empty-handed. This thought was not gratifying, and I began to look around more on the alert than ever. I was soon rewarded. All at once there opened a picture before me that caused a thrill of satisfaction and keen sportsman-like feeling to take possession of me. Right in front of me, distant about thirty yards, sat a cottontail. It was of a peculiar color and half of its ear was gone. I recognized it as the very one I had seen an hour ago; but I did not stop to ask him how he had come there. Raising my gun, I took good aim and pulled the trigger. Bang! Slowly the smoke cleared away, and there lay the cottontail, dead. Just as I started forward I caught sight of some one disappearing at the top of his speed in the bushes two hundred yards away, and, somewhat surprised, I went over, picked up my victim, reloaded my gun, and started in the direction which the person had taken. Although I walked and walked till twelve o'clock, I failed to increase the number of my slain, and at last I reached the rendezvous tired and hungry and in no very pleasant frame of mind. There I found Will and Elmer, and after getting well started in on the comissary outfit, I turned to Will.

"Did you have any luck? Give us an account of yourself," said I.

Will glanced at his game-sack, looked rather dubious for a moment, then began:

"Well, after I left you fellows, I walked on for almost an hour without seeing a thing to shoot at, and at length I began to get weary. Never saw game so scarce. I was just thinking of hunting you up and going home, when suddenly up started a rabbit. He hadn't gone ten leaps when I up and—"

"Killed him," supplemented Elmer, eagerly.

Will sighed: "And shot at him," he continued, "and hit just behind him. Perhaps I wounded him, but at any rate he ran off so quick that I couldn't follow him. But I loaded up again and struck out in the direction he had taken, and at the end of half an hour I saw him again. He was sitting in an open spot between some bushes and didn't see me. I crept cautiously up behind a bush to within forty yards of him; then, poking my gun over a large log, I crouched down for a good shot and took aim. At that moment, bang! went a gun from some bushes on my right, and I saw the dirt fly all over where the rabbit had sat, and the rabbit himself cut off—"

"Like the wind, and disappeared among some high grass about five hundred yards ahead," interrupted Elmer.

"How do you know? asked Will suspiciously, but we told him to go ahead, and he did.

"Well he did disappear and I tell you I was mad. I supposed it was one of you fellows, but couldn't see you, and soon I struck out again. I saw that same rabbit three times after that but every time he was frightened off before I could kill him, and the last time, after I had crawled through nearly a mile of brush, and had got within twenty feet of him, just as I was about to shoot, a sheet of smoke shot out of some bushes near by and over went the rabbit dead as a rock."

"And here he is," said I, pulling him out of my game-sack and displaying him with some pride.

The others looked at me in some surprise and with gloomy countenances, but Will continued.

"Just as the rabbit 'layed out,' another one, a Jack, jumped up near by and started off and I after him. After chasing around for three or four hours, I struck out for here which place I reached half hour ago."

"And didn't you kill anything?" we asked.

"Y–es" was the answer.

"What was it?"

Will slowly rose, went to his game-sack and drew out a *blue jay*.

"Is that all!" I exclaimed.

"Well I'd like to see any one do better in a place where there's so many such hunters as you two fellows," he retorted in a disgusted tone. "Then, perhaps, you killed something" he added to Elmer. "Give us your story."

"Mine is soon told," said Elmer, with a laugh. He seemed to be the only good-natured one in the company.

"I only got one shot altogether and that was at that rabbit" he said. "When I left you I walked along slowly for over an hour, and then caught sight of a cottontail. I made a good sneak on him and got within fifty yards, rested my rifle over a log and banged away at him, knocking the dust and dirt over him and at first I thought he was hit, but off he ran and I didn't care to follow him. However, after I had wandered around an hour or so, I scared up the very same cottontail again and directly afterward saw Will hurrying through the brush after him. Soon I heard a shot and said to myself that Will had gotten him. Under the firm conviction that there wasn't another rabbit in the woods, I set out at a slow gait for the meeting place and after wandering around awhile, reached it, and here I am."

"And where's your game" asked Will ironically. Elmer laughed and pointed to the rabbit.

"There he is. Just look at him and see if there isn't a rifle hole in him. He looks as if he had been hit by a pile-driver."

And really he did. We examined him closely and found that all of his legs were broke, one ear was off and altogether he was an animal wreck.

Seven long hours hunting and only one rabbit and a blue jay. And worst of all we had all been chasing and hunting the same rabbit.

We looked at each other; then slowly we arose, shouldered our guns and turned our faces homeward. But little was said between us. We felt sad and avoided each other as much as possible.

Toward evening we reached home.

"What did you kill?" asked Will's smaller brother.

Then I felt in my game-sack. It was empty. We had left the rabbit at the rendezvous. * * * * * *

"Well," said Will as we wearily retired, that night. "You fellows can plan your hunts and make all the elaborate preparations you want to, but after this I'm going to hunt extemporaneously" with which wise resolve he dropped off to sleep.

GOOD HEALTH.

CLIMATOLOGY OF OLD AGE.—The climatology of old age may be roughly summed up as follows: Elderly people in general do well with equability and moderate warmth; they bear cold badly; they benefit by abundant sunshine. The high altitudes are very rarely suitable to them, and are usually decidedly injurious; they do best in level places, where there is abundant shelter. They may or may not benefit by the seaside or a sea voyage, but these measures cannot be recommended with at all the same confidence as in the case of children. Most of these principles become almost obvious upon a little consideration. The failing vitality, by which we mean impaired vigor of circulation, assimilation and excretion, which characterizes advanced years, and the special maladies most frequent at that time of life, such as rheumatism, cardiac disease, gout and renal affections, serve to determine the climatological problem. Moderate warmth with fair equability, abundance of sunshine with adequate shelter, and level walks, evidently meet the most obvious indications called for by these affections.

A REMEDY FOR THE GRIP.—Dr. Keely, who has met with great success in curing dipsomania at his home in Dwight, Illinois, says: "I would like to suggest a treatment for the grip which I know is nearly a specific as well as innocent. It is simply asafœtida, given in four-grain pills, one pill four times a day. No man need be sick of the grip these days who will take it. For the past two years, with all my patients here, subject, of course, to such an epidemic, I had not one man go to bed from the disease. I break it up very quickly, and, in fact, cure it. If this treatment was generally known, it would save sufferers much expense and wretchedness and many useful and valuable lives." In view of the fearful suffering, and large and increasing death record from this prevailing disease, would it not be well for some of our physicians, who are daily being called upon to prescribe for this disease, to try Dr. Keeley's prescription and report the results in some of our city papers?

DOMESTIC ECONOMY.

BUCKWHEAT CAKES.—One quart of lukewarm water, one-half cupful of wet yeast, one cupful of flour. To this add enough buckwheat flour to make a thin batter. Let them stand over night to raise, and in the morning dissolve one-half a teaspoonful of soda in one-half a cupful of lukewarm water, and stir this into the batter, then cook quick.

ORANGE PUDDING.—Peel and slice four large oranges, lay in your dish, sprinkle over them one cup sugar, three eggs, yolks only beaten, one-half cup of sugar, two tablespoonfuls of cornstarch, one quart of boiling milk. Let this boil and thicken. Then let it cool a little before pouring over the oranges. Beat the whites of the eggs and pour over it. Set in the oven to brown.

DROPPED EGGS.—Break the number of eggs desired for the meal into a pan of boiling water slightly salted, with muffin rings laid on the bottom of the pan, as they keep the shape of the egg well. Care should be taken not to break the yolks. When the whites harden, take the egg up carefully and lay each on a piece of toasted bread that has been moistened in hot water and buttered. Sprinkle with pepper.

APPLE DUMPLINGS.—Take light bread dough, and shorten with a little butter. Roll and cut into balls the size of dumplings. Drop these into boiling water, with a little salt added. Boil 1 or 1½ hours. Have ready a dish of apple sauce, break open the dumplings and spread with the sauce. Put the dumplings together again, and serve with sweetened milk. In this case, you know that the apples are done.

FRIED MUFFINS.—One cup milk, scalded, one-half scant teaspoon salt, one tablespoon sugar, one tablespoon butter, one egg, one-quarter cup yeast, flour to make a stiff drop batter. Scald the milk and melt in it the salt, sugar and butter. When cool, add the beaten egg and yeast; then add flour gradually, beating it in until you can beat no longer. Rise over night. In the morning, take up a spoonful without stirring and drop it into deep fat.

COCOANUT - CUSTARD PUDDING — One cup desiccated cocoanut, one quart milk, one-half cup sugar, one pint soft bread crumbs, three eggs, one saltspoon salt, one saltspoon nutmeg, one tablespoon butter. Soak the cocoanut and bread in the milk for half an hour. Beat the eggs (yolks), add the sugar and spices, stir into the milk, and bake in a moderate oven about an hour. Beat the whites of eggs, and add one-half cup sugar, and one teaspoon lemon juice. Cover and brown slightly.

CHOCOLATE CARAMELS.—Two cups of brown sugar, one cup of molasses, one cup of cream or milk, one-half cup of butter, one-half pound of grated chocolate, two tablespoonfuls of flour. Boil the molasses, butter, sugar and flour 15 minutes; stir the chocolate into the cream and pour in the boiling syrup and boil till done; drop in a little cold water; if it piles up and hardens, then it is done. Before pouring it out on buttered pans or plates, add a teaspoonful of vanilla, and as it cools, crease it in small squares.

INDIAN POUND CAKE.—Three-quarters of a pound of sugar, nine ounces of Indian meal, a quarter of a pound of wheat flour, half a pound of butter, one nutmeg grated, one teaspoonful of ground cinnamon, eight eggs, four tablespoonfuls of brandy. Mix the wheat and Indian meal together. Stir the butter and sugar to a cream; beat the eggs light and add to it then the flour; add the spices and liquor; beat it well. Line your pan with paper well buttered and pour in the mixture, or bake it in an earthen mold in a moderate oven. Rosewater may be substituted for the brandy.

SPANISH BUNS.—One pound of flour, three-quarters of a pound of sugar, half a pound of butter, two tablespoonfuls of rosewater, four eggs, one gill of yeast, one teaspoonful of cinnamon, half a teaspoonful of nutmeg, half a pint of milk. Cut up the butter and rub it well with the flour, add the sugar, beat the eggs very light, and stir in lastly the spices and rosewater, with milk enough to form a very thick batter, then add the yeast. The next morning stir it again and let it rise the second time. Butter your pans and fill them three parts full. When they are done and cold sift sugar over them, and with a sharp knife cut them in squares.

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ALFRED HOLMAN.....General Manager

SATURDAY, JANUARY 23, 1892.

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☞ *See Advertising Columns.*

The Week.

What glorious weather for work or for play, but what poor weather for growing! Such a reflection presses close upon the fruit grower, even though he finds the bright, warm days delightful for his pruning and spraying. It also mars the pleasure of the grain grower, who finds everything suited for quick and easy plowing—except on extra heavy soils which have crusted beneath drying winds. Even the dairyman cannot fully enjoy the milking under a bright sun or a clear moon, because the grass will not grow, and the hay and feed bills are pulling the dollars out of his pocket at an alarming rate. In fact, delightful as is this glorious weather, no one but a tourist can enjoy it without thought of what it may possibly signify.

So far, the season's rainfall at most California points is deplorably small. Fortunately there is still much time left, and if seeding has been done, the late rains make the crop. The situation is one of expectancy with fortunately very little apprehension thus far.

A Great Question.

As we go to press there is in session in this city a convention of those interested in mining, who assemble for the purpose of expediting arrangements by which hydraulic mining may be resumed upon navigable streams and their tributaries. Most of our readers know that such mining on such streams is now prohibited by Supreme Court decisions because it was so clearly shown that such mining had destroyed and was destroying valuable valley lands, and not only rendering navigable streams unnavigable, but by filling natural water courses, had made their high waters a menace to life and property in several populous cities and towns and destructive to agricultural lands by washouts and flooding. Testimony was adduced that this hydraulic mining contravened in a startling manner the old common-law principle that one industry shall not trespass upon the rights and destroy properties of another. This testimony was so overwhelming that, though the first cry for relief came from a few farmers around Marysville, only a few months passed before recognition of their claims extended until it became a public sentiment, although everything possible was done by the hydraulickers to belittle the issue and blind the eyes of the people with the glare of gold. Perhaps there has never been in all industrial history a case in which a few men, made strong by the right which was in them, met and overcame such mighty opposition as was put forth to crush the anti-debris movement at its beginning.

Now come the representatives of the mining interests. Their disposition is not what it was a decade ago. We will not insinuate that their mellow and respectful manner is merely politic; let us consider them frank and sincere, if you please, when they say that they now proceed with the idea of not injuring another industry. We may even forget the scorn with which they once showered objurgations and adjurations upon the mudsills of the valleys, and forgive them the insane wish that they could turn their monitors upon the groveling throng and wash them all into the Pacific. These were the old times; a decade of decadence has taught the miners wisdom. The oppressor has become the oppressed; the haughty barons use pleas which they once derided.

This is all right, and so far as disposition goes that of the miners commends itself. But herein lies the point. Change in men does not change the devastating disposition of the monitors. It is true that laws and decisions which prohibit work because of injury to others become inoperative when no injury is wrought. It is true also that engineers have reported that by certain safeguards, in the shape of impounding dams, it will be possible to hydraulic and make desolate the foothills without destroying valley lands and rivers. So far as official reports go, it would appear that we can give posterity gravel heaps and boulder banks without now burying fertile plains and destroying cities. Upon this ground the miners seem to rest their plea, and will urge Congress to set up great barriers which shall place metes and bounds upon their ruin.

Now, we are not at all sure that this ground is well taken, nor that official reports, which put a milder face upon the frowning bluffs and would even make pleasing melody of the crash and thunder of the monitor, are safe ground upon which to reopen this question. We are not ready to assure our dwellers in walled towns, if work should proceed upon the new basis, that they can forego further elevation of their levees, or river boatmen that they can longer count upon the pitiful channels now left to them. The fact of the matter is that it is really upon very scant and doubtful ground that this miners' movement, which promises to be persistent and strong, is based. They are very wise in their generation. They are endeavoring to make it appear that the whole mining industry is suffering, and hope to win some popular support from parading claims and statistics to only part of which they can properly lay title. They will succeed in arresting public attention, and herein arises a new duty and a new responsibility upon the agricultural and municipal and transportation interests, to all of which the resumption of hydraulicking is a menace.

For this reason we council a reopening of this question from general points of view. Some meetings have already been held at Sacramento, which show that the valley people are not unmindful of the responsibility of the hour. But it will not do to trust to small or sporadic efforts. There should be a most representative and comprehensive movement all through the valleys. Every point should be sharply scrutinized and all doubtful points strongly contested. The issue now beginning will probably be the real fight on this question. What has gone before has been but skirmishing, though bravely and resolutely done. It will not do to allow a resumption of practices which are attended by such wide-reaching destruction to proceed upon the dictum of three men. It should require far more evidence than that to induce Congress to invest a vast deal of money and incur such great risks, not alone of its outright loss, but of incalculable-resulting damages. If there is to be any lightening whatever of the bonds which now lie upon a single form of work because of its pernicious results, the relaxation should be undertaken with the greatest caution and only after all doubtful factors are eliminated. This issue is now upon the great valley and river side interests of the State. How shall it be met?

The Chilean War Talk.

The subject uppermost in the public mind during the past few days has been the controversy between our Government and Chile. Within ten days there has been a revival of war talk, and the dispatches from Washington indicate that pretty much everybody there expects that the trouble will become serious, and that very soon. It is reported that Chile will not, under any circumstances, apologize for the outrages upon sailors of the Baltimore, much less contribute to the relief of their families, as our Government has demanded.

But in spite of all this talk, the RURAL begs leave to hold its own opinion, and that is that there will be no war. If the matter were left to the hot-headed Chilean military and naval officers, who do the talking at that end of the line, and to the scarcely less enthusiastic military and naval men who do the talking at Washington, we should, of course, soon be plunged into warfare. But, fortunately for mankind, these are not the people who make the policies of governments. The sober judgment of the people of Chile must lead them to know that, however brilliantly they might begin a contest with the United States, the end would inevitably be disastrous to them. It is a case of seventy millions against four millions.

But there are some considerations which seem to be forgotten on both sides in the pending discussion, and they rest largely upon the commercial interests which would suffer in case of war. The destruction of San Francisco on the one hand, and of the chief Chilean ports on the other, would not only cost the American and Chilean Governments dearly, but would, to a very great extent, involve English capital which is engaged in both countries, and very largely, indeed, in Chile. In case of war between the two nations, we believe that Great Britain, with her powerful navy, which is easily large enough to overpower and sink both the American and Chilean navies combined, would serve notice upon both combatants that the cities, which would naturally be the chief points of offensive attack, must not be damaged. English interests would demand this policy and the English navy would enforce it. We cannot believe that it will come to this. There will, no doubt, be found a way out of this controversy, just as a way was found out of the controversy with Italy. England will probably not be called upon to interpose a veto upon the destruction of the Pacific Coast cities, but in our judgment she may be depended upon to do it if the exigency should arise.

In the meantime the United States Government is making active war preparations. In all the navy yards of the country, including that of Vallejo, there is increased activity, and every craft that can be made formidable as a fighter or useful as a transport is being put in condition for service. A considerable number of steamers has been chartered, subject to demand, from the Pacific Mail Steamship Company, the Oregon Improvement Company, and other sources. All the available ships of the navy have been sent south under sealed orders, presumably destined for the Pacific Coast, and it is reported that the great Miantonomah, constructed especially for the defense of New York City, will be sent south to guard the straits of Magellan. In any event, our Government will not be caught napping, but will have all its naval and military resources ready for an emergency.

Lex Talionis.

The law of retaliation is the harshest principle of human action, and one which should be last invoked. It may be in some cases the only dignified means of international conduct, but it has no place in home affairs, except, perhaps, in its mildest forms. Aside from its hateful character, it is very likely to proceed upon misapprehension, and is, therefore, very often wrongly undertaken.

In our issue of last week, we alluded to certain declaration of Eastern nurserymen, who are aggrieved by our practical exclusion of Eastern trees, that they intended to labor for the depression of California fruit at the East. There is now published in San Jose a letter from a firm of nurserymen in Western New York, which embodies a different sort of a threat of retaliation, as follows:

> The nurserymen in the East are to join in a combination to get Congress to take off the duty on raisins, on apricots and on prunes that are imported from the Mediterranean, and the reason why they want this done is because that they believe—and I would not wonder if it was true—that all the laws that have been passed lately ruling the Eastern trees out of California have been enacted at the request and instigation of California nurserymen for their own selfish purposes.
>
> If this should be done, it would let in all the Valencia raisins, all the French apricots and prunes, all the German prunes and the Turkish prunes without any duty whatever. You had best consult with some of your leading men and see whether this thing had better go on until it has killed all the green and dried fruit interests in California, as it surely will, in the line of raisins, apricots and prunes.
>
> If this Act was once repealed, it would be a hard matter to get it back again. You can no doubt see what the power of the Eastern nurserymen would be, joined together with the wholesale grocers, to move Congress, especially if they show up the facts of the case, that the nurserymen of California have instigated a law, under cover of protecting the planters from insects, to destroy all the Eastern trees that come there.

This is a silly threat, and yet its spirit is so outrageous that it should not be passed without the severest condemnation. Like many other retaliations, it proceeds upon a wrong basis. As we stated last week, it is not true that California nurserymen are to be charged with the present action against Eastern trees. It will ultimately result to their benefit, it is true, but its operation this year will be to their loss in many cases.

If Eastern nurserymen desire to know why the general disposition to exclude their stock has been so strongly manifested, let them look to their own knowledge of peach yellows, and understand that only recently has this terrible disease and its work begun to be appreciated in California. This knowledge was not made public property here by our local nurserymen, but by our State Board of Horticulture, basing their announcements upon the U. S. Government reports, which are not equivocal, as we showed last week.

Now see what becomes of this Eastern retaliator's argument. He proposes to organize Eastern nurserymen for the ruin of California's great fruit-growing interest, because California nurserymen are believed to have done something which they did not do. Upon this false ground he would tear away the protection to the fruit interest, in which California is only one of several States benefited, and he would endeavor to turn in a tide of foreign fruit which would bring injury to all dried fruit producers in the country—not alone to the manufacturers of special products out here, as he seems to think. Of course he is a small man; no one but a small man could find a corner in his head small enough to hold such a narrow idea.

Such threats do not frighten us. The influential Eastern nurserymen are not going to be misled by such men. Even if such men should succeed in committing the Eastern nurserymens' associations to such a line of conduct as he describes, their petitions would never escape from the Congressional wastebasket. National policies are not to be shaken by trade fights. The statement which we quote above kills itself. It is of no earthly use except to be rebuked for its presumption and maliciousness.

The State Press.

Kern County *Echo*: "Governor Russell of Massachusetts advocates a law that shall compel candidates to publish a list of their campaign expenses. Such a statute would bring out some racy reading in this part of the moral vineyard."

Watsonville *Pajaronian:* "Good roads are a necessity, and the more permanent they are in construction the less expense they will be to keep in repair. The rule that 'the best is the cheapest' will forcibly apply to the business of road making."

Kern County *Echo:* "The silver question comes to the front at an early hour in the Senate, and we mistake the signs of the times if it does not maintain its prominence till settled. The coinage of silver is a question that has come to stay—and so has silver itself."

Perris *New Era:* "Fruit-raising and bee-culture are two industries that will go well together. One assists the other, while neither materially retards the other. Here in this valley this combination should be most advantageous, for the bees will assist the rancher to live while the young trees are growing."

Los Angeles *Express:* "When railroad magnates spend their valuable time in 'looking over the country,' it is generally with an eye to business. Perhaps the President of the Rio Grande Western has visited Southern California merely for recreation, but our people are inclined to think he has an eye to business."

With evident reference to the case of Minister Egan, the *San Diegan* says: "No man should be permitted to hold an office under one government when his allegiance is due to another government. There has been too much foolishness in granting newly-arrived emigrants all the rights of full-fledged American citizens, and it is about time to call a halt in this matter."

San Diego *Union:* "The postal subsidy law which tariff reformers fought so bitterly in the last Congress is not only going to give us the fastest and most efficient mail service in the world, and increase the tonnage of our merchant marine, but will also add to our naval strength, as the vessels constructed under the law will be capable of quick conversion into armed cruisers."

Sacramento *Daily News:* "Governor Markham's proposition for a Branch Capitol at San Francisco will not be looked on with favor by the people of Sacramento. The tendency toward San Francisco is strong enough already. With such a building there as the Governor suggests, the removal of all or nearly all State business to tide water might be looked upon as simply a matter of time."

Noting the fact that those members of the legislature who have been most earnest for reform and for decency in legislative methods have not as a rule been returned, the Stockton *Independent* remarks: "If the people were not ungrateful and did not neglect reformers, politics would be purer and there would soon be but little to reform. People demand virtue in public officers, but want to let virtue be its own reward."

Hanford *Journal:* "The fight which Judge Wallace inaugurated against Buckley and his adherents has been made futile by the courts, and it looks as though the people must arise in their might and do what the machinery of law absolutely fails to accomplish. The citizens of other parts of the State would be glad to see the politics of San Francisco cleaned, for it is well known that legislative corruption can generally be traced to its origin in the metropolis."

Sacramento *News:* "Representative Caminetti has introduced a bill declaring Sacramento, Stockton and Marysville, ports of delivery. Mr. Caminetti's idea is that if this is done the importance of the Sacramento and San Joaquin rivers will be made apparent to Congress, and to the people generally, for if the three towns named are made ports of delivery, statistics will be tabulated annually showing the amount of goods transported by water on the two rivers."

Fresno *Republican:* "The Grand Jury organized under the administration of Judge Wallace has proven an illegal body, but it served to make plain that a state of corruption exists in public affairs that is a menace to the welfare of every citizen and a source of shame and disgrace to the whole commonwealth. If, under the administration of Judge Trout, the good work commenced by the unfortunately illegal Grand Jury is carried forward to a successful conclusion, the benediction of a grateful people will be his now and in the future."

Sacramento *News:* "It is the solemn duty of our authorities to stop the awful crimes of Chinatown that are daily corrupting our own boys and young men. The worst of all these things are the lottery installments. They sell tickets to boys and girls for five, ten, fifteen or twenty cents. This puts gambling in the reach of children. The influences are all for evil. These lottery places ought to be closed. If the police are unable to cope with the wily Chinese, why do they not report their inability to the Grand Jury and appeal for help?"

Commenting upon the fact that Michigan has made a "bold and dangerous departure" from the general rule in choosing Presidential Electors, the Sacramento *Record-Union* says: "If followed by a few other States, it will certainly involve the whole country in serious trouble. The Democratic Legislature of that State a year ago passed a law providing that Presidential Electors shall be chosen by districts. Under that system, by use of the gerrymander, the will of the people of the State as a whole can be defeated. Thus Michigan is a Republican State, yet by the district system a majority of Democratic Electors will probably be chosen this year. A system such as that is a standing temptation to defraud, to manipulate and gerrymander districts, and to stimulate all the worst features of boss and machine trickery. The matter, therefore, concerns all the people of the Union. It is to be hoped that the agitation of the subject will be continued until uniformity of method shall be agreed upon and a constitutional amendment proposed to effect it. The subject rises above all partisan considerations; it is one of patriotic importance, and into which party bias cannot rightfully enter. Our Presidents ought to be chosen by an Electoral College that is selected by the same method in all the States, and until that is accomplished it cannot be said that we have attained that degree of political justice that ought to dominate in a republic."

San Jose *Mercury:* "One of the notable features of the present session of Congress has been the number of bills introduced to restrict the immigration of undesirable people to this country. While the Pacific States have been fighting for the exclusion of Chinese, the Atlantic States have found it necessary to protect themselves in some way from the hordes that come over from the slums of Europe. It is evident that a strong public opinion has been roused upon the subject, and the stream of European immigration hereafter will probably be forcibly turned from our shores to other portions of the world."

Free Silver Coinage

San Jose *Mercury:*

The most notable utterance that was made at the great Democratic banquet given by the Reform Club at New York on Saturday night was that of Senator Vilas of Wisconsin, in saying that "tariff reform and free silver coinage are not twin brothers." The special importance of these words lies not so much in the words themselves nor in the high position of the man who said them, as in the emphatic manner in which they were cheered by the distinguished company that listened to them. By this, as well as by the speeches of the other orators of the evening, it is made remarkably clear that a strong faction in the Democratic party is unalterably opposed to the free coinage of silver. There is no particular news in this fact, for it has long been known that the one point on which Cleveland and Hill agree is that free coinage shall not be made a part of the Democratic platform this year. On the other hand, however, there is an equally strong faction of the party that is resolved that it shall be, and this faction seems to be growing in strength all the time, so that, despite all the efforts of the New York leaders, it appears now to be more than a mere probability that the silver men will win in the convention. The Republican party is not so badly divided on this issue as the Democrats, but it cannot be denied that differences of opinion exist among its members also. In truth, the Government of the United States can hardly afford to keep silver at a discount by refusing to make use of it as money, for the simple reason that we have nearly half a billion of it in our Treasury. It is plainly to our advantage to get it recognized as money all over the world, and in the present monetary stringency in Europe there seems to be good reason for believing that, with a little effort, we can do this. It was stated in a dispatch yesterday that Senator Teller had given as his reason for introducing a resolution calling for an International Monetary Congress, that Mr. Goschen, the British Chancellor of the Exchequer, had intimated to him that Great Britain was willing to join in such a conference if the United States would take the initiative. Of course this means that British financiers are prepared to compromise the silver question, if not to concede it absolutely, and if the conference should be held it will doubtless result in some marked gain for the silver men. The question is in fact daily growing more and more paramount in the politics of the country. There can be but few business men who would like to see the present tariff disturbed just as the industries of the country have adapted themselves to it. Free silver, therefore, rather than free trade, is likely to be the issue of the coming campaign, despite the fact that the conservative leaders of both parties at the present time seem sanguine to ignore it. It is a question that cannot be permanently settled by a compromise, and an appeal to the people on the subject in some form or another is sure to be taken at this election, and if the two great parties do not speak out clearly in their national platforms, the people will demand clearness in the congressional districts and will vote for Congressmen very largely on that issue.

Why Is It So?

Santa Maria *Graphic:* "It is within the experience of many California farmers that a piece of land in their neighborhood, which they always considered worthless as agricultural land, has been taken up by a foreigner, who has gone industriously to work and in course of time has not only made it blossom as the rose, but has gone steadily on from poverty to prosperity, and finally to affluence.

"The question naturally arises, Why is it so? In answer to this, we must look at the work itself. In the first place, he goes to work methodically cultivating the land with the greatest care, plowing deeply, manuring well, observing what crop does the best this year, alternating with some other crop that is equally suitable to the soil next year, wasting nothing that can possibly be of use to him. In a word, he cultivates the soil scientifically.

"He has learned these things by hard experience in the land of his birth, where population is thick and where the soil has been cultivated for so many generations that these methods must be known to the tiller of the soil there; he has, in fact, been brought up to this sort of thing.

"The necessity for this knowledge has already come to many of the Eastern States, and they have made some advancement in this direction. California must soon fall in line.

"Much of her fertile land has been sown for years to the same crop, and the consequence is that it already begins to show signs of deterioration; therefore it behooves her farmers to think these things over and make the subject of agriculture a study."

Spice of Life.

Detroit Free Press: What Was Necessary. "Do you think we would be suited to each other?" she said, hesitatingly, before the final acceptance. "Certainly we would, after a little while," he responded, with supreme confidence. "All that is necessary is for you to suit yourself to me and we'll get along beautifully."

Kate Field's Washington: "What was the most successful funeral you ever saw?" "Well, I think the best attended one was that of a man who had spent the most of his life practicing the cornet with his windows open."

N. Y. Life: "I don't know which is worse, Christmas or measles," said Mrs. Workedtodeath. "Oh, Christmas, by all means," said Mr. W. "You only have the measles once."

GEORGE ELIOT says: "The man who trusts a friend educates him." But the truster often gets the most experimental knowledge.

"A Losing Battle Cry."

Commenting on the resolution introduced into Congress by Mr. Holman of Indiana, declaring that the appropriations of Congress shall be limited to moneys necessary to carry on the several departments of the Government, the Portland *Oregonian* says that the Democrats will show a lack of practical good sense in politics if they accept this proposition as a battle cry for the coming Presidential campaign. It further says:

Economy is a virtuous-sounding word in national as well as private affairs, but the value of the thing is relative. There are times in the history of nations, as of individuals, when the practice of the most rigid economy is the highest virtue. There are other times when what would have been common prudence in days of national or individual poverty, privation or debt, becomes petty and short-sighted meanness, defeating the object of promoting prosperity by checking progress and thwarting development. The trouble with Mr. Holman and those who follow him in this matter is that they do not know their time. Mr Randall won with the economy battle cry once; but he would have more sense than to try it now. Mr. Holman is less wise than his old leader, He will get himself laughed at and his party beaten.

That economy which avoids waste and extravagance, which demands the worth of its money, counts present and future resources before incurring debt, is always in place. That parsimony which limits national expenditures to the bare current needs of government, as if a rich man should refuse to satisfy more than his bare physical necessities, is out of place in a season of national prosperity, strong public credit, commercial expansion and political development. The United States has entered upon such a period, dating from the abundant crops, eager markets and high prices of last year. Individual prosperity everywhere makes up a sum of national prosperity. Judicious fostering legislation has given a new impetus to manufacturing industry everywhere, and its ample product is seeking new markets at home and abroad. The transfer of our raw crops to market has given an extraordinary stimulus to internal commerce; the foreign demand carries on the stimulus to ocean commerce with Europe, and the pressure to export products of industry creates new and increases old trade with all parts of the world. We have fairly entered upon such a period of national prosperity and national expansion as the United States has not known for two generations.

He is a short-sighted statesman who throws in the face of this state of things the parrot screech of national parsimony. The most vital function of government at this moment is to take advantage of national prosperity to encourage and protect national expansion. The most far-seeing and patriotic work of the last Congress was those appropriations which Holman denounces as extravagant; the river and harbor act which facilitates internal, and the mail subsidy law which creates foreign commerce; the liberal expenditures for navy and coast defences which furnish security to American citizens at home and abroad, and enable our race to pursue its destiny without asking leave of every mongrel Latin tribe with a few ironclads at its disposal. That work is going on, if not in this Congress in the next, and the most fatal blow Mr. Holman ever struck his own party was to put himself in its way. It will not be strange if the history of the next month shall demonstrate to Mr. Holman himself the utility of naval vessels and coast defenses, and the desirability of finishing the Nicaragua canal.

THE reelection of John Sherman to the United States Senate by the legislature of Ohio, which occurred on the 13th inst., continues in the public service for another term of six years the man who is perhaps the most competent and useful statesman in the country. Mr. Sherman lacks the "brilliancy" of Mr. Blaine, but for all-round capacity he has no equal. Since the retirement of Edmunds, he is the only man of the first rank left in the Senate. It is worth while to know what such a man deems the highest national duties of the time. In thanking the legislature for his election, he said among other things:

You will expect me to stand fast to the policy of impartially protecting all American industries from undue competition with foreign labor, so capital may be induced to embark in new enterprises, and American labor may secure such reasonable wages as are consistent with the dignity and wants of American workingmen. You will also expect me to insist on the best standards of value, so labor and production will be measured by money of the highest purchasing power. All measures to lower the purchasing power of money operate against labor and the producer. Good money and plenty of it is, I believe, the desire of both parties in Ohio. The sacred and faithful observance of public obligations to the surviving Union soldiers of the civil war, their widows and orphans, is demanded by the patriotic people of Ohio without distinction of party. These are the national duties of the hour.

Sherman was born in 1823, and is, therefore, now 69 years of age. His health is not of the best, and in all likelihood his coming term in the Senate (his fifth in that body) will be his last tour of public duty.

A Pessimistic View.

San Miguel *Messenger:*

The scheme on foot in San Francisco to construct a so-called "competing" transcontinental railroad, is but a dodge on the part of a lot of capitalists to build another road at the expense of the people. Under the guise of an "opposition road and cheap fares and freights," these schemers delude the business public into the belief that another road will break the backbone of the monopoly. But, when completed, this alleged competing road, built mainly by the subsidies of the people, joins the "pool," and the same high tariff rates prevail. It is the history of railroads, especially western roads. There are five transcontinental lines. Each charges exactly the same tariff on freights and fares. A "cut" by one road subjects the "offending" road to a fine. This is criminal extortion—about on a par with a gang of merciless free-booters who "corner" all of the necessaries of life and say to a famine-threatened people: "Pay our price, or starve!" It is the policy of these roads to "charge all that the traffic will bear," and thus keep the people in perpetual bondage—toiling for the benefit of the monopoly. The Government should own the railways. This is about the only way to prevent highway robbery, under the guise of "pools."

THE sinful editor of the Modesto *Herald* advised the girls that if they wanted something nice in their stockings to keep them on when they went to bed Christmas night.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FINE OLIVE OIL.--Oroville *Mercury*: In June, 1889, Messrs. Fogg & McLaughlin had their 30-acre olive grove set in Thermalito. Of course the trees were large and healthy, and on the 14th of this month a fine lot of olives were gathered. Mrs. E. W. Fogg, Mrs. A. G. Pierson and Mrs. Z. M. Sexton made a lot of oil from these olives and it is pronounced perfect.

CROP PROSPECTS.—Biggs *Argus*: Never before have the adobe lands in this section, at this stage of the season, shown better indications or prospects of a good crop than the present outlook. The farmers have had every opportunity to get in every available foot of land, and they made every hour count, and as a result the whole adobe section is one immense carpet of beautifully growing wheat. The rainfall has been all that could be desired, and with the usual fall during the coming three months, wheat growers will have an immense yield. The orchardists are just as fortunate as the farmers. The trees now planted, and nursery stock could not be better, and this year's planting, will have increased the acreage in orchard by several thousand.

Colusa.

ORANGES.—Colusa *Sun:* In many yards of Colusa, ripe oranges can be seen on the trees. The planting of orange trees has been increasing considerably during the past few years. These ripe oranges in January are a standing advertisement of our wonderful climate.

Fresno.

POULTRY PROFIT.— Fresno *Republican:* The poultry business has made rapid strides of late years with us, and though the fruit industry was aimed to be chief, now "honors are easy" in the two industries and parties are making from $50 to $80 per month in the hen fruit business.

GRAIN CROP OUTLOOK.—Fresno *Expositor:* If present appearances are worth anything, and present indications are carried out, Fresno county will this year have the largest acreage of grain that it has ever known in its history. That is saying a good deal, for there have been years in the past when the plains of this county looked like one vast wheat field. Good prices obtained this season for wheat, and the prospect that the price will be good next season, has much to do with the increased acreage that is being sown. Men have confidence in the business, and are willing to take the chances with the prospects of large gains, which will certainly be theirs if the year should continue to be a good one for the growing of wheat. It all depends on that. So far, the year has been favorable. True, there might have been more rains earlier in the season, but as it was the farmers were able to plow dry lands to a considerable extent, and the grain on them was brought out by the rains, when they did come, and now look fine, with every prospect for a good crop.

Kern.

FRUIT TREES QUARANTINED. — Bakersfield *Californian:* A consignment of about 1500 peach trees from the Phœnix nursery in Bloomington, Ill., consigned to W. C. Wilson at this place, arrived at the depot on Wednesday and was immediately quarantined by D. M. Pyle, who has the necessary authority for that purpose. While it is to be regretted that Mr. Wilson, who has undoubtedly acted in the best of faith in the purchase, should suffer any loss, Mr. Pyle has done the proper thing, for the welfare of our fruit growers demands that disease be kept away from us.

Los Angeles.

WINTER VEGETABLE DISTRICT.—L. A. *Express:* There is no more profitable branch of rural industry in Southern California than the production of winter vegetables and small fruits for shipping to the East. The Cahuenga district can furnish each winter thousands of carloads of beans, peas, lettuce, cabbage, new potatoes, strawberries and other fruits and vegetables for the frozen regions of the East. It has been amply demonstrated by experience that there is certainty of large profit in the business under favorable circumstances. The exemption from frost is a priceless advantage.

FERTILIZING ORANGE TREES.—A. F. B. in Covina *Argus:* Last winter I put about 20 pounds common stable manure (*well-rotted*) around my orange trees five years old and plowed it in; and around other trees five pounds of fertilizer manufactured in Los Angeles called "phosphate," and I find that during the past year, the trees having the manure around put on good growths and came out in the fall in a healthy, good green color, while those having the manufactured fertilizer grew about four times as much and seemed to use the fertilizer all up. They now have a rather sickly green color tending to the yellow. I believe the manure was the best, as it will last longest. The manure cost nothing, the fertilizer 10 cents to the tree, and the oranges are nicest on manured trees. Now I have five tons of guano which I will plow in around the trees, using perhaps 15 pounds to the tree, and shall put in about 30 to 40 pounds of unrotted manure around same trees I put manure on last winter. I shall tell you how they come out if you care to know next fall. I would like to hear the experience of others on this subject. It would be invaluable to many. I forgot to mention that the manured trees were in a very sandy soil, while the others were in a richer sandy loam.

GOOD RESULTS OF ARTESIAN WELLS.—L. A. *Express:* Artesian wells are now doing wonders for Antelope valley. Wherever irrigation is introduced, no matter what the source of the water supply, gratifying developments are sure to follow.

POULTRY SHOW.—The American Poultry Association will hold a convention at Los Angeles on February 12th, to continue six days. There will be several hundred delegates in attendance, and the session will prove of universal interest to breeders throughout the country.

San Bernardino.

THE OSTRICH INDUSTRY.—Riverside *Press and Horticulturist:* We are glad to hear that the American Ostrich Company, who have at Fallbrook the largest troop of ostriches in America, will shortly establish a branch of their business in Riverside. They have secured land on the Tibbets tract, and have already contracted for house, fences, etc.

SUGAR-BEET PLANTING. — Chino *Champion:* The beet-planting season is now fairly inaugurated. The crop should be ready to harvest at least 50 days earlier than harvesting commenced last year, and it is now but three weeks until the same date that planting commenced last season. The weather is fine for working now, and rainy weather later may cause considerable delay. Every day's work done now will be a big advantage, and may save considerable rush and anxiety later. The ground can be prepared for the seed, and the sooner that very particular work is commenced the more thoroughly it is apt to be done, thus insuring a much better crop.

TOMATOES FOR CHICAGO.—*Pomotropic:* C. E. Needham, of Glendora, has been shipping tomatoes to Chicago the past two or three weeks. Last week he shipped 40 crates of 20 lbs. each. They are packed in boxes holding 5 lbs. each, and sell there to the wholesale dealers at $3 a crate, or 15 cts. a pound. Some of the first shipped brought $3.25 per crate. Last year they were as high as $3.50. Mr. Needham has shipped about 85 crates, and may get off as many more. They net him 6 cts. a pound on the vines.

TWO PATRIARCHIAL OLIVE TREES.—Redlands *Citrograph:* On the place of Mr. Ingram, the Elder, at Highlands, may be seen two olive trees that for 15 years have stood among the orange trees in his splendid orchard and received the same fine irrigation and cultivation that oranges receive at Highlands, and have also had their share of fertilizers. When the writer last saw these trees, nearly two years ago, one of them was in the "off year," and yet it bore a greater weight of berries than any tree of its size, the difference in size more than balancing the difference in numbers, though even the difference in numbers was not so very great. The other tree, which was in the bearing year, was bowed down in every limb like a weeping willow. In the orange orchard of the same age as these two trees, there was fully $800 worth of fruit in sight, and yet it would have puzzled any one to say which he would have preferred—the whole place in oranges, or in trees like the two olives.

San Diego.

FARM NOTES.—San Jacinto *Register:* Farmers have nearly finished the season's plowing, with the result that a greater acreage is now in than has ever been known before. It is difficult to estimate just the exact figure sown to grain, but it is close in the neighborhood of 90,000 acres. Thousands of acres of virgin soil have this season been converted into vast grain fields. A successful harvest will give a wonderful prosperity to this section.

San Luis Obispo.

DAIRY NOTES.—Oak Park Cor. S. L. O. *Tribune:* Improvement of a substantial character is being made at the Pierce dairy between here and Pismo. The erection of a very neatly arranged building for cheese and butter making is a decided advantage in the work. A new windmill has just been put up. They are milking but few cows at present, but the rapid growth of the pasture will soon make plenty of work.

Santa Barbara.

A MECHANIC'S SUCCESS AT FRUIT-GROWING.—Santa Maria *Times:* G. M. Doane bought 50 acres of land up the valley a few years ago, for which he paid what seemed at that time a big price. He made a small payment down and mortgaged the property for the balance. He lost no time in putting out an orchard. Being a mechanic, he was obliged to hire all his orchard work done, which made it more expensive than if he had done the work himself. He was unable to buy first class yearling trees, so he made a deal for dormant bud trees, and he has made a perfect success of it. The great portion of his orchard will come into bearing in another year. His trees have made an even, thrifty growth. They are all of a size and height. They are all headed low, and no limbs were allowed to grow that would have to be cut out at pruning time. It is one of the prettiest orchards in the valley, and is an example of what can be done even though you owe more than the actual market value of your land. He has 1450 apricot trees, 1150 prunes, 500 apples and 400 English walnuts. Mr. Doane has raised two crops of beans between the rows, which have more than paid for the care of the orchard. He says it looked pretty dark for a long time, but he can look down those tree rows now and see some of the brightest sunshine he has ever seen in his life.

FRUIT NOTES.—*Times:* Fruit-growers are just beginning to wake up to the necessity of planting clean, healthy trees and keeping them that way. A number of the old diseased orchards will be dug up entirely this winter as the surest way to protect the adjacent young orchards. All fruit trees shipped to the Santa Maria depot will be inspected on Wednesdays and Saturdays. Any trees arriving on other days must remain at the depot until the next Wednesday or Saturday following. The inspector is only allowed two days each week for inspecting nursery stock at the depot. The many young orchards to be seen up the valley all made a good growth last year and are in a perfectly healthy condition. The thorough cleaning up last winter of old breeding places of disease was timely indeed for the benefit of these young orchards, and more will be done this winter. U. G. Battles will dig up his old seedling peach orchard this winter and plant the plat to apricots. There are a few people who still persist in planting seedling trees simply because they happened to have a good seedling tree or two in bearing or knew one who did, and then they are cheaper. Such people should learn a lesson from Mr. Battles' experience, and not encumber their grounds with worthless trees.

Santa Clara.

RASPBERRIES IN JANUARY.—Los Gatos *News*, Jan. 15: Wednesday of this week W. H. Cutter brought to this office a number of raspberry cuttings which were fairly well loaded with lucious ripe fruit, some not quite ripe, and healthy blossoms. They grew on his place north of town.

FRUIT-LAND IN DEMAND.—*News:* The great supply of young fruit trees placed near the Farmers' Union is rapidly changing. The number being planted exceeds that of any former year. There is an active demand not only for orchards but for improved land suitable for trees. The real estate men are busy with prospective buyers.

NAMING OF FARMS.—Cor. Fresno *Republican:* In Santa Clara county it has become a general custom for farmers to give their ranch a name, either using their own name or some fancy name, and in passing about the country you will see nearly every gate bearing a sign, such as "Evergreen Ranch," "Vine Ranch," "Valley Ranch," "Hopper Ranch," "Jones Ranch," "Brown Ranch," etc. The ranches are not only named, but every highway, and there may be seen on the crossing of the various roads a sign bearing the name of the road. This is as it should be in every county, and the writer hopes to yet see all county Supervisors do as much in road-naming.

Sonoma.

DAIRY NOTES.—Petaluma *Courier:* Peter Dolcini, a prominent dairyman of Nicasio, says: "The outlook is very favorable. Grass is very fine for this time of year, and the cattle came through the winter in more than average condition. Prices in butter are keeping up and prospects for the dairyman and farmer never looked better." William Camm informs us that there will be a meeting of dairymen of Two Rock valley with the view to the establishment of a large creamery in that valley. There is plenty of capital to take hold of it, and we have no doubt that it will be a success.

DEMAND FOR GUM TREES.—*Courier:* W. A. T. Stratton says: "I am shipping a great number of blue gum trees that are being sent to Fresno and Tulare counties; in fact, all through the upper San Joaquin valley. We will all be cleaned out of gum trees this year. The S. P. R. R. Co. are just now dividing up large tracts of land in that section and selling them off in five and ten acres, and are setting these trees around the tracts. I will this year ship 50,000 gums and 25,000 cypress trees. From the present outlook I will next year double and probably treble my output.

Stanislaus.

OAKDALE FARM NOTES.—Cor. Modesto *Herald:* The farmers in this section have never had a more favorable season for plowing and seeding their lands. As a rule, farm work is well advanced and a broad area has been seeded in a thorough manner, leaving nothing undone that would tend to the yield of an abundant harvest. J. W. Bell is pulverizing the soil in his vineyards with a spade harrow, which is the first implement of the kind ever used in this locality. It is drawn by two horses and thoroughly pulverizes the soil to a depth of six inches by means of several steel blades forming a revolving wheel. This implement is patented. It is well adapted to the cultivation of orchards and vineyards, as it can be run in close proximity to a tree or vine.

Tulare.

PORTERVILLE FARM NOTES.—Cor. Visalia *Register:* The Cheeney Bros. have the greater part of the "Old Reserve" plowed over and seeded, having all the land heretofore under cultivation finished and much of the hog wallow land taken in, which has never been used for other than grazing purposes. The large bunch of stock which has usually been kept on the place has been taken to different points in the foothills. It is a task to care for stock at present, as old feed is very scarce, while the green feed just starting is a "delusion and snare," merely calculated to keep hungry animals on the move. On Upper Deer creek, an arrangement has been entered into by the owners to cut the fences and let everything out on to the lower range and herd off the farmers, as the snow has been deep and weather cold. D. A. Vaughn has a large tract of land seeded on Deer creek. As the cattle have troubled him more or less, he has been buying a large quantity of fence wire from the Hockett firm, which will be put up immediately. The Pioneer Land Co. has seeded between one and two hundred acres to grain, and intend to sow a quarter section to alfalfa on the west side. The Hyde land has been cultivated by the Gibson Bros. Mr. Chin is having a section plowed south of Plano, besides other lands let out on shares. Taken all in all, there will be more grain sown on Upper Tule near this place than for many years.

IRRIGATING BY STEAM PUMPS.—Lindsay Cor. Tulare City *Citizen:* Mr. J. J. Cairn's steam pump has solved the water question in this locality. His pump throws over eighty thousand gallons per hour, and in less than four weeks he wet 160 acres down to bedrock with less cost than it would take to build a small ditch and keep it in repair for that length of time, and he can have the water whenever he wants it and no quarreling with his neighbors about water rights. Capt. Hutchinson has a new steam pump which he claims will throw thirty thousand gallons per hour, which will be used in irrigating his young orchard. He has two year old lemon trees on which a growth of five feet has been made during the past season. Mr. Hutchinson has trees started from the seed last March, which now measure nearly three feet in height. These trees he will bud for his own planting.

RURAL FARM NOTES.—Cor. *Citizen:* We are having fine weather for the young grass and grain crops, with sunshine and showers and warm weather. The farmers are all busy as bees, putting in their crops. There is no talk of drouth now, but cattle that have to depend on the outside range are suffering for feed, and some have already died.

TESTING THE EAST SIDE ELEVATED LAND FOR FRUIT.—*Citizen:* There is a great body of very fine land lying along the east side of this county, somewhat elevated and supposed to be valuable only for grain-raising and dry-farming, as there was no known water supply, the land being denominated as "hog wallow." The soil is hard and very strong, and has proved excellent for wheat, but a change is about to take place. J. J. Cairns has conceived the idea that it would be much more profitable for orange orchard and general fruit-growing than for wheat, and as it possesses all the natural qualifications except water, he has gone to work to supply the water. Mr. Cairns has leveled and irrigated 160 acres, and as soon as his teams finish seeding, he will level an adjoining 160. He will plant as a trial, 20 acres of oranges, 20 acres of lemons and about the same amount to soft shell almonds, besides other fruit in smaller quantities.

Ventura.

BEAN FIGURES.—Ventura *Free Press:* In some parts of the county there will be a decrease in acreage, and some place it as low as one-third of the average of last year, or say 20,000 acres. The following figures show the amount of beans on hand Dec 31 at the various stations of this division. It is furnished by John Simpson, agent of the S. P. Co.

	Pounds.
Carpinteria	1,270,000
Santa Barbara	180 000
Ventura	4,716,474
Montalvo	6 500,000
Santa Paula	752,184
Saticoy	1,835 400
Hueneme	4 200,000
Total	19,454,068

This is 9,727 tons or 972 carloads, a considerable amount to begin the year with.

RED OATS.—Saticoy cor. *Free Press:* T. J. Robinson, of the Ojai, five years since got 1½ gallons of red oats for seed, and in three years had 325 sacks of oats averaging 45 pounds to the sack. On Tuesday Mr. Robinson passed through Saticoy, en route for the Simi, with the seed of these oats, to plant 100 acres on what was part of the S. M. W. Easley tract.

NOT INJURED BY THE COLD WEATHER.—Saticoy, January 10: Making personal inspection of the ranches about our city recently, we find that none of the fruit trees are in the least injured by the Christmas cold snap. Of vegetables, nothing injured but the tomatoes. Some of the more delicate flowering plants were touched.

GRAIN COMING UP.—Conejo cor. *Free Press:* The new sown grain is coming up nicely. The season so far has been very favorable for the coming wheat crop.

ARIZONA.

PROFIT IN CEREALS. — Phœnix *Herald*: We give the subjoined figures of Alex Silva's two crops raised on one acre this year in Chalderwood district of Salt River valley. Only an acre is given, but Mr. Silva has done the same kind of farming on his whole 280 acres. There was only a partial crop of wheat on this acre this season, owing to the last spring's flood leaving the ditches in such shape that water could not be got through them for months. Two crops were harvested thus:

1000 pounds wheat at $1.50	$15 00
45 sacks corn at 65 cts	29 25
Total yield of one acre	$44 25

The cost of production included items as follows:

Water tax, one acre	$ 1 25
Seed wheat	75
Harrowing, sowing, irrigating	1 50
Threshing and heading	2 75
Sacking wheat	1 00
Plowing and planting	2 00
Irrigation	50
Harvesting corn	2 00
Total	$11 75
Profit on one acre	32 50

Mr. Silva cut his corn close to the ground. He has kept 100 head of cattle and horses six weeks on the fodder taken from 35 acres, and now has some ground plowed ready for another crop of wheat. Mr. Silva raised 800 sacks of corn this year. The crop of wheat was sowed in December, 1890, and harvested in May, 1891. The ground was then plowed immediately and allowed to remain idle until July, when it was plowed again and planted to corn. The corn grew four feet high without water, the ground not having been irrigated since the time of the first plowing in May. The only cultivation this second crop had was simply what resulted from running a furrow between the rows after the corn was four feet high, to receive the running water. Mr. Silva says the secret of raising corn in a hot climate is to plant it at the right time, and his experience has taught him that July is the best month for this section. If corn is planted too early it will tassel out during hot weather, when the sun will burn the tassel so that no ear can form.

FARMERS' INSTITUTES.

The Fowler Meeting.

TO THE EDITOR:—Notwithstanding the stormy weather of the morning of Jan. 7th, a large number of farmers from all parts of the county assembled at Good Templars' Hall, in Fowler, Fresno county, to give their attention to the important subjects that had been announced by program for discussion at that time. None of the time was wasted, for the time was far too brief, considering the importance of the subjects under consideration.

Most excellent papers were read on varieties and the cultivation of raisin grapes, by J. H. LaRue, and on vine-pruning by J. H. Harding. They will be offered the RURAL for publication, but the discussion of them, which was of equal value to the people of this county, cannot be given, for the reason that no stenographer being present, there was no way of furnishing off-hand speeches. The Secretary has all that one writer can do in recording the minutes and attending to the necessary business of the organization.

An earnest, determined representative body of men and women listened with closest attention to the address given to them by Rev. N. W. Motheral of Tulare, on the subject of marketing fruits. To attempt a synopsis of that address would be an injustice to the speaker and to myself. Every word of it was important; of such value none can be omitted without loss. The situation, the cause of it, the effect of it, the help for it, were all so vividly portrayed, and the remedy so practically demonstrated, that it reached the understanding of all present.

After a brief discussion by a number, in cluding such persons as J. H. LaRue, Miss L. H. Hatch, J. S. Dore, Captain Norris and L. H. Harding, a committee was appointed consisting of the following named gentlemen: Capt. Charles H. Norris, John S. Dore, J. H. LaRue, Alex Gordon, of Fresno county; N. W. Motheral, L. M. Morton of Tulare, and D. M. Pyle of Kern county, "to prepare and issue a call to the raisin-producers of California to assemble in Fresno soon, to consider and take action upon the proposition of general cooperation of all raisin-producers in the preparation, packing and marketing of their products."

It is proposed at this meeting and at other following meetings of the Institute to secure the attendance of a reporter that will give our proceedings to the public.

In the unavoidable absence of our President, O. P. Laird, Prof. Wickson, of the State University, acted as chairman and conductor, filling both positions in a most acceptable manner. In the evening he gave a most interesting lecture on "What Horticulture Has Done for California." The large audience present was also entertained by Miss Nellie Boyd, who gave Tennyson's "Dora" in a way to well deserve the enthusiastic encore given, which brought out the humorous selection, "Pat's Letter."

The musical features of the program were delightful, despite the drawback of having an unmusical piano to use. They were furnished by Mrs. Charles H. Norris, Mrs. L. H. Norris, Mrs. Scott and Mrs. and Mr. Harlin. The song, "Forget Me Not," given by him, shows a voice of universal merit. All the exercises were good, but the closing piece, a trio by Mme. Norris and Mr. Scott, "Oh, Hush Thee My Baby," was music as pure and sweet as is ever heard.

The Institute having increased its membership to 129, it adjourned, to meet again in Fresno City some day of the first week in April.

MRS. M. B. STUART,
Sec'y Fresno Co. F. I.

A PLEA FOR SHORTHAND REPORTS.

FRESNO, Jan. 11.

TO THE EDITOR:—We had a splendid Institute meeting at Fowler, and it's too bad that the Regents of our State University permit its value to be so largely lost to the people, when by sending out with Prof. Wickson a shorthand reporter, those valuable addresses and the more valuable discussions could be secured and saved for publication in such papers as cared to assist this work; and at the end of the year what a volume the work of all our California Institutes would make. How valuable and helpful to the new comers who are confronted with new and strange conditions and new lines of work that accompany our wider range of products. The State cannot afford to lose so much that could be utilized by a little added expense. Other States have a care in this direction and point with pride to their annual volumes of verbatim reports of Institute work. Fresno County Institute has decided to have its next meeting at Fresno, in April, continue two days and one evening, and arrangements are to be made for a shorthand reporter and for full publication of the work of the Institute in some enterprising paper which will incur the necessary expenses and can furnish the space for such extended report.

JOHN S. DORE.

How Trees May Pass Quarantine.

LOS ANGELES, Jan 14.—The Southern California Horticultural Commission, after discussing at great length the question of stopping the importation of infected stock from the East, passed the following resolution:

Resolved, That we will place in quarantine all peach, plum, prune or almond trees and all deciduous trees on peach or plum roots or buds, pits or roots of the same that may be shipped into our counties from east of the Rocky mountains, and demand from the owner or person wishing to bring them into the county affidavits establishing the following points, to-wit:

First—That a certain person grew the trees or buds, pits, etc., under quarantine.

Second—That they were grown in a section at least 100 miles from any trees believed to be infested with yellows or rosette.

Third—That the grower of the trees, or buds, pits, etc., has not used or bought buds, pits or roots of the above-named trees from any district where yellows or rosette are known to exist within five years; and also that we will demand such further evidence as shall be necessary to satisfactorily establish the place of growth of the trees under quarantine, and that neither trees, buds, pits nor roots were grown in a district infested with yellows or rosette, and that we will hold trees, etc., in quarantine until such evidence is produced.

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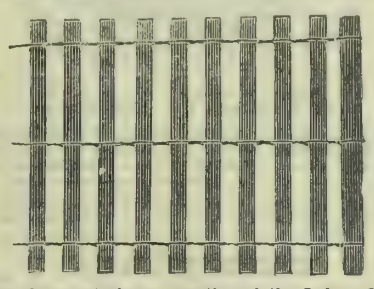


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A FEW KNOCK-DOWNS

Stock-taking last week has turned up a good many bargains where we have too much goods of a kind, or too little to keep it on the regular list, or out of style and reduced to close them out.

Our stock must be kept all O. K., at whatever sacrifice. 1891 goods and overstock must give way to new stock.

Over 100,000 Blood's, Turney's, Warren's, or Baylis' best sewing needles at 2½ cents a paper, 40 for $1.00. all sizes except 6; also 4 to 8, 1 to 5, 5 to 10, and 3 to 9 mixed darners or yarn needles at same price.

Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price.

SWISS embroidery, 2, 2½, 3, 3½-inch edging, beautiful and costly, has sold at 25 to 50, now 12½ cents, and na row ones at 5 cents. Fancy linen splashers (samples) and other linens at 50 cents on the dollar. Button-hole twist, assorted (3 black), 25 in a box at 37 cents. Sewing silk, 100-yard spools, assorted (3 black), 65 cents dozen. Ladies' handkerchiefs, several 100 dozen at one-half price, fine goods.

10,000 articles we have not room to tell about. Order a few by mail or express if not ready for a large order by freight. Add for postage. Ask for complete list. Address

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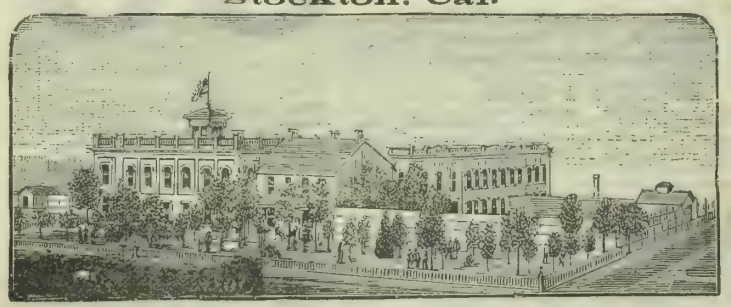
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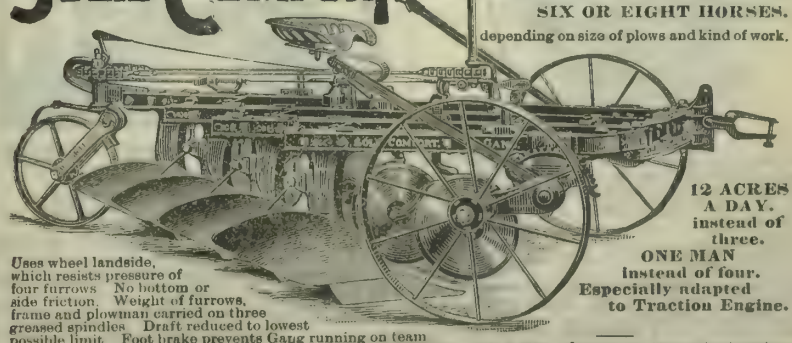
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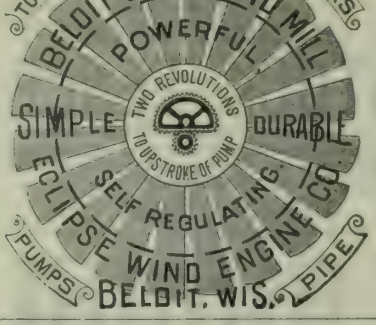
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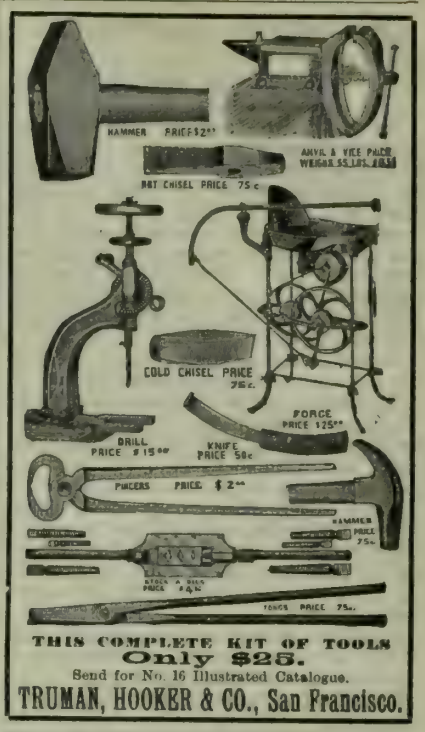
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FRUIT PRESERVATION.

A New Sulphuring Device.

VACAVILLE, Jan. 18.

TO THE EDITOR:—I have been able to profit many times by the experience of others, given through the medium of your valuable paper, so, therefore, I shall give some of my experience which may be of benefit to some of your readers.

As every fruit grower knows, there is a great deal of labor and expense connected with fruit-drying, and any method of handling the fruit whereby a saving can be made is worth considering by him, for to the fruit grower especially, economy is a matter of importance.

By the use of a new kind of sulphur box and other apparatus, devised by me two years ago, I have effected a great saving of time, labor and sulphur in the sun-drying of fruit, as compared with the usual method.

The past season I dried 400,000 pounds of green fruit, and used only 1100 pounds of sulphur, or one pound of sulphur to 363 pounds of fruit—an amount so small that even Prof. Hilgard would not object to it, and my fruit was of as fine color as any one could wish.

My apparatus and method of sulphuring was as follows: I constructed a track to run from cutting shed to drying ground, and two cars to run on this track. A car was run into the shed, and as the trays were filled, they were stacked upon the car until the car was full, when it was run out under the sulphur box, the sulphur ignited, and the cover, or box, drawn down over the trays until it rested on the platform of the car, which was made of matched flooring so as to be tight. The cover, or box, was made of canvas tacked over a wooden frame, and well painted, and hung inside of a frame with weights to counterbalance, so that it was an easy matter to raise and lower it.

I put 180 2x3 ft. trays on the car at a time, and used about the same quantity of sulphur that other people use for 20 or 30 trays. The box being perfectly tight, none of the fumes were lost by escaping, as is the case with a wooden box, and by having a large quantity of fruit in at a time, I effected a saving of both time and sulphur, and also labor in handling of the trays, as they have to be handled but twice, *i. e.*, when they are put on and when they are taken off the car to be placed where they belong in the drying ground. The empty car brings back the empty trays.

I have no patent on my rig, and any one can use it if they wish. At a future time I may give directions for building a sulphur box on my plan, with improvements suggested by experience of the past season.

J. R. SEARS.

[We like to publish such descriptions, and to have them commented upon by our readers. Perhaps Mr. Sears can induce a photographer to take a good photograph of his arrangement to go with the full directions for building, etc., which he promises. We can then make an engraving which will render the description more clear. We extend the same request to all who succeed in improving methods or appliances in any line of farm work. Tell us what you are doing, and send us sketches or photographs if you can.—ED. PRESS.]

Who Has Unsulphured Fruit?

906 North "M" St.,
TACOMA, Wash., Jan. 11, 1892.

Prof. Hilgard hands us the appended letter for publication. If any readers of the RURAL who have good unsulphured fruit desire to correspond with the writer, they have opportunity to do so.

TACOMA, Wash., 906 North M St.

Prof. Hilgard, Berkeley, Cal.:—I have read with much interest what you have written with regard to the use of sulphur in fruit-drying. Being desirous to get good *unsulphured* fruit, would be greatly obliged to you if you would send me the address of a party of whom I could get the genuine unsophisticated article. Hitherto, the California dried fruits I have been able to get here, or by sending to San Francisco, although handsome in appearance, have been unsatisfactory, and in some cases very unpleasant in flavor. As I still believe there must be somewhere where fruit is dried in such a way as to retain some of its natural qualities, I would be much obliged if you would give me the desired information. HENRI V. LEMENAGER.

FINE HORSES.—Holbert & Conger, 129 Eighteenth St., Los Angeles, have just issued a very neat catalogue of their imported English Shire, Cleveland Bay and German coach horses, in which 15 fine animals are described and pedigreed, and in some cases portrayed by the artist. It is a very attractive publication.

The Citrus Fair at Auburn.

The citrus fair held its interest undiminished through its week and was visited by a vast concourse of people from near and far. The display was a revelation, even to Californians, and is said to have paralyzed the descriptive powers of the distinguished editorial tourists from the East, who were dropped into it from out of the snows of the summit of the Sierras. We hope ere long to show some of the most striking features of the fair in engravings. The following are

The Awards.

Class 1, county exhibits—First, Placer County Board of Trade; second, J. A. Cleveland, Thermalito, Butte; third, Jack O'Brien, Smartsville, Yuba; fourth, C. F. Wyer, Winters, Yolo.

Class 2, largest and best exhibit of budded oranges—First, Robert Hector, Monte Rio: second, Peter Norburg, Penryn; third, Oroville Citrus Association, Thermalito; fourth, J. K. Correa, Jr., Newcastie; fifth, Auburn Orange Company.

Class 3, best twelve budded oranges—First, Oroville Citrus Association, Thermalito; second, J. R. Wolfskill, Winters; third, Mrs. D. Benjamin, Oroville; fourth, Mrs. J. H, Lewis, Monte Rio; fifth, Mrs. A. F. Jones, Oroville; sixth, Robert Hector, Monte Rio; seventh, W. A. Rogers, Thermalito; eighth, H. E. Parker, Penryn; ninth, J. K. Correa, Jr., Newcastle; tenth, Robert Hector.

Class 4, best exhibit of seedling oranges—First, Owen R. Owens, Penryn; second, J. K. O'Brien, Smartsville; third, William Barter, Penryn; fourth, George Rich, Sacramento.

Class 5, best twelve seedling oranges—First, J. K. O'Brien, Smartsville; second, George Jeffery, Smartsville; third, William A. O'Brien, Smartsville; fourth, S. A. Griggs, Red Bluff; fifth, H. E. Parker, Penryn; sixth, William Foster, Lincoln; seventh, R. G. Currier, Folsom; eighth, Owen R. Owens, Penryn; ninth, J. K. Correa, Jr., Newcastle; tenth, Mrs. Van Arsdale, Yuba City.

Class 6, best two boxes of budded oranges—First, Oroville Citrus Association, Thermalito; second, J. K. Correa, Newcastle.

Class 7, best two standard boxes of seedling oranges—First, J. K, O'Brien, Smartsville; second, J. K. Correa, Jr., Newcastle.

Class 8, lemons—First, H. Seamany, Winters; second, Auburn Orange Company; third, O. K. Cleveland, Thermalito; fourth, George T. Rich, Sacramento.

Class 9, shaddocks and pomelos—First, C. F. Lewis, Monte Rio; second, D. W. Lubick, Auburn; third, James Rutler, Florin.

Class 10, largest and best display of olives—First, Mrs. Roberson, Auburn; second, Miss N. S. Dunlap, Sacramento; third, Thermalito Olive Oil Association.

Class 11, pickled olives—First, Mrs. E. Roberson; second, J. R. Wolfskill, Winters; third, F. Class; fourth, George Cooley, Marysville.

Class 13, persimmons—First, W. B. Gester, Monte Rio; second, Martin Pelstet, Auburn; third, A. C. Keeler, Auburn.

Class 14, pomegranates—First, J. T. Jones & Son, Ophir; second, H. B. Saylord, Auburn; third, S. S. Betterley, Ophir.

Class 15, raisins—L. H. Cary, Lincoln; B. G. Stabler, Yuba City; L. G. Stone, Woodland; C, F. Wyer, Winters.

Class 16, dried prunes display—R. C. Kells, Yuba City; Mrs. F. Purrington, Santa Rosa; D. A. Jackson, Woodland.

Class 17, best dried prunes—Young Bros., Auburn; S. F. Woodworth, Clipper Gap.

Class 18, figs—Sherman Bros., Monte Rio; William Foster, Lincoln; L. A. Wilton, Yuba City; H. E. Parker, Penryn.

Class 19, general exhibit of dried fruit—Hon. H. P. Stabler, Yuba City; Sherman Bros., Monte Rio; C. F. Wyer, Winters; L. G. Stone, Woodland.

Class 20, preserved and canned fruit—Mrs. W. B. Lardner, Auburn; J. A. Devilbiss, Winters; E. B. Beecher, Auburn.

Class 21, nuts—J. R. Wolfskill, Winters; Mrs. F. Purrington, Santa Rosa; Hon. Thomas Frazer, Placerville.

Class 22, nursery stock—H. F. Boardman & Co., Auburn; W. R. Strong & Co., Sacramento.

Class 23, apples—Towle Brothers & Co., Towle Station; H. A. Frost, Dutch Flat; Mrs. F. A. Towle, Mrs. J. H. Lewis, Monte Rio.

Class 24, pears—Hon. T. Frazer, Placerville; Hon. D. W. Spear, Auburn; Mrs. F. Purrington, Santa Rosa; C. M. De Lamater, Newcastle.

Class 25, most artistic exhibit—Sutter county, by L. A. Walton.

Class 26, honorable mention—Dates, J. R. Wolfskill, Winters; bananas, J. R. Preston, Oroville; China dates, J. W, Smyth, Monte Rio; cotton, J. Smyth; cotton, Mrs. T. B. Gibson, Auburn; licorice root, T. Gibson; licorice root, Mrs. Pratt, Sacramento; green corn, Thos. Frazer, Placerville; grapes, H. Geisendorfer, Weimar; plums, usually ripening in December, H. Bresslier, Red Bluff, figs from 16-month cuttings, S. Dewy, Newcastle; seedless grapes, J. P. Onstott, Yuba City; oranges, Mrs. W. A. Rogers, Thermalito; orange syrup, Norton & Reckman, Orovillle; exhibit of fruit, L. A. Walton, Yuba City; citrus lemon, G. H. Kimball, Red Bluff; seedless oranges, Robert Hector, Monte Rio; H. E. Parker, Penryn.

A Generous Proposition.

Wells, Richardson & Co., the enterprising manufacturers of Burlington, Vt., write us under date of Jan. 15, as follows:

Editor "Rural Press:" We are very anxious to have the gold medal for the best butter at the Chicago World's Fair go to some United States butter maker. At the Paris Exposition Moulton Bros., of Randolph, Vt, received the gold medal, and the color used in their butter was our Improved Butter Color. We will give enough of this color for sixty pounds of butter to any of your readers who will send us six cents in stamps. We will also send our valuable Dairyman's Account Book. The best materials are necessary for making the best butter.

Very truly yours,
WELLS, RICHARDSON & CO.

QUERIES AND REPLIES.

Sowing Alfalfa.

TO THE EDITOR:—Being about to seed a piece of land to 'alfalfa," I would like some advice regarding the best time to plant, fall or spring. I have had an idea of putting it out this December, so it would get the benefit of the winter rains, but am afraid of the frost injuring the young plants. Any information you or your correspondents may give through your valuable paper will be thankfully received. The location of the land I wish to seed is in Fresno county.—C. H. T.

As described by Daniel Flint on page 37 of the RURAL of Jan. 9, it is the practice in some localities to sow after the first rains, and in other localities to sow after the heavy frosts of the season are over. We believe Fresno and other San Joaquin valley experience favors sowing in the spring, especially in the lower and more frosty parts of the valley. We would like to have communications on this subject.

Killing Morning Glory.

MIDDLETOWN, CAL.

TO THE EDITOR:—Will you kindly inform me if you know of any way to exterminate wild morning glory. I have some in my yard that I cannot get rid of. I subscribed for the PRESS five or six years and saw several accounts of morning glory in the paper, but do not remember the remedies.

J. C. V.

There is only one way to kill out morning glory without destroying the soil, and that is to regularly and persistently cut it off below the surface of the soil just so long as it attempts to reach the light. Do not wait for it to make a top growth before cutting: cut the ground over, whether you see any morning glory or not. You may have to do this for weeks and months. Cut in the field or orchard with a flat or knife-toothed cultivator or weed cutter; in the dooryard you can do it with a hoe—but cut it and then keep cutting it.

Heroic Pruning of Moorparks.

LAMANDA PARK, LOS ANGELES CO., CAL

TO THE EDITOR:—It is not all moonshine about hard-pruning Moorpark apricot trees. Two years ago this coming March I cut off five Moorpark apricot trees and grafted them to another variety, leaving on about one-fourth of the top, also leaving on all low branches. Last summer I had more apricots on the lower branches than I ever took from any of the trees, and they are full of buds now for this year.

Last spring I cut off 25 or 30 more trees, leaving, as before, about one-fourth of top and all lower branches, and budded young shoots in July. The lower branches are just a mass of fruit buds.

I thought by cutting the top so hard it would force the sap to wood, but it has not. It has gone to fruit. The reason I am budding them is because they have never borne enough to pay. I am satisfied from my experiments that you must butcher a Moorpark to make it fruit.—E. A. BONINE.

We are glad to have this testimony. It will be especially interesting to our Santa Clara friends who now have their Moorparks booked for heroic treatment. The demonstration of this matter will be one of the most interesting things in our horticulture. It will be well for all Moorpark growers to try a few trees this winter and compare results next year.—ED. PRESS.

Hard-Working Butter.

TO THE EDITOR:—In making butter on a small scale (four pounds at a churning), I find the butter so hard that working it with the paddle is difficult. Can the butter be softened by warming without spoiling the product?—E. E. C., *Napa*.

Yes. It is good practice to bring your butter to a proper temperature before attempting to work it; but do not attempt to warm it by direct application of a high degree of heat. Let it stand in a room moderately warm until the mass of butter is evenly and thoroughly acted upon.

It would be better practice to conform to the modern method of butter-gathering which nearly dispenses with working. Stop churning when the butter comes in small grains, draw off the buttermilk through a hole in the churn or pour out upon a hair sieve. Wash by pouring cold water into the churn, stir it with the dash and draw off the water, or pour the water gently upon the granular mass of butter on the sieve. If the butter is thus freed from buttermilk and salted by sprinkling, all the working necessary is to press the granules into mass form and press out surplus brine. This gives the finest kind of butter with no chance to injure the grain by over-working.

GOPHER TRAPS.—Ira F. White announces in their advertisement in another column, that they have made certain improvements in their famous gopher traps which will greatly add to their already well earned popularity.

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466,878.—ZITHER—Chas. Buckner, S. F.
466,774.—CUFF-HOLDER—J. J. Culley, S. F.
466,879.—PRUNING IMPLEMENT—C. H. Dixon, Santa Rosa, Cal.
466,849.—POTATO PLANTER—C. F. Gillett, Corvallis, Oregon.
466,941.—SASH BALANCE—S. N. Goldy, S. F.
466,880.—CLIP FOR ROPE TRAMWAYS—A. S. Hallidie, S. F.
466,864.—PULVERIZING MILL—E. I. Nichols, S. F.
466,833.—STUMP EXTRACTOR—T. & A. Pinard, Chehalis, Wash.
466,881.—ORE FEEDER—I. R. Russell, S. F.
467,054.—BRAKE FOR CHILDREN'S CARRIAGES—A. E. Scharff, Tacoma, Wash.
466,809.—FILTER—Peter Stone, Los Angeles, Cal.
467,072.—WATER ELEVATOR—A. L. White, Suisun, Cal.

The following brief list by telegraph, for Jan. 19, will appear more complete on receipt of mail advices:

California.—Russel A. Arben, Los Angeles, calf and colt weaner; James W. Atkinson, Milpitas, incubator; Thomas W. Breen, Sausalito, gardening implement; Moses P. Farnham, Germantown, stovepipe drum; James L. Hawkins, Fresno, culinary boiler; James E. Hagan, Oakland, automatic cut-off for gas burners; Byron Jennings, San Jose, pneumatic clutch; Frederick P. McFeeley, Oakland, beam for cultivators; James McNeil, San Francisco, templet for boiler holes; John B. Pitchford, San Francisco, and A. S. Cooper, Santa Barbara, mixing machine for asphalt; Clarence M. Simonds, San Francisco, paint can. Oregon—Charles W. Tremain, Portland, steam engine. Washing on—Joseph Mount and F. H. Warneck, Spokane, hoisting apparatus; William F. Parsons and A. Davis, wrench. Nevada—James McFarland, Virginia City, stamp mill.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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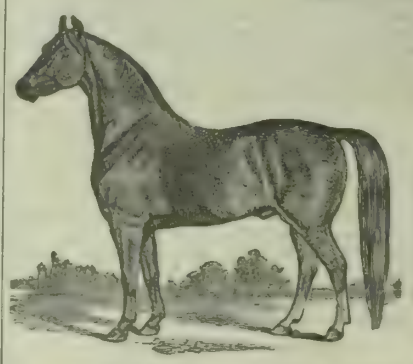


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Choice Brood Mares!

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Golden Italian Queens. Tested, $2.00 each; untested, $1.00 each L Hives, $1.00 each Root's V groove sections, $5.00 per 1000. Dadant's comb foundation, 58c and 65c a pound. Smokers, $1.00 each. Globe veils, $1.00 each, etc. WM. STYAN & SON, San Mateo, Cal.

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IMPORTATION OF 1892.



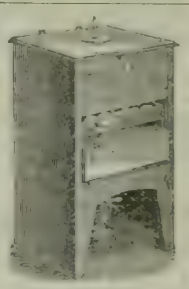
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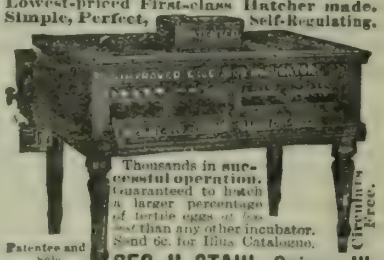
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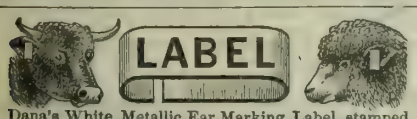
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4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
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7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
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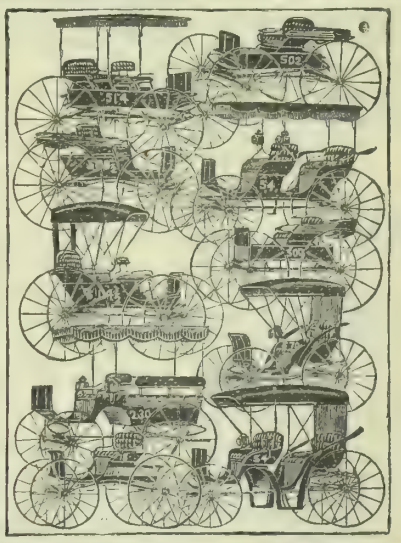
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MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

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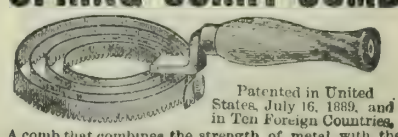
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

Fair weather the past week allowed outdoor work in all parts of the State. Our advices report that seldom, if ever before, has farm and orchard work been pushed with such vigor, and that with favorable seasonable rains all kinds of crops will show a very large gain over that of 1891. Trading in farm products has been largely of a nominal character, owing to light supplies and a light demand. Trade in orchard products is confined to oranges and apples. Money continues in liberal supply, with all legitimate requirements based on gilt-edged security readily placed.

Foreign Grain Review.

LONDON, Jan. 18.—"Mark Lane Express:" English wheats are dull; foreign wheats are inert. The total decline since the 1st of December is 4s California and 2s on American red winter. American flour is 1s lower; oats 1s, and corn 6d cheaper. To-day's market—English flour dropped 1s; barley is steady; oats and corn are unchanged.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.
Thursday	8s5d	8s3d	8s3½d	8s3½d	8s3½d
Friday	8s4½d	8s3d	8s3½d	8s3d	8s2d
Saturday	8s4½d	8s3d	8 6d	8s3d	8s 2d
Monday	8s4½d	8s3d	8s4½d	8s4½d	8s4½d
Tuesday	8s5d	8s3d	8s 4d	8s3d	8s3½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	41s0d	41s0d	41s0d	American advices favorable
Friday	41s0d	41s0d	41s0d	Quiet but steady.
Saturday	41s0d	41s0d	40s9d	Turning down.
Monday	41s0d	40s9d	40s9d	Rather firmer.
Tuesday	41s0d	40s9d	40s9d	Quiet.

To-day's cablegram is as follows:

LIVERPOOL, Jan. 20. Wheat—Steadier. California spot lots, 8s 3d.; off coast, 41s; just shipped 40s. 6d.; nearly due, 40s 6d.; cargoes off coast and on passage, firmer; English country markets, slow; French, dull; weather in England, cold.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Jan.	Feb.	Mar.	Apr.	May
Thursday	168	169½	171½	172½	171
Friday	166	166	169½	169½	168½
Saturday	168	169	171	171	170⅝
Monday	169	170	171½	173	170
Tuesday	170	171	172½	173	171½

The following is to-day's telegram:

NEW YORK, Jan. 20.—Wheat—$1 02½ for February; $1 03½ for March; $1.03½ for April; $1.02⅝ for May and $1.01½ for June.

CHICAGO, Jan. 20 —Wheat—91⅛c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer 1892. H.	L.	Seller 1892. H.	L.
Thursday	182½	181½	....	....	....	....
Friday	179¾	178	....	....	....	....
Saturday	179	178½	....	....	....	....
Monday	179⅝	178⅜	....	....	150	150
Tuesday	177½	176⅜	....	....	150½	149⅝

The following are to-day's recorded sales on Call:

Morning Session.—Buyer season, 400 tons, $1.77½; 200, $1.77¼, 1300, $1.77¾ per ctl.

After noon Session.—Buyer season 100 tons, $1.77½; 1000, $1.78; 700 $1.78½; 700, $1.78 per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892. H.	L.
Thursday	111½	11[illegible]	....	....	....	....
Friday	110½	10[illegible]	102½	102¼	....	....
Saturday	110	10[illegible]	....	....	....	....
Monday	111⅜	111	....	....	....	....
Tuesday	111⅛	110½	104½	103⅝	....	....

The following are to-day's recorded sales on Call:

Morning Session.—Buyer season, 2.0 tons, $1.11½; 300, $1 11; 600, $1 11¾; 400, $1 11¾

Seller season 100 tons, $1.05 per ctl

Afternoon Session.—Buyer season, 100 tons, $1.10½; 200, $1.11; 100, $1.11¾ per ctl.

Eastern Wool Markets.

NEW YORK, Jan. 15.—"Bradstreet's:" There is a slightly better feeling noted in the leading wool markets. On fine wools the situation is not as strong owing to large importations of Australian wools and the slow movement of Ohio and Michigan wools. Cheviot manufacturers are buying heavily of quarter-blood unwashed wools, and dealers are holding their prices on this grade very firm. Good staple Territories sell well. Texas and California wools are rather quiet. Pulled wools are in good demand, particularly A and B supers. The dullness in Carpet wools is reflected in weak demand; stocks of these wools in all leading markets are large; values are firm and dealers have refused to make concessions.

NEW YORK, Jan. 18.—The wool market does not promptly develop expectations. The mild weather has checked the demand for goods. Manufacturers at the moment are more or less apathetic, though quotations are as low as before and the offerings improved by the opening of many parcels that have been reserved for a better turn. Unwashed wools make the late full price at all the seaboard points, but enlarging sales of Australian cause considerable sober feeling among the holders of competing fleeces.

Dried Fruits.

NEW YORK, Jan. 18.—Unpeeled peaches are dull at 7¼@7½c. Philadelphia is underselling this market fully 1c, so our buyers are undecided. A small line of peeled brought 21c. Prunes in a moderate way are quoted: Four sizes, bags, 7c; five sizes, 7¼c; boxes, seventies and eighties, 7¾c; sixties and seventies, 8¼c; fifties and sixties, 9½c; forties and fifties, 10¼c. Apricots are quiet for bags at 7½c; best boxes 9c.

Eastern Raisin Market.

NEW YORK, Jan. 16.—Quite liberal sales of California raisins have been made the past few days, and the surface indications are that pretty much all the stock in transit has passed into the ownership of dealers in a position to work off goods to the best advantage, leaving no burdensome surplus to disturb values. Prices are not positively higher, but the market shows in better form. The interest in prunes and other dried fruit is tame at the moment, but business is at prices reflecting a fairly firm market, while the offerings indicate that supplies are well under control.

NEW YORK, Jan. 18.—Raisins, without being higher, show an encouraging firmness and fair activity, which endorses the belief in new wants of distributors. Prime three-crown bags have been readily placed at 5c in good grocery dealings, but two-crown drag a little at 3¾@4c. Boxes, too, have revived, sales of perhaps 6000 at $1.22½ are enough to indicate a better tone. The range for boxes, including the best of layers, which are somewhat off in quality from what is expected of that class, is $1.10@$2.35.

Eastern Hop Market.

NEW YORK, Jan. 16.—In hops some transactions in prime quality of States were 24½c, and low-grade goods at 21½c, showing a decidedly firm market. England and Germany are very firm.

NEW YORK, Jan. 18.—Hops advanced early and maintained the new prices at the close. Option operations were light; bull element prevailed during the week, helping to strengthen spot bids. The natural tone of the market, however, is strong, stocks and cables favoring sellers. The exports for the week were 1226 bales. A large lot went from Baltimore. The exchange future calls were well attended, promising success. New York, 1891, choice 25c; good to firm 23@24½c; common, 20@22; Pacific choice 25c; good to firm 22@24; common 20@21c; all nineties 18@19c; olds 6@9; new Bavarian and Bohemian 47@50c.

Miscellaneous.

NEW YORK, Jan. 18.—Honey is tending higher. It retails in small lots at 7¾c. Light amber Lima beans at $1.80 per bushel; spot is in most frequent selling rate.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 18, 92, were as follows:

Flour, qr. sks	48,133	Bran, sks	3,349
Wheat, ctls	164,126	Buckwheat "	.....
Barley, "	34,947	Middlings "	2,713
Rye, "	389	Chicory, bbls	153
Oats, "	49	Hop, "	168
Corn, "	3,763	Wool, "	57
*Butter, "	645	Hay, ton	2,148
do bxs	161	Straw, "	119
do bbls	1	Wine, gals	198,530
do kgs	.....	Brandy, "	46,830
do tubs	.....	Raisins, bxs	200
do bxs	32	Honey, cs	142
†Cheese, ctls	383	Peanuts, sks	82
do bxs	15	Walnuts "	62
Eggs, doz	348,875	Almonds "	135
do "Eastern	88,920	Mustard "	53
Beans, ctls	5,307	Flax "	.....
Potatoes, sks	30,558	Popcorn "	.....
Onions, "	1,260	Broom corn, bbls	.....

*Over'd, 153 ctls. †Over'd, 200 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Jan. 17, '91.	July 1, '91 to Jan. 17, '92.
Flour, ½ sks	154,120	295,540
Wheat, ctls	715,458	1,356,229
Barley, "	133,192	28,267
Oats, "	199,573	295,357
Wool, bales	5,790	5,720
Hops, "	333	339
Rye, sks	.....	3,293
Potatoes, sks	18,610	29,406

Cereals.

The local wheat market has been on an almost continuous down move, with speculative holders unloading. So far as we are able to learn, there are very few farmers carrying wheat. The manager of the Grangers' Business Association says that in their warehouses there are not 10,000 tons held by farmers. Other large warehouse managers report like small quantities held by first hands, so that the bulk of the warehoused grain must belong to exporters, millers and speculators. Owing to shippers' immediate requirements being met, they are only tempted to buy by sellers offering concessions. The lower rates (20s f. o.) ruling for charters do not appear to act as a stimulant on exporting orders. One of the largest exporting firms informs us that the low, declining price of silver, combined with favorable crop advices from India, deter them and others from entering the market even at present prices. Oregon and Washington continue to send us liberal supplies, which is a source of surprise when it is considered that the direct exports from up north show a very large gain over the like time in 1890-91. The tonnage under charter in this port is decreasing, but in the Columbia river it is increasing. The tonnage on the way to Pacific Coast ports is decreasing, but the disengaged tonnage in the different ports is steadily increasing.

Crop advices are uniformly favorable. The absence of warm, forcing weather is decidedly in favor of growing plants. A strong north wind the past week dried out considerable land, yet no serious results are looked for. The acreage already seeded is in excess of last year, while continued plowing and seeding are being reported. From Oregon and Washington our crop advices are all that can be desired.

Barley receipts show a decided gain, yet the market holds to strong prices. The demand is said to never before have been so large, which is accepted as proof positive of the contention that each year shows an increase of from 10 to 25 per cent in work horses in the farming districts. This increase is due largely, if not entirely, to more attention given to fruit culture. The supply of bright grades of barley is light.

With a free call for oats and only moderate receipts, the market shows more strength with an advance obtainable. Free shipments to this port from Oregon and Washington have reduced the supply in those two States to such small proportions as to create the impression that there will be no carry over into the season of 1892-93, which, if proven correct, will cause still better prices before the end of the present season.

Corn is fairly steady. Receipts are light and so is the demand. It is generally claimed that a free export movement to Mexico and Central America will set in soon. If this is realized, then prices with us ought to do better.

Both buckwheat and rye are inactive.

Feedstuff.

There has been a renewed demand for ground feed, and as the receipts of both bran and middlings were only fair, holders were able to secure an advance in prices. Ground and rolled barley have met with a largely increased call from dairy and stock men.

Hay, while slightly easier, has a healthy tone. Rains the forepart of the month insured early pasture, and in anticipation of which many owners of range stock bought feed to carry their stock over until green feed is more abundant. Nevada continues to send liberal supplies into this State.

Dairy Product.

Butter is easier at declining prices. The unfavorable turn to the market is due to increasing receipts of fresh rolls and dealers confining their purchases. The lower prices will cause butterine and oleomargarine importers to cut off their orders for shipments to this coast. More creameries are being organized and ready for business by spring.

Cheese appears to be working to lower prices under increasing receipts and a lighter call.

Eggs are weak and lower, due largely to continuous heavy imports of Eastern eggs, of which the Dairymen's Union of California are large importers or handlers. Warm weather and better feed are increasing the supply of California.

Vegetables.

Outdoor gardening reports continued large and favorable progress. Los Angeles is sending us small quantities of tomatoes, peppers, asparagus and green peas. The high prices restrict the demand.

Onions are getting scarcer, and as there is a free demand, the market shows a slight improvement.

Cabbages are strong, with shipments being made Eastward.

Owing to very heavy receipts, poorer potatoes are weaker, but choice, good keepers are firm under free buying by some parties, who look for better prices after this month. This opinion is based on received advices that river potatoes will be all marketed by the end of the present month.

Fruit.

The market is almost bare of pears. Apples continue in large supply, causing low prices to rule for the poorer kinds, but choice varieties, tart and fruity, meet with a quick demand at full prices. Oregon, Washington, and the northern counties of this State supply the bulk of those received. Persimmons are sold at from 30 to 60 cts. for small boxes.

The receipts of oranges are very heavy, and as the stock on hand is large, consignees are compelled to offer concessions to induce buying. Trucksters are the largest buyers of off kinds, and their peddling at from 10 to 20 cts. a dozen aids no little in producing the demoralized market. Cold weather is another factor against the market. About all the oranges coming to hand are either windfall or else more or less touched by frost. The size is small and unattractive. Values take on a wide range.

The East is not drawing many oranges, owing to Florida still meeting the bulk of requirements. Cold weather at the East is against the market.

In dried fruits we note an improved inquiry for prunes and peaches. Large sizes of prunes are wanted, while the low prices ruling for peaches make them attractive to dealers and speculators. Apples and apricots continue slow.

Raisins are steadier with a stronger tone. The low prices have increased the consumption. The New York *Shipping List* says: "The low price of raisins this season, while a disappointment to growers, is likely to operate to their future advantage. By reason of their cheapness this year, California raisins have gone into markets that were hitherto closed against them. They have practically driven the Spanish raisin out of the American market, and in contiguous foreign territory California raisins are getting the call. Next season our growers will have a broader market than ever before, and will consequently have gained an advantage which they are likely to hold and extend."

Live Stock.

The market is easier for mutton sheep, but stronger for bullocks. Since the advance in mutton the consumption of beef has been increasing and enlarging. Hogs are strong at an advance. Milch cows are wanted, with the inquiry running largely to improved breeds.

Miscellaneous.

Grain bags, hand-sewed, standard sized, are held at an advance. They are quoted to-day at 7¼@7½c.

The poultry market is lower and weaker for hens, roosters and chickens, but firm for ducks and geese. Turkeys are steady.

Beans are essentially unchanged. The market has the appearance of being controlled by a pool for the purpose of buying up the surplus.

Hops continue strong, with very light supplies to draw from. The East and Europe continue to strengthen.

There is an absence of business in wool, due largely to poor selections. The clip in California this year will not be up to the average, owing to poor feed toward the close of 1891.

Red clover is higher and advancing. Europe is drawing larger supplies from the East than for several years past. Alfalfa is in fair demand. Yellow mustard is steady at the advance.

From reliable advices up to Jan. 20, the following summary tonnage movement is compiled:

	On the way 1892	On the way 1891	In port 1892	In port 1891
San Francisco	235,166	291,473	*134,744	*46,808
San Diego	19,263	15,475	6,605	.....
San Pedro	4,349	4,981	4,712	15,712
Oregon	33,546	37,822	39,743	
Puget Sound	21,513	18,746	.....	
Totals	314,837	368,497	185,804	62,520

*Engaged for wheat, 1892, 59,482; 1891, 45,072.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891.	1890.
Wheat, ctls	9,159,130	6,327,160
Flour, bbls	629,523	542,000
Barley, ctls	765,190	173,646

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, January 20, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, City Mills	5 40 @ 5 50
Butter	2 20 @ 2 65	Do Country Mills	5 25 @ 5 50
Pea	2 40 @ 2 80	Superfine	3 40 @ 3 65
Red	2 00 @ 2 30	**NUTS—JOBBING.**	
Pink	1 75 @ 2 05	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 65	Do Choice	8 @ —
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 25	Do Chili	7½ @ 9
Wild Pease, blk eye	1 50 @ 1 75	Almonds, sft sh	11 @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	6 @ 7½
Do Nies	1 35 @ 1 45	Brazil	6½ @ 8
Split	4 @ —	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 22½	Peanuts	3 @ 4
Do good to choice	27½ @ —	Filberts	11½ @ 14
Do Giltedged	32½ @ —	Hickory	7 @ 8
Do Creamery rolls	32½ @ —	Chestnuts	11½ @ 16
Do do Giltedge	34 @ —	**ONIONS.**	
Eastern	20 @ 32½	Silver Skin	75 @ 1 25
Cal. pickled	23½ @ 26½	**POTATOES.**	
CHEESE.		Early Rose, ctl	30 @ 45
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling	40 @ 65
Do gilt edged	14 @ —	Do do Salinas	95 @ 1 25
Young America	12 @ 15	Do do Oregon	1 00 @ 1 25
EGGS.		Sweet's	2 00 @ 2 50
Cal. ranch, doz	26½ @ —	Garnet Chiles	40 @ —
Do do selected	28½ @ —	River Reds	30 @ 45
Do store	22½ @ 26	**POULTRY AND GAME.**	
Eastern	25 @ 30	Hens, doz	5 50 @ 7 50
FEED.		Roosters, old	5 00 @ 6 50
Bran, ton	20 00 @21 00	Do young	6 00 @ 9 00
Feedmeal	26 00 @ —	Broilers, small	4 00 @ —
Gr'd Barley	24 00 @27 00	Do large	5 00 @ —
Middlings	23 00 @24 00	Fryers	6 50 @ —
Oil Cake Meal	35 00 @37 00	Ducks	6 50 @10 00
Manhattan Food ₩ cwt.	7 50	Geese, pair	1 75 @ 2 50
HAY.		Turkeys, Gobbler	12 @ 14
Wheat, per ton	13 50 @ —	Turkeys, Hens	14 @ 16
Do choice	15 00 @ —	Do Dressed	14 @ 18
Wheat and Oats	12 50 @ —	Manhattan Egg Food ₩ cwt.	11 50 @ —
Wild Oats	11 00 @ —	**PROVISIONS**	
Cultivated do	12 50 @ —	Cal. Bacon, heavy, lb	9½ @ —
Barley	11 00 @ —	Medium	11 @ —
Alfalfa	10 00 @ —	Light	12½ @ —
Clover	12 00 @ —	Lard	9 @ 11
Straw bale	50 @ 60	Cal. Sm'k'd Beef	11½ @ —
GRAIN, ETC		Hams, Cal salt'd	10 @ —
Barley, feed, ctl	1 05 @ 1 10	do Eastern	12½ @ —
Do Choice	1 12½ @ —	**SEEDS.**	
Do Brewing	1 13½ @ —	Alfalfa	7 @ 8
Do do Choice	1 17½ @ —	Clover, Red	12 @ 13
Do do Giltedge	1 21½ @ —	White	17½ @ —
Do Chevalier	1 15 @ 1 45	Flaxseed	2 50 @ 2 80
Do do Giltedge	1 48½ @ 1 52½	Hemp	3½ @ 4½
Buckwheat	2 00 @ 2 25	Mustard, yellow	3 25 @ 3 75
Corn, White	1 35 @ —	do Brown	3 00 @ 3 25
Yellow, large	1 26½ @ 1 31½	**WOOL.**	
Do small	1 33½ @ 1 38½	**SPRING, 1891**	
Oats, milling	1 47½ @ —	Humb't & Men'cino	20 @ —
Feed, choice	1 45 @ —	Sac'to valley	16 @ —
Do good	1 37½ @ —	Free Mountain	19 @ —
Do fair	1 30 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain	18 @ —
Black Cal	1 60 @ 1 90	Cala's & F'th'll	16 @ —
Do Oregon	1 45 @ 1 55	Oregon Eastern	14 @ —
Gray	1 32½ @ 1 41½	do valley	21 @ —
Rye	1 55 @ 1 60	So'n Coast def	11 @ —
Wheat, milling.		So'n Coast free	13½ @ —
Gilt edged	1 82½ @ —	**FALL, 1891.**	
Do Choice	1 80 @ —	San Joaquin	9 @ 12
Do fair to good	1 76½ @ —	Mountain	10 @ 15
Shipping, choice	1 76½ @ —	Humb't & Men'cino	14 @ 18
Do good	1 73½ @ —	**HONEY.**	
Do fair	1 71½ @ —	White Comb, 2-lb	10 @ 13
Common	1 67½ @ —	do do 1-lb frame	12 @ 14
Sonora	1 67½ @ 1 78½	White extract'd	6½ @ 7
HOPS.		Amber do	5½ @ 6½
1891 Choice to Ex.	23 @ —	Beeswax, lb	23½ @ —
Fair to Good	18 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 20, 1892

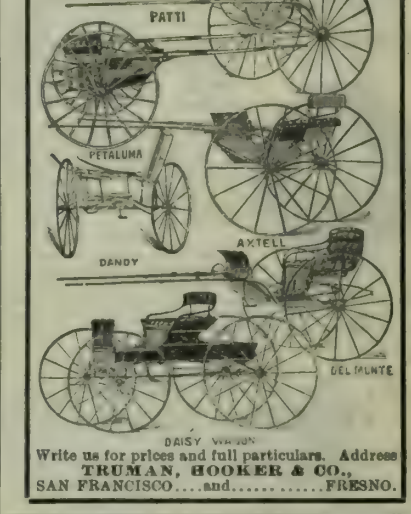
Limes, Mex	5 50 @ 7 25	Do extra choice	1 50 @ 2 00
Do Cal	75 @ 1 00	Do Lady Apples	75 @ 1 25
Lemons, box	1 25 @ 3 50	Beets, sk	— @ 1 00
Do Sicily	5 50 @ 7 00	Carrots, sk	35 @ —
Oranges, Winter small box	50 @ 1 00	Okra, dry, lb	12½ @ —
Do Seedlings		Parsnips, ctl	— @ 1 25
Riverside	1 25 @ 2 00	Peppers, dry, lb	12 @ 18
Los Angeles	1 00 @ 1 50	Turnips, ctl	50 @ —
Do Navels—		Cabbage, 100 lbs	60 @ —
Los Angeles	1 50 @ 2 50	Garlic, lb	2 @ 3½
Riverside	2 00 @ 3 50	Squash, Mrft, tn	4 00 @ 8 00
Duarte	2 00 @ 3 50	Pumpkins, ton	7 00 @ —
Apples, box	40 @ 75	Tomatoes, box	1 50 @ 1 75
Do choice	1 00 @ 1 25	Asparagus, lb	20 @ —
		Peas, green, lb	10 @ 15

Live Stock.

BEEF.		MUTTON.	
Stall fed	3½ @ —	Wethers	9 @ 9½
Grass fed, extra	3½ @ —	Ewes	8½ @ 9
First quality	3½ @ —	Lamb, yearling	9½ @ —
Second quality	3 @ —	Do Fall	12½ @ 18
Third quality	2½ @ —	**HOGS.**	
Bulls and thin Cows	2 @ 3	Light, ₩ lb, cents	4½ @ —
VEAL.		Heavy	4½ @ —
Range, heavy	4½ @ 5½	Feeders	4 @ —
Do light	6 @ 8	Stock Hogs	3½ @ —
Dairy	7 @ 8		



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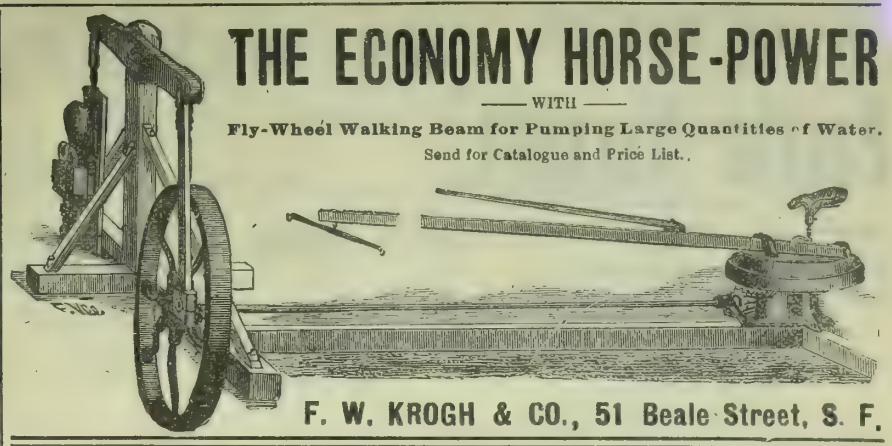
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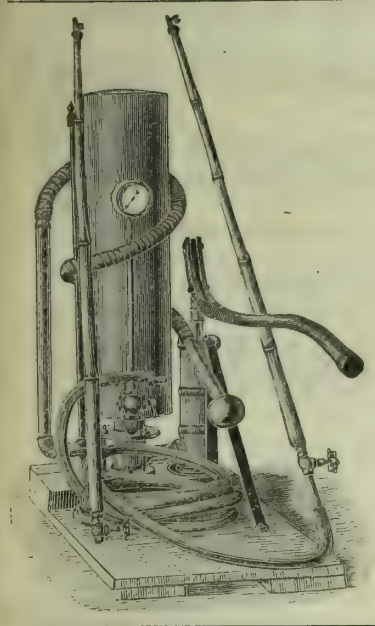
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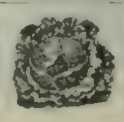
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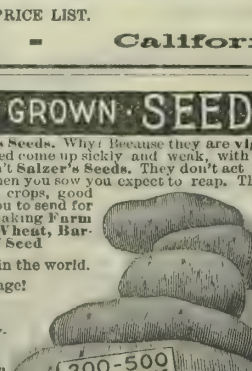
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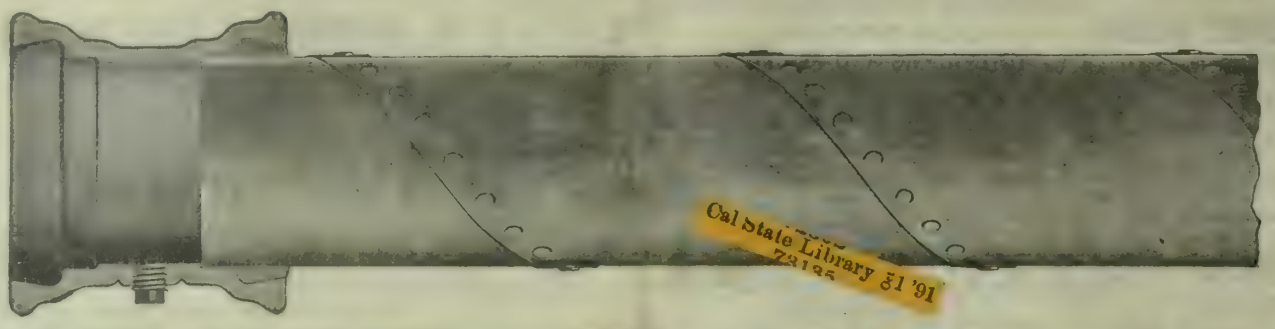


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TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: We have your favor of the 25th inst. In regard to the Morgan Spading Harrow would say that we have used the harrow cultivating our orchard and vineyard and find it just the tool. In fact, we know of no tool that will surpass it as a cultivator. Yours truly, HATCH & GIST.

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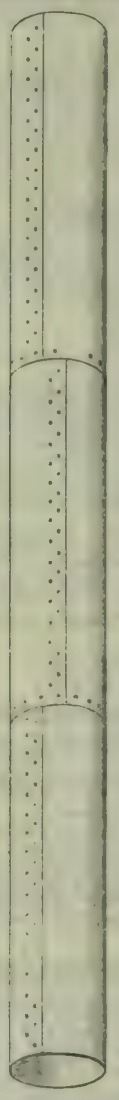
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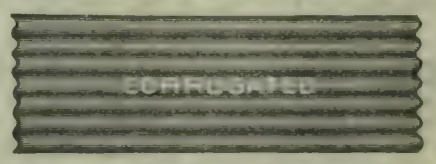
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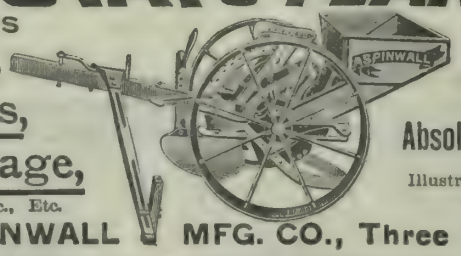
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PACIFIC RURAL PRESS

Vol. XLIII. No. 5. SAN FRANCISCO, SATURDAY, JANUARY 30, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

Practically Settled.

Since our last issue the Chilean question has taken on an entirely new character. In the midst of the negotiations then pending, Chile peremptorily demanded the recall of our Minister Egan as an official not personally in good odor. Our Government held that whatever might be the personal ill-feeling toward Mr. Egan it was due to his obedience to orders, and in response delivered to Chile its *ultimatum*. Chile was called upon to withdraw the offensive letter written at the beginning of the trouble, to withdraw its demand for Egan's recall and to make suitable apology and indemnity for the Baltimore outrage.

These demands were presented sim, ly and in civil terms, but in a tone clearly implying that if they failed of a satisfactory response, Chile could look out for "consequences." On the day following this demand, the President submitted to Congress a special message in which the whole question at issue was admirably and temperately summed up. Diplomacy, he said, had come to its last resource, and it now remained for Congress to determine what was necessary for the maintenance of the dignityof the nation. Here the matter rests so far as our side of the controversy is concerned. But it is unofficially reported that Chile has responded by recalling the offensive letter in question, recalling her demand for the dismissal of Egan and by proposing to submit the Baltimore matter to arbitration of any other nation or to the Supreme Court at Washington. These terms, though not in such frank spirit as they might be, are still fairly reasonable and will no doubt be accepted. There will be no end of correspondence and unlimited measurements of red tape but the danger of war, if indeed there ever was any danger, is now past.

It is very gratifying to note the admirable spirit in which the American people have borne themselves during this long negotiation. The offense was a most flagrant one, an incident of a sort most likely to inflame national resentment. It would not have been surprising if a spirit of hot indignation had overborne all calmer judgment and had forced our Government to visit upon Chile such humiliation as we were quite able to inflict. But not for one moment has there been failure to respect our position as the stronger nation, from whom deliberation and concession was due. There has been no wish to push on to a war in which we would be certain of success. On the contrary, public sentiment has stood for peace if it could be maintained upon terms honorable to our flag. The self-control of our people under aggravating circumstances has been a most admirable expression of public spirit. Incidents like this encourage to better opinions, those who see in the corruptions of politics, the jobberies of legislation and the iniquities of corporation business methods the evil stars of government by the people.

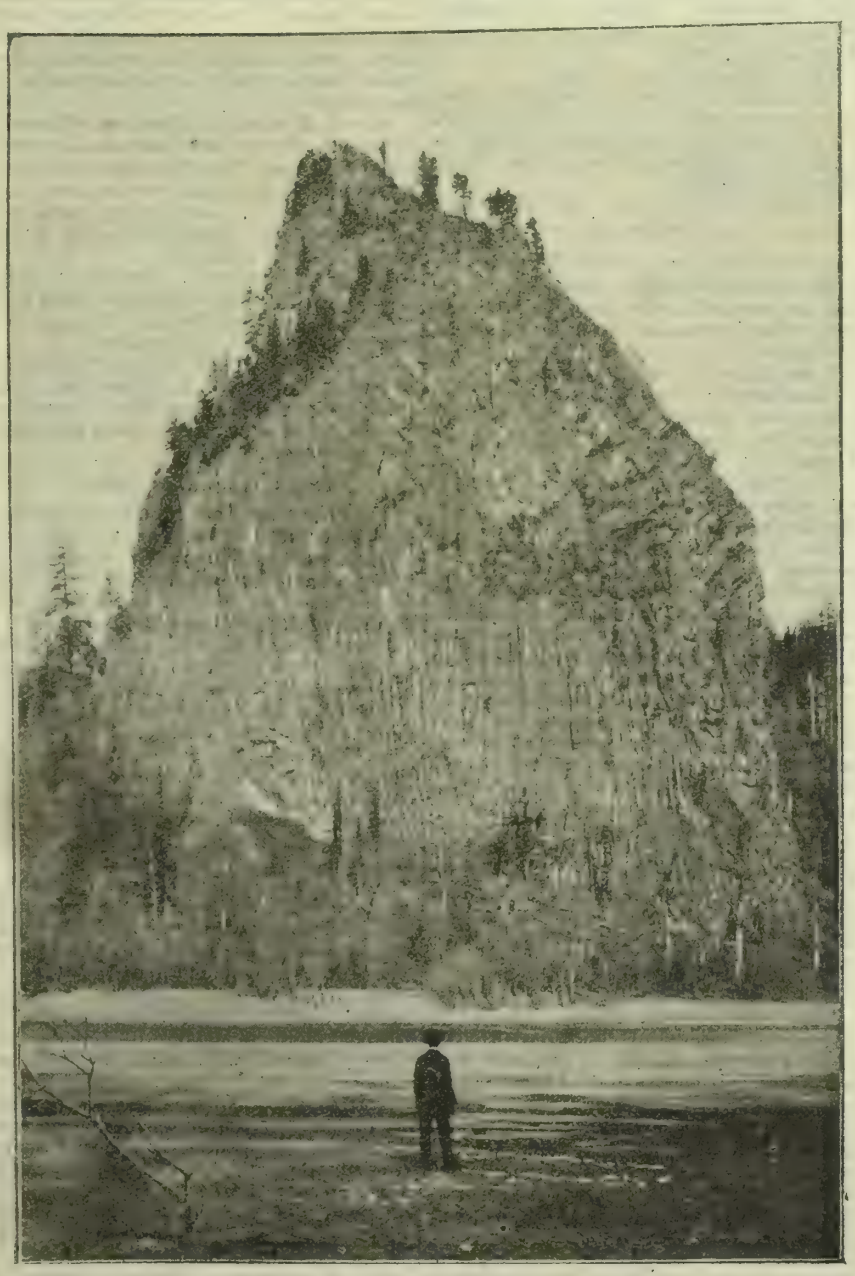
BENEFICIAL BUGS.—Another shipment of scale-eating ladybirds and of moth cocoons of a species the larvæ of which feed upon the black scale, have been received from Mr. Koebele, and are being distributed by Secretary Lelong of the State Board of Horticulture.

Mr. Jordan's Folly.

The Napa County Alliance has gone to a passionate length in its condemnation of President Jordan of the Stanford University, and has displayed a lack of temperance in judgment not at all creditable; but on the other hand there was good ground for indignation. Mr. Jordan has shown himself a very shallow observer and critic, and has given the rural population of the country good reason to dislike him. His charge that idleness, shiftlessness and loaferism are characteristic rural vices, is utterly absurd and indefensible. If Mr. Stanford is to make a success of his University he will have to put at its head a man of sounder judgment and broader sympathies.

ORANGE FREIGHTS.—The Santa Fe route has declared an "exigency rate" of 90 cents per hundred on oranges from Southern California to Missouri River points, instead of the old rate of $1.25. It is thought this may lead to a war of rates to secure the hauling of the orange crop which, because of wind and frost, will be less than anticipated.

THE BEET-SUGAR PRODUCERS of the United States have formed an association for mutual benefit. The first meetwas held in this city on Tuesday.



"JAY COOKE'S FARM."

Castle Rock.—"Jay Cooke's Farm."

One of the notable and famous wonders of the Pacific Coast is Castle Rock, a majestic pillar of basalt which stands on the north bank of the Columbia river, at the western extremity of the grand gorge which that noble stream has furrowed through the heart of the Cascade mountains.

It rises abruptly from the water's edge, in the midst of a level space, wholly detached from the mountain chain of which it is an outpost, and reaches an elevation of between eight and nine hundred feet. It is almost circular at its base, and is perhaps an eighth of a mile in diameter. Its sides are precipitous, of a dark-brown and gray stone, the common basalt of the Cascade Range of mountains, and its conical summit is crowned by a scattering growth of majestic forest trees.

There is nothing like this grand pillar anywhere else in the world. It has long been the wonder of geologists, and the admiration of the thousands who annually visit the grand gorge of the Columbia, which is truly one of the beauty spots of the world.

Many years ago the fame of this giant pillar of stone reached the eminent financier, Hon. Jay Cooke, of Philadelphia, then at the zenith of his greatness, and at the head of the Northern Pacific railroad enterprise. Through a whim he desired to become its owner, and by a considerable payment to the Government, under the land entry laws, became in fact its proprietor. He offered a prize of $500 to whoever would scale its precipitous sides and plant the American flag upon its summit, and the offer has never been withdrawn. Every year a new effort is made by some adventurer, but none of these have ever yet been successful. A crowd of soldiers from Vancouver barracks determined some years ago to win this prize, and spent a week in vain efforts to reach the summit. Every device that could be operated was tried, including the flying of kites across the mountain; but all failed, and it was given up as a bad job.

On the maps of the country, and in the ten thousand pictures of which this noble pillar is the theme, it is styled Castle Rock, but the people of Oregon and Washington rarely refer to it except ironically as "Jay Cooke's Farm." This name will probably last as long as the rock does. It is perhaps the most extraordinary piece of landed property in the United States, and certainly the most unique "farm" within its boundary.

On the occasion of Mr. Cooke's first visit to the Pacific Coast, only a few months ago, he was taken to see this "farm," and one of his entertainers laughingly asked him what he would take for it. "Well, I hardly know," said Mr. Cooke, "it comes high."

FOR THE WORLD'S FAIR.—The California World's Fair Commission is regularly at work now preparing for its display of the State at Chicago. A host of propositions is being brought to its attention. It appears that there is a good disposition to favor the various horticultural interests of the State, and that a grand display of our trees and shrubs, fruits and flowers, will be realized.

THE BOTANIST.

Concerning English Names for Our Western Forest Trees.

[Written for the RURAL PRESS by J. G. LEMMON.]

[Concluded from page 71]

Sub-Tribe II. Solitaires.

Trees with all the leaves solitary, not in fascicles nor tufted.

SECTION 1.—PENDERES, THE SPRUCES. Trees with fruit pendent from or near the end of the branchlets. Four closely related genera, often considered as one polymorphous genus, but clearly distinct.

PICEA, Link. TRUE SPRUCE. — Cones terminal, leaves scattered, sessile, with prominent, persistent bases or pulvinæ.

30. *P. laxa*, Sargent. (Until recently *P. alba*.) "White Spruce."—Trees of far northern regions, with glaucous or white leaves.

31. *P. Mariana*, Sargent. (Until recently *P. nigra*.) "Black Spruce."— Northern trees with dark green foliage.

32. *P. Engelmanni*, Engelm. "Engelmann's Spruce."—Rocky Mts. and westward to near California. Branchlets short and thick; cones elliptical.

33. *P. pungens*, Engelm. "Prickly or Blue Spruce."—Rocky Mts. and westward to Wyoming, along streams. Remarkable for its sharp, very glaucous leaves.

34. *P. Sitchensis*, Carriere. "Great Tide-land Spruce."—Reaches the California coast from the north. Large trees, with slender branchlets and cylindrical cones.

35. *P. Breweriana*, S. Watson. "Weeping Spruce."—A recent discovery on the Siskiyou Mts. Branchlets very long, slender and pendent; cones tapering to each end.

HESPEROPEUCE, Lemmon. WESTERN SPRUCE.—Cones terminal, small, the scales usually reflexed at maturity; leaves scattered (not in two ranks), narrowed at base and with a single, large resin duct; seeds angular and bearing resin vesicles; pollen bilobed.

36. *H. Pattoniana*, Lemmon. (Until recently *Tsuga Pattoniana*.) "Alpine Western Spruce."— Alpine or sub-alpine trees of the Sierra and Rocky Mts. A solitary species usually classed with the Hemlock Spruces, but clearly distinct.

TSUGA, Carriere. HEMLOCK SPRUCE.— Cones terminal, very small; leaves two-ranked, flat, pulvina not prominent etc., only one species in Northwest America; pollen discoidal.

37. *T. Mertensiana*, Carriere. "Western Hemlock Spruce."—A large tree of the Northwest, reaching Northern California.

PSEUDOTSUGA, Carriere. FALSE SPRUCES. —Cones sub-terminal, with long, exserted bracts or leaves between the scales; true leaves petioled or stalked, leaving when fallen, oval, transverse scars, etc. Two species, both in Northwest America.

38. *P. taxifolia*, Britton. (Until recently *P. Douglassii*.) "Douglas Spruce."—A large and valuable lumber tree of the Northwest; abundant in California.

39. *P. macrocarpa*, Lemmon. "Big Cone Spruce."—A very large-coned spruce, local on the San Bernardino and neighboring mountains of California. Trees less symmetrical than the other species.

SECTION 2.—ERECTES, TRUE FIRS.— Cones erect, lateral, sessile, nearly cylindrical, axillary from the upper side of mostly the upper limbs; the scales deciduous. All in one large genus well represented in the Northwest, including California.

ABIES, Link. TRUE FIRS.—Mostly large trees which branches in horizontal whorls or strata; the leaves mostly two-ranked on young trees and lower branches. The Firs of Northwest America are comprised in two sections:

SECTION 1.—MEGACARPÆ, RED FIRS.— Species with cones mostly large; bark reddish within; leaves short, not twisted at base.

40. *A. lasiocarpa*, Nuttall. "Downy Cone or Sub-Alpine Fir."—Rare on high peaks of the Northwest. Cone scales bearing short, brownish hairs. Leaves small and very short.

41. *A. amabilis*, Forbes. "Lovely Red Fir."—A rare tree on peaks near the cascades of the Columbia and northward to Fraser river; cone bracts short, concealed; leaves flat.

42. *A. nobilis*, Lindley. "Feathered Red Fir."—A rare tree near Mt. Hood and in a few other northern localities. Cone bracts large, long, exserted and reflexed.

43. *A. Magnifica*, Murray. "California Red Fir.—Attains the largest size of any tree of the genus; on high plateaus and mountains of California; bracts mostly concealed, leaves quadrangular.

Variety, *Shastensis*, Lemmon. "Shasta Red Fir," near Shasta, bracts long, exserted.

Variety, *xanthocarpa*, Lemmon. "Yellow-fruited Fir," near Webber lake and southward to Mt. Whitney; cones, yellowish.

SECTION 2.–MICROCARPÆ.–WHITE FIRS; Cones smaller; bark whitish within; leaves longer, mostly flat, and twisted at base.

44. *A. grandis*, Lindley, "Oregon White Fir."—Large trees of the Northwest and reaching California. Leaves dark green.

45. *A. Lowiana*, McNab, "California White Fir."—Common in the California mountains at middle altitudes. Leaves whitened below.

46. *A. concolor*, Lindley, "Colorado White Fir."—Summits of the watershed of the Colorado river, including Wyoming, Colorado, Utah and New Mexico. Leaves, large, whitened above and below.

47. *A. venusta*, Sargent, (until recently *A. bracteata*,) "Bristle-Cone Fir."—Extremely local in the Santa Lucia mountains of California. Cone-bracts with the large midribs long exserted, like stiff bristles. Leaves very large and long.

48. *A. religiosa*, Schlectendal, "Mexican Sacred Fir."—Beautiful trees on high peaks of the Cordilleries of northern Mexico and southward to the mountains of Guatamala. Cones with bracts long exserted.

CUPRESSACEÆ.

CYPRESSES AND THEIR ALLIES.

Mostly important trees, widely distributed and including some of the largest trees known, particularly abundant in former ages of the earth. Leaves spiral, opposite, or ternate, usually small and scale-like Fruit, diverse, small.

They divide into three Tribes.

TAXODINEÆ.—Cone-scales spiral and peltate; leaves spiral. Trees of the largest size,

CUPRESSINEÆ.—Cone-scales opposite or verticillate, either valvate or peltate; leaves opposite, scale-like.

JUNIPERINEÆ.—Fruit, berry-like, with vestiges of scales; leaves opposite or ternate.

Tribe I., Taxodineæ.

The leading tribe have their leaves spiral and the cone with scales spirally arranged, terminating in rounded bosses or flat, shield-like heads.

They divide into two Sections:—

TAXODIEÆ. — Cone-axis elongated, comprising two genera; one in the Eastern States, the other in California—the "Big Trees."

GLYPTOSTROBI. — Cone-axis depressed; comprises two genera, neither indigenous to the Northwest, but often cultivated.

The TAXODIÆ include the two genera of monster trees:

TAXODIUM, the Eastern Bald Cypress, and SEQUOIA, the CALIFORNIA REDWOODS or BIG TREES, the largest and most magnificent trees known; peculiarly confined to the limits of California.

49. *S. sempervirens*, "Coast Redwood." The famous lumber tree, growing only near the ocean in numerous groves from Monterey bay to near the Oregon line. Cones the size of a lady's thimble; leaves about half an inch thick in two-ranks.

50. *S. gigantea*, Decaisne, "Giant Sequoia," "Big Trees."— Limited to a few groves (about 20) in the high Sierra from Calaveras Co. to Kern Co. Cones about the size of a hen's egg; leaves scale-like, scattered. (This matchless tree is often miscalled "Wellingtonia.")

Tribe II, Cupressineæ.

This tribe includes a large number of genera and species of slow-growing trees, most of them in the Old World and Australia, with four genera in the United States, comprising ten species, six of them in Northwest America. The wood of all these trees is peculiarly fragrant and pungent; the leaves small and scale-like; the cones small, with scales valvate or peltate. They comprise in America two pairs of closely allied genera.

FIRST PAIR. AMERICAN CEDARS, with cones oblong and scales flat, convex or thickened; branchlets flattened horizontally, with dimorphous, decurrent leaves.

THUYA, RED CEDAR.—Fertile scales six, unequal in size, thin; seeds 12. Two species in America, one in the Eastern States, the other in the Northwest. Heartwood reddish.

51. T. *gigantea*, "Gigantic or Pacific Red Cedar."—A noble tree, with headquarters of greatest development around Puget Sound. Apt to taper rapidly from a thick, hollow base, hence highly prized for dug-out boats; also the wood being very durable is highly prized for shingles, clapboards, etc.

LIBOCEDRUS, INCENSE CEDAR.—Cones the size of a lady's thimble; fertile scales two, equal sized, thick, convex; seeds four, long-winged.

52. *L. decurrens*, Torrey, "California Post Cedar."—A beautiful and very valuable tree of California mountains. Most of the trees affected within by a fungus—"dry rot."

SECOND PAIR, TRUE CYPRESSES, with cones globular and scales ob-pyramidal and peltate. Heartwood yellowish.

CHAMÆCYPARIS, GROUND CYPRESS OR CEDAR.—Branchlets horizontal and leaves 2-ranked; cones the size of peas, maturing in one year; seeds few, narrowly winged. One species in the Eastern States, two in the Northwest.

53. *Ch. Nutkaensis*, Spach, "Alaska Ground Cypress." Abundant around Puget Sound and northward on the islands and peninsulas of Alaska. Timber a bright, clear yellow; highly prized for cabinet work.

54. *Ch. Lawsoniana*, Parlatore, "Port Orford Cedar." Most beautiful of ornamental trees, with its fan-like, horizontal or declined foliage, and, in the season, its numerous small globular cones. Timber light cream color, very serviceable, with a satin gloss and a pungent, aromatic odor.

CUPRESSUS, TRUE STANDARD CYPRESS. Trees or shrubs with cones larger, requiring two years to mature; seeds numerous, 6 to 20 to each scale, leaves not in two ranks, but scattered; trees readily yielding to treatment with pruning shears.

55. *C. Guadaloupensis*, S. Watson, "Guadaloupe Cypress." Native of Guadaloupe island, off the coast of Mexico, and reported from the coast of San Diego Co., Cal. Branchlets slender, drooping, light green; the bark flaking off, leaves a claret red surface to the limbs.

56. *C. Arizonica*, Greene, "Arizona Red-bark Cypress." Trees of the highest peaks of Arizona mountains. Branchlets erect, short, stout, and distinctly quadrangular, caused by the closely appressed leaves in four ranks.

57. *C. Macrocarpa*, Hartweg, "Monterey Cypress." The familiar hedge-making tree, indigenous upon Point Pinos, near Monterey, where the cutting winds from the ocean have fashioned the old, slow-growing trees into fantastic shapes. Cones the largest of the genus, about an inch thick.

58. *C. Goveniana*, Gordon, "North Coast Cypress." Rare, shrubby trees from Monterey bay northward. Foliage pea green; cones small, of six scales.

59. *C. Macnabiana*, Murray, "California Mountain Cypress." A tall shrub branching from the ground. Branchlets numerous, slender; foliage dark green; cones very small with prominent bosses.

Tribe III, Juniperineæ.

This, the last tribe of the Cypress-like trees, is peculiar in being so compact and uniform a group that, though composed of a large number of species, they are all usually regarded as forming one genus, with small, consolidated, berry-like fruit.

JUNIPERUS, JUNIPER. — Twenty species in the old world (two of them apparently reaching North America), five in Mexico, and four or five in more northern regions. Heartwood reddish.

60. *J. pachyphlæa*, Torrey, "Thick-barked Juniper." A species in Arizona and northern Mexico, with thick, hard bark, finely checked like a white oak; berries large and sweetish, much prized by Aborigines for food.

61. *J. occidentalis*, Hooker, "Western Juniper."—A small tree on the mountains from Southern Oregon through California to Arizona. Berries small, blue-black. Timber very valuable for fence posts, etc.

62. *J. Utahensis*, Lemmon, "Desert Juniper."—On the eastern slopes of the Sierra and on the mountains of Nevada and Utah. Berries small, reddish; leaves ternate.

63. *J. Calijornica*, Carriere, "California Juniper."—A shrub much divided from the ground; frequent in the plains of Southern California. Berries larger, the size of peas, reddish; leaves ternate.

Variety *monosperma*, Engelm. A form with single, large brown seeds. In the Sierra and San Bernardino Mts.

64. *J. communis*, Linnæus, variety *alpina*, Engelm, "Creeping Juniper."—A prostrate form of an Eastern Juniper that reaches the highest peaks of western ranges. Leaves one-half inch long in two ranks; pungent; berries small, dark blue, fleshy.

TAXACEÆ,

YEWS AND THEIR ALLIES.

This order of evergreens is really very numerous, but as its members are principally in the Old World or the Southern Hemisphere, it does not seem of importance to us of the Northwest. It comprises four tribes with 12 genera and about 90 species. Two genera only are represented in America, each with a species in the Northwest.

TAXUS.—TRUE YEW.—These trees are very numerous abroad, with two species in the Eastern States and one in the Northwest. Fruit a small, red, fleshy cup containing a solitary, erect, pointed seed.

65. *T. brevifolia*, Nuttall, "Pacific Yew."—A small tree growing along streams of British Columbia, Western Washington, and Oregon and extending along the coast to the Santa Cruz Mts. Leaves small, in two ranks.

TUMION. — (Until recently *Torreya*) FALSE NUTMEG.—Singular trees of four species found in Japan, China, Florida and California, respectively. Foliage of a heavy, disagreeable odor; fruit resembling a nutmeg in appearance, both exteriorly and interiorly, but terebinthinous. Seed large, solitary.

66. *T. Californicum.* — (Until recently *Torreya Californica*), Greene, "California False Nutmeg."—Rare in the Coast mountains and in the Sierra as far interior as Yosemite valley. Leaves large, two to three inches long, flat and pungent, in two ranks; fruit about the size of an almond.

SHEEP AND WOOL.

Goat Breeders' Memorial to Congress.

Julius Weyand, Secretary of the Angora Goat Breeders Association, sends us a copy of the following memorial, which by authority of his association, he has addressed to both houses of Congress:

On the 17th day of September, 1885, a number of breeders organized the Angora Goat Breeders' Association of California. Subsequently a Constitution was adopted and breeders from any and every State or Territory were declared eligible to membership. The object of the Association was, and now is, to advance the Mohair Industry, and at their annual meetings to report their advancements in breeding, handling and general management of their flocks.

Annual meetings were held at regular times, the seventh or last being held at Sacramento, California, on the 17th day of September, 1891. It was adopted that this Association prepare and present a Memorial to Congress and United States Senate, setting forth the condition of the Angora Goat industry in the United States, and petition for aid to make further advancements possible.

In Arizona, California, Colorado, Georgia, Idaho, Kentucky, Montana, Nevada, New Mexico, Oregon, Tennessee, Texas, Virginia and Wyoming, the industry is now well established and carried on profitably. In Alabama, Arkansas, Connecticut, Dakota, Florida, Illinois, Iowa, Kansas, Missouri, New Jersey, New York, North and South Carolina, Ohio, Washington, West Virginia, Pennsylvania and Wisconsin, experiments are being made, some reported successful. While there are no restrictions laid on the exportation of live stock from any other country to the United States, under general laws, permitting private individuals such privileges unmolested, the Turkish Government strictly prohibited the exportation of goats more than ten years ago, and new strains of blood cannot be obtained by private enterprise from that source.

Mohair, the fleece product of the goat, is apparently on a standstill instead of an advancement; the uniform fine, silky and lustrous staple suitable for most fashionable dress goods for ladies and gentlemen's wear, commands a fair renumerative price in the market of the country, and is the smallest portion of the clip.

The product of the inferior, low grade goat commands uncertain values and is the larger portion of the product.

First-class, or best blooded animals now obtainable from so-called pure blood breeders, are generally sold at high prices, transportation adding greatly to their cost, and the result of cross-breeding is frequently discouraging to the breeder's hopes to improve his stock.

Admitting that this pure blood stock is of early importation by their owners, the present system of breeding in for ten years, or longer by many breeders is unavoidable, but damaging to the constitutional powers of sires for reproduction, therefore grade stock of good constitution improves but little, and the product of fleece not improving, discourages the small breeder of grade stock.

The aid now asked for and the benefits sought to be received through the liberal action of the Government, is not for the present alone, nor for the benefit of a few, but for the good of all the breeders of Angora goats in the different sections of our country, and for the extension and improvement of an industry of great value both to the citizens and Government of the United States.

A vast domain now lying idle and unoccupied, being not suitable for any other domestic animal, can be made productive by fostering this live stock industry.

Compliance with the reasonable request

will be gratefully recognized and bear good results, while refusal will delay the further development of this most valuable industry.

Now, the Association prays that the National Legislature may recognize the importance of this subject, will pass laws and provide for the establishment of a Government breeding farm of pure blooded Angora goats.

First—Authorizing the honored Secretaries of State and Agriculture to negotiate with the Turkish Government for the sale of, and permit to purchase and remove from Asia Minor a flock of Angora goats. No less than one hundred does (twice that number being preferable) and no less than twenty-five bucks.

Second—To authorize the Secretary of Agriculture to engage suitable persons to proceed to Turkey, examine goats of different localities, to select the very best to be found, and purchase those animals by them selected and to remove to seaport and ship on the safest and best route, to the United States, giving them personal attention and care on the way, and upon the arrival in the United States, deliver the same to the duly appointed agents of our Government here, with full reports of the examinations of climate, resources of Angora, and other matters of general interest to the breeders.

Third—To authorize the Secretary of Agriculture, to select a suitable locality for keeping the said Angora stock, appoint qualified persons to take care of them, keep them separate from any private property of this kind and to provide well for their increase, keeping a register of the breeding and cross-breeding of said stock together with date of birth of the kids and their numbers for identification.

Fourth—To authorize from the increase of this flock, not diminishing the original number, to distribute to breeders in the different States at uniform rates, never exceeding one male and one female to one breeder.

Now can there be a more reasonable prayer presented, appealing to the National Legislature for recognition of the importance of this subject and providing for aid to this industry?

Therefore for the granting of their request the petitioners, the Angora Goat Breeders of the United States will ever pray, etc., etc.

By order of the A. G. B. A.

JULIUS WEYAND, Sec'y

THE VINEYARD.

Pruning the Vine.

[An essay read at the Fresno Farmers' Institute by J. H. HARDING of Oleander.]

The magnitude that the raisin industry has already assumed in this valley is far beyond the wildest guess of any pioneer vineyardist ten years back, and even now a sanguine prediction of its future destiny would likely be very wide of the mark.

We cannot even now assume that we are entirely beyond the experimental stage and are established on a firm basis.

Is it not a fact that we are yet continually altering our plans of propagation and culture, our modes of planting, pruning and training the vine to get new light, a more rational, intelligent and economic basis to reach the highest state of perfection by the surest and shortest route?

The conditions and environments of the raisin industry from its beginning in this valley have been so totally different from other parts of the world that we have had little to guide us that has proved satisfactory in the end. Each planter has usually followed his own ideas or the advice of some one but little better qualified, and as a result we are confronted with an unlimited number of theories and plans for the future salvation of the raisin industry in this county.

Have we not been going headlong under the rush to get as many acres planted to raisins as possible without stopping to investigate whether we have done it well and carefully, that the best results may obtain in the end? I fear not, and I doubt not that many of us will yet see that we have undertaken too great a task to do it thoroughly and well.

We have been unable under the pressure of work to give our vineyards the personal attention demanded to insure the greatest success. Too much must be left to inefficient and inexperienced subordinates, and any business conducted on such a scale largely must necessarily fall far below perfection or anticipated expectations.

One of the beauties of the raisin industry is that if we cannot give our personal attention to the whole vineyard, we can at least set apart a portion for experiment and study, and watch the results of our labor, so that when we gain a point we may apply it to the whole.

IMPORTANCE OF PRUNING.

Vine pruning is a part of the raisin culture that perhaps has a greater bearing upon its present and future success than any other portion of the work. It commences at the very time the cutting is selected and made before planting. None but the best, firm, ripe fruit wood should be selected. No cuttings should be made from sucker canes or coarse, pithy wood, as they are less liable to grow, and many are of the opinion that such plants as they produce have a greater tendency to keep producing too much wood and too little fruit.

In any event, it is safer to use only the best canes the vine produces, cutting close to the lower bud and as far as possible above the upper. Some success has been made by planting the cuttings directly in the vineyard, but it has not been general. Most planters prefer putting them out in nursery form for one year.

Rootings when taken from the nursery should be properly pruned, cutting the top back to one or two buds on the new wood, then all side roots should be cut clean of the stock and only those at or very near the bottom be left. These should be cut back short enough that each root will assume its natural downward position when planted, and not be bent up at the end or cramped.

A vine may grow and look well for a time if simply thrown down and partially covered, but a failure to properly prune and place the roots when planting will be a failure in making a productive and lasting vineyard.

Now we will take for granted that the vineyard has been properly planted, and during the summer all suckers have been removed, and we will go into the vineyard for the winter work.

THE FIRST PRUNING.

The first pruning of a young vineyard should not be for fruit, but merely a shaping up of the vines to form the future crown of the plant, leaving but one of the two spurs about the height you wish the crown to form.

Then as soon as the ground has been plowed away from the vines—a small strip will be left in the row, which hoe or dig away from around them as deep as plowed, and cut smooth to the trunk every side or surface root to at least five or six inches depth and compel the vine to get its nourishment from the original bottom roots.

There are many and obvious reasons why we should be so particular about keeping off the surface roots, and I will endeavor to show at least a tangible reason for the importance of this mode of treatment.

By allowing the side and surface roots to grow, they being nearer the top in the warm soil start earlier to throw sap into the young vine and soon become its feeders, leaving the original bottom roots in a weak and stunted condition. Then again, they soon get in the way of the plow and the cultivator and you are liable to tear them from the trunk and materially injure your vine. Not only this, but their tendency is to run along near the surface and are subject to excessive changes of temperature, and in the heated term are liable to check the flow of sap, and the result is a falling of the foliage from the vine and exposing the fruit to the burning sun. Some have argued that nature provides for her own wants, and if the vines throw out their roots near the surface it is perfectly natural that they should do so, and that they should not be disturbed or cut away. Upon the same theory the vine naturally throws out a superabundance of canes at the top, and why we do we cut them away? We have simply taken the vine from its wild state and have domesticated it and trained it to fulfill a certain mission, and in so doing it is just as necessary to take care of the bottom as the top.

We will now pass to the second year of pruning, still shaping our crown head of the vine, leaving three or four spurs with two or three buds or eyes, but leaving our spurs in such a way as to keep the crown from spreading apart and becoming too open or saucer shaped, but rather compact and upright.

SIDE AND SURFACE ROOTS.

As soon as the ground has been plowed away from the vines we must look after those side and surface roots, as they will keep pushing out, and you must not trust to the shears cutting them close enough. A sharp knife that will shave them close to the trunk is the best thing I have found that will stop their pushing out.

Why I dwell on this matter of root pruning is that I believe it of all things the most essential to the longevity of the vine and continued success of the vineyard.

I have visited vineyards 6 and 10 years old where I found large vines that I could turn over by hand. And why? They had never been root-pruned and these surface roots had become the sole feeder of the vine, and the original bottom roots had perished and they, with the trunk, had rotted off up to just below where these surface roots grew out, as an examination fully showed. After years of skimming over the surface next the vines, the vineyardist thinks his land is getting too packed aud he sets his plow down, rips up the shallow roots, tearing and breaking them from the trunk of the vine, and when he cross-plows again he sees his singletrees here and there hooking on to a vine and turning it over; he finds that in less than a minute he has destroyed what he has been trying years to establish—a model vineyard. We must remember that a vine grown from a cutting has no top root and is entirely fed by laterals, and we have the power of placing those feeders anywhere to a reasonable depth in the soil, and by so placing them down in the soil they are not subject to any radical changes of temperature, but keep up a uniform healthy circulation in the vine during the heated term.

THIRD YEAR PRUNING.

We have now arrived to the third year with our young vineyard and can now commence in reality to prune for fruit, as our vines should by this time have their crowns well shaped and the trunk almost clear of surface roots to the depth we plow, but still we must not neglect to cut away a few we will find here and there. We will find our vines healthy and strong. Now it's a matter of as much speculation as to how many spurs should be left and how many eyes or buds should be left on each as to who will be the next president of the United States. Each vineyardist has his own plan or theory, and scarcely any two agree.

I shall not attempt to solve the problem here as I might come in conflict with about every vine planter in hearing, and I will leave the whole matter for discussion after touching on

SUMMER PRUNING.

I think this matter of summer-pruning has been a mere experiment with most all of us. I have tried cutting back once, twice, three and even four times, and while it has helped greatly to protect and keep the fruit from burning, I am not fully satisfied it is all we can do to almost entirely protect the fruit. Cutting off the tops, no matter how often or close, has not fully prevented the vines from falling apart and exposing the fruit in the center.

I think the young shoots as soon as they have grown a foot or eighteen inches long, should be cut back just above the fruit bunches, to keep the wind from breaking them off, if nothing more. Then as the next or later shoots appear above where these have been cut, also cut them back too, then immediately tie a piece of common grape twine loosely around a few center shoots and stop pruning. I think by such treatment your vines will soon have a natural and proper shade and cannot fall apart and expose the fruit, but fully protect all the berries and save much expense and vexation in the season of picking.

[There was some difference of opinion manifested in the discussion, which followed the reading of Mr. Harding's essay, on the advisability of removing the side and surface roots of the vine. Some claimed that they had vines which would have been destroyed by so doing, because they had found that all below the so-called surface roots had rotted off. Mr. Harding, however, maintains his position that wherever the lower layers of the soil are not waterlogged, it is desirable to make the vine depend upon its lower root system rather than upon surface roots, which are in danger of being torn out in cultivating or burned by the summer heat in the surface soil. The question is an interesting one. We would like to have it discussed.]

THE MICROSCOPE seems to be very busy of late in bringing to notice parasites destructive to human life and health. Its latest achievement is the discovery of a parasite which infects paper money and is found nowhere else. It is invisible to the unassisted eye, does not attach itself to persons, but multiplies at a rapid rate.

IS THE MOLE BLIND?—"As blind as a mole" must henceforth take its place in the heap of shattered similar sayings, for a German naturalist has demonstrated that moles have eyes and that they can see as well as other animals.

THE TELEGRAPH IN SPAIN and the post-office system of that country have been consolidated.

FRUIT MARKETING.

Statements About Dried Fruit Prices.

We alluded briefly last week to the causes which led to the depressed condition of the raisin and dried fruit trade last fall. The statements in a letter of a California raisin producer to the *Chronicle* are as follows:

BOSTON, Jan. 14, 1892.

Now that the California raisin product for 1891 has passed from the grower and packer into the hands of the Eastern jobber, and at prices considerably below those obtained in former years, many of your readers will no doubt be interested in learning that the prices of California raisins in Eastern markets are advancing, and that the same men who have whipped our producers into accepting reduced prices for their crops with the old story of large crops and over-production, are now talking shortage in raisin stocks. Being interested in this matter as a grower, and having made quite an extended trip through the Eastern States, I have been looking for the causes of the reduced prices paid to vineyardists during the past season, and as a result of interviews with some of the leading jobbers in California dried fruits in Chicago, New York and Boston, I have come to the conclusion that our raisin growers have in their own hands the solution of this matter.

If they desire to dispose of their product at prices of former years, two things must be observed by them. First, the quality of the pack should be improved. More care can and must be taken in the handling of the fruit in all its stages if our output is to sell at the same prices as the imported. Eastern jobbers admit that our California London layers compare favorably with the Malaga in the size of berry, amount of saccharine matter contained and in the thinness of the skin, yet the Malagas are selling at from 25 to 50 per cent above the California, simply because they have been more carefully handled in the harvesting and cure, and have been packed in more attractive style. Malaga boxes are some larger than our own, enabling looser packing, thus better preserving the natural shape and size of the grape.

Second—The vineyardists, both large and small, should dispose of their crops through an association organized by them for the advancement of their mutual interests, and this association, controlling the entire product of its district, could more successfully dictate prices to the buyer than individual buyers, each operating independent of the other. The expense of such an association would be very small, and I am convinced that an organization of this kind would have secured for our vineyardists higher prices for the 1891 crop.

In this connection the following circular, handed me by a well-known New York house, may be of interest:

"The grocery and fruit trades are to be congratulated for the wise and conservative course they have pursued the past season with regard to buying California dried fruit, and have saved a great deal of money by not buying early for future delivery, as they formerly have been in the habit of doing. You will remember in a previous circular we advised this, and the result is those who have waited until the goods arrived have been enabled to buy California raisins at phenomenally low prices that are not only safe, but will show them a large percentage of profit, which will continue to increase as the season advances. It should not be forgotten that we have had only three months' consumption of this crop, and have nine months more in which to consume the present stock before the next crop comes to market. Furthermore, the next crop of raisins in California is likely to be restricted as to quantity, and there is even now talk of combinations being formed by the raisin-growers to keep prices up and not let them be sacrificed as they have been the past season. Therefore, we think it is quite improbable that the next crop of raisins will open except at much higher than present prices, and as loose muscatel raisins in bags will be just as good then as now, there is not the least danger in having some left over. But we have not the remotest idea that any one will have any to carry over, because we estimate the present stock of all kinds of raisins in this country at fully 500,000 boxes less than it was last year at this date; besides prices are about 50 per cent lower, which increases consumption. Present prices of California raisins practically shut off importation of foreign raisins, as they cannot successfully compete, and though we were formerly large importers and dealers of Valencias, we are forced to the conclusion that they are not in it with Californias. Since California raisins dropped to panic prices, about three weeks ago, we have never had the least doubt that they were good property, and we believe now, as we said then, that they are better than gold dollars at 90 cents. We have been astonished at the large and continued demand for California raisins in bags, and the time is not far distant when we shall be obliged to advance our prices. California raisins may advance 25 per cent, or even 50 per cent, and still be comparatively low."

I give you the results of my investigation into the Eastern fruit markets, in the hope that California raisin growers will take more pains in the handling of their crops and that some interest may be aroused in the matter of the formation of local associations.

ARTHUR BULL.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The following named sisters have been recommended as willing workers in the cause of Woman's Work in the Grange. They are therefore appointed such committee for the coming year. The first named is constituted chairman of the committee, unless the committee, at a meeting, shall otherwise decree. If there is any one of the sisters named who cannot, or will not, discharge the duties of the position for the honor conferred, I hope she will at once notify of the fact, and at the same time recommend some other sister for the position. But I trust each one will serve. The work of woman in our Order is far-reaching and of the highest importance. Without woman the Grange would be only half a success. With her presence, her counsel and her admonitions it cannot be any part a failure: Sisters Mary Merrill of Waterloo Grange; Hattie S. Jones of Yuba City Grange, Amos Adams of San Jose Grange S. J. Cross of Roseville Grange, S. H. Dewey of Temescal Grange, M. Brainard of San Jose Grange, N. A. Alling of Stockton Grange, E. Z. Roache of Watsonville Grange, C. E. Kinney of Temescal Grange, E. Greer of Sacramento Grange, and Mary E. Saxton of Santa Rosa Grange.

If you want an open meeting, and will get the farmers to attend it, send for a speaker. Some of the Past Masters, or any of the officers of the State Grange, will feel honored to respond to your call.

Send the name of the person you want for County Deputy. The law requires the one named to be a Master or a Past Master.

Organize the farmers. Now is the time. Lawyers, doctors, teachers, preachers, bankers, railroad managers, politicians and mechanics have their own independent organizations. Why not have just as thorough an organization among farmers? No class of people produces more, or is more severely tax-ridden than the farmer. Give us Granges everywhere. Though the Grange is non-partizan, yet it is both purifying and elevating in politics. It teaches loyalty and true citizenship. It makes voters independent by making them more intelligent. It gives opportunity to know men and to study principles. The Grange is National, not sectional. It is an organization, and it requires organization to meet the issues of the day. Farmers of California, do you want your business and your home more prosperous? If so, organize. Help make a Grange.

Look well to your public school. See to it that the children under your care, and in your jurisdiction, have that gentle training that will dignify them and the work they are to do.

Childrens' Day is a feature of more than ordinary note with the Grange. The National Grange wants one day in each year dedicated to the children. Let each Grange in this State see to it, that at the proper time a day is given to the Little Ones. Sonoma County Pomona Grange has already taken an interest in this matter; for the coming outing they propose to take the Little Ones to the sea-side. A picnic, &c., will be held at Dutton's Beach, Marin county. Date yet to be determined. We hope our friends everywhere will provide to entertain and instruct the children. Remember the Little Ones and suffer them to have one day of sport under the guidance of your Grange.

If you are going to keep up with the times and with the important events which make history, you must read. The questions of the hour are of importance, not only to the present generation, but to the coming one. Our Order will not do itself full and proper credit unless, as an Order, it keeps up with, and abreast of, all the questions which affect home, family, finances, Government, education, temperance and progress. No idle man can do his duty to himself in these trying times. Patrons of California, you have always been found at your post of duty, and very faithful to the trusts reposed in you! May you ever be thus. Bear in mind that no tree bears fruit in summer that does not blossom in spring. This is another springtime in our Order. Let your trees—your own Grange—bear blossoms. Care for these blossoms, and in the later summer you will have fruit; ripe fruit for the Grange. Encourage improvement among the members. Nature's orders are, "Forward March;" she never retreats. Send an application for membership, through the post office, to a few of the best farmers in your neighborhood, who do not belong to the Grange. Perhaps a few of them may want to know more about the Grange. Possibly a few might join the Grange. No one of us can tell which seed will grow and which one will perish. The trial is worth the effort.

If *you* are the Master, Secretary, Lecturer or other officer of the Grange to whom communications are sent, it is your duty to see the same at once placed before the Grange. The Lecturer should, at proper times, read from the Journal of State and National Grange Proceedings. Also from reports of special committees. By thus doing, much useful information will be imparted and the otherwise idle time of the Grange, will be utilized and improved.

Patrons' Relief Association.

The work of this organization, which was instituted by action of the State Grange at its last session (see pages 53–56 of Annual Report, 1891) is rapidly taking form, and will soon be ready to invite membership and issue certificates. The committee, consisting of Bros. A. T. Perkins, S. Goodenough and S. T. Coulter, P. M. of S. G., placed in charge of this important addition to Grange interests on the Pacific Coast, have been industriously attending to their duty, secured a considerable membership from Temescal and Eden Granges, and completed the formalities of organization. At a meeting held in Oakland, at Grange Hall, Jan. 16th, the following Board of Directors was elected: Messrs. A. T. Perkins, S. Goodenough, E. R. Jones, J. H. Hollister, A. T. Dewey, M. L. Gray, Henry Mohr and Mesdames Helena Gading and N. G. Babcock. Oakland was selected as office headquarters.

At a meeting of Directors held at 1304 Franklin St., Oakland, Jan. 23d, Mr. A. T. Perkins of Alameda was elected President, J. H. Hollister of Haywards, Vice-President, and S. Goodenough of Oakland was chosen Secretary and Treasurer. Regular monthly meetings of Directors will be held at 10 A. M. on the third Monday in each month. The Secretary and Treasurer was required to give a bond in the sum of $1000. The President and Secretary were made a committee to procure the printing of the Constitution and By-Laws of the Association and all necessary blanks and documents for the successful prosecution of this important work. They will be in readiness soon to lay this matter before all the Granges in this State, and extend its advantages to all Patrons between the ages of 16 and 60. We bespeak the favorable attention of all Patrons in behalf of this institution, which, we believe, is sure to be of great benefit both to the individual member and to the welfare of the Grange.

What the Grange has Done.

Letter from Mr. H. E. Hayes, Grand Master of the Oregon State Grange to the *Northwest Pacific Farmer:*

"I am willing to concede all the good the Alliance or any other Order has done or can do; they can never take the hard-earned laurels of the Grange from us. What Order first brought down the price of all kinds of farm machinery in Oregon? The Grange. What Order broke up Freadlander and his wheat trust, and placed our wheat in the markets of the world? The Grange. What Order first urged the Interstate Commerce Commission, and forced through the courts test cases, until we got the decision that railroads did not have vested rights to plunder the people at will? The Grange. What Order was instrumental in getting the Secretary of Agricuiture to be made a member of the President's Cabinet? The Grange. Who were the first to urge that United States Senators should be elected by the people, and the free coinage of silver? The members of the Grange. And we have had a legislative committee at Washington urging the pure food bill, postal telegraph, to modify the tare at present levied on the cotton of the United States, and to modify the tariffs so that the raw material should be equally protected. It is not necessary for me to say more, and the man who thinks that any organization that is educating the laboring masses of our country upon the laws of trade and commerce, and the system of government under which they live, is a failure, is certainly a little mistaken. If the Grange had done nothing more than to teach its members parliamentary usages, and to lay aside the prejudices that existed after the war, which it has done to a great extent, it would have been amply paid; but we cannot gather all into our fold any more than the Baptist church can into theirs. Still that is no sign that others are not doing a good work. Charity is a noble trait of character; let the Grange concede to others all the noble qualities to which they are entitled."

FARMERS' ALLIANCE.

From Mr. F. P. Cook.

The Canal Question—A Personal Explanation.

FRESNO, Cal., Jan. 22, 1892.

TO THE EDITOR:—I feel under obligations to Bro. Jesse Poundstone, Secretary of the Executive Committee of the State Alliance, for his kind and courteous note in reference to my article in a recent number of the *Central Californian* of this city, and the very fair statement which he makes both of one position I took in that article and of his own. There are some facts in addition, however, which deserve mention in this connection.

1. As to whether my position or his is correct in the matter of the Nicaragua canal having been generally discussed and passed upon by the Alliance in this State, I leave members of the Order in each section to judge for themselves.

2. The only object of my article was to preserve peace and good will in a local matter here, and to show the falseness (as I believed) of a position into which the Order in the county had been put by a majority of delegates to the County Alliance.

3. I opposed, very strongly, the publication of the *Central Californian's* article criticising Pres. Cannon, and did all I could to prevent its publication, *not* because I thought the proprietors of the paper did not have the right to speak their mind, but because I at that time believed Pres. Cannon's position to be right.

As to the canal matter: One point seems to have been overlooked by both sides in this controversy, so far as what has been printed is concerned, and that point is that *Government ownership of the Nicaragua canal concession is now impossible except by purchase.* The Government, under Presidents Arthur and Cleveland, had a chance to secure the concession, but refused to do so. Then private citizens—not very rich ones either—of this Government secured it, and it is now theirs, and cannot be taken away from them by force, though perhaps they might be willing to sell it to the Government. It must, then, be apparent to every level-headed member of the Alliance, and other citizens as well, that a general sort of demand for Government ownership in this case is visionary and impracticable, and shows a lack of that careful study and wise suggestion in the matter which we have a right to expect from the State President of the Alliance in a matter so important to the farmers and other people, of the Pacific Coast in particular. So far as it goes, Bro. Cannon's suggestion that ships passing through the canal should have entrance, duty free, to Pacific Coast ports, strikes me as a good one, if in application limited to vessels bound from one part of the United States to another and carrying only United States produce, leaving foreign produce to pay duty. Beyond that, I would suggest that the pivotal point in this whole matter is to secure lower freight rates, and that if this can be secured by the Government guaranteeing the bonds and controlling a majority of the stock for a number of years, the Government ought to take that much hand in it, in that way or in any better way which is now practicable. As a general proposition, I am for Government ownership in preference to any other method of control, and was before I ever heard of the Farmers' Alliance; but in this case such ownership *has ceased to be practicable*, unless by purchase. The practical thing for the Alliance movement now to do is to see that everything that can be done by law shall be done to insure lower freight rates by way of the canal as a result of Government assistance.

And now, since there has been bitter and determined hostility to me personally on the part of a few in the Order in this State, since I gave evidence a year or so ago that I should oppose the building up of cliques and little monopolies of privilege within the Order, I deem it proper on my own behalf to offer a few words of personal explanation. Born in Michigan in 1860, I learned early the printing business, and went from that to newspaper work, at which I continued most of my time in the same State, until four years ago. So long as I remained at those businesses I was never out of a position, save when I chose to be. But ill health, incident thereto, brought me to this State by way of Washington Territory in the spring of 1889. Naturally the care of my health should have been my chief concern; but those who knew me in Michigan know that I always put myself out to forward reform movements, and those who have known me intimately in this State know that I have earnestly continued reform work here, whenever and wherever opportunity offered, regardless of consequences to myself. At the request of Bro. Barbee, one of the grandest Christian men among us, I entered the organizing work of the Farmers' Alliance in Nov. 1890, and continued to do such work to the best of my ability until the nervous strain which it involved compelled me to quit it six months later, when I practically surrendered my commission. In that six months, with the utmost economy and correctness of life, I was able to save $55 above necessary expenses while engaged on behalf of the Order; some $17 of that being unpaid at the time I quit, and $6 of it unpaid yet. I thought then that it was time for a man out of health, out of money, and compelled to learn a new business, to begin to look after his own interests a little better, and I am doing so. While I held a commission as organizer, and since, I refused to be a party to any little cliques that were formed, and little monopolies that were projected, inside the Order, because I thought and still think them wrong in principle. I endeavored to use what power I had for the general welfare of those with whom I came in contact. I enjoy a clear conscience for what I have done, and the principles I have noted shall guide me in the future as in the past; and I shall continue to do what I can (consistently with a reasonable regard for myself) to forward both the principles of the Alliance and its organization.

FRANK P. COOK,
Late Deputy State Organizer,
F. A & I. U.

Red Hot Resolutions.

The Napa County Alliance In An Indignant Mood.

The following resolutions were adopted by the Napa County Alliance at its last meeting:

WHEREAS, The *Weekly Call* of Dec. 3, 1891, published what is claimed to have been said by David S. Jordan, President of the Stanford Jr., University, entitled, "Wastefulness of Farmers," in which he, Jordan, claims that loss to machinery from lack of proper housing, poor roads, all the Saturdays spent by farmers going to town, the increasing number of idlers hanging around R. R. stations, stores, etc., as the result of the waste or idleness of farmers.

1st, He ignores the fact that farmers are compelled to use machinery.

2d, He presumes that farmers are able to purchase material and take the time to build sheds for such machinery.

3rd, That poor roads are attributable to the laziness of farmers only.

4th, That farmers have no needs that, require them to go to town, and when they do it is from indolence and a waste of time.

5th, That idlers around stores, R. R. stations, etc., are farmers.

And, finally, he says if farmers now worked as hard as they did 30 or 40 years ago, there would be no hard times; therefore,

Resolved, By the Pope Valley Alliance, Napa Co., Cal., in regular session, Dec. 26, 1891, that we denounce the above insinuation and statement made by Jordan against the intelligent and industrious farmers of America as an insult and a lie, and could only emanate from the devil, who is said to be the father of liars.

Resolved, That such utterances, coming from a man at the head of a great institution of learning, pampered by a salary of $10,000 per year, for five hours work per day, every dollar of which he knows has been robbed from the horny hands of toil by a system of the most gigantic legal robbery ever known in the annals of history, are doing more to bring on a bloody conflict between capital and labor than all the speeches ever uttered by the red-handed anarchists.

Resolved, That our pride in the great university is humbled by a knowledge of the fact that every dollar of the immense sum that built the institution was taken by robbery, claimed to be legal, from the producers of this nation.

Resolved, That we are ashamed that such an institution should be presided over by a man so ignorant of the condition of the great body of producers as to be capable of making such utterances, or, if not ignorant, willing to please his master and the monied aristocracy, with which he is surrounded, would consent to rush into print with such a slanderous lie. Well does sacred writ describe him, "When thou sawest a thief thou consentedest with him. Thou givest thy mouth to evil. Thou sittest and speakest against thy brother; thou slanderest thy own mother's son."

The above resolutions were referred by the Pope Valley Alliance to the County Alliance for its consideration and adoption before being adopted by the Pope Valley Alliance. They were adopted Jan. 9, 1892, by the Napa County Alliance.

Calaveras County Alliance

At the last meeting of Calaveras Alliance the following resolutions were unanimously adopted:

Resolved, That this County Alliance do most heartily endorse the action of the California State Peoples Party Convention and the platform as a whole.

Resolved, That Calaveras County Alliance appreciates the benefits derived from the State Business Agency, and considers that it should on no account be abandoned, even if funds must be raised in some way to pay expenses over and above the commission charged.

Resolved, That we extend to Bro. J. L. Gilbert our sincere thanks for his attendance at our County Alliance meeting; for his advice and instructions, and wish him success in his work.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Forest Preservation.

So far as a close perusal of the press of the entire arid region discloses, there is an entire unanimity with a single exception, upon the desirability, indeed the absolute necessity, of taking immediate steps to guard the forests of the watersheds of streams used or to be used for irrigation, in order that the flow of those streams may be prevented from diminution or absolute cessation.

The only present method of so guarding the sources of these streams, is to withdraw the unentered Government lands from the market, and already a good commencement has been made in this direction. Singularly enough the only opposition that has been developed to this necessary step has been in California, and a memorial has been prepared for presentation to Congress, praying that the lands withdrawn be restored again to entry. How any irrigator or any intelligent man with the interests of irrigation at heart, can indorse such a step is past understanding.

In Colorado the necessity for forest preservation is fully understood. The press of that State publishes with commendation, the following plan of watershed protection, outlined by W. N. Byers, one of the oldest residents and most intelligent newspaper writers of that State:

"I would set apart the summit of every range, and of every spur thereof, and of every detached group of mountain peaks, that reaches up to or above the limit of timber growth as a national reserve for the preservation of timber and water, and I would maintain and protect them with all the safeguards of law and power of police that can be brought to bear. Taking the crest of the range, spur or group of mountains, along its axis as a center line, I would extend the park reserve on either side therefrom, outward and downward, four, six, or eight miles, more or less, depending upon circumstances and conditions, to certain designated range, township or section lines, more or less nearly parallel with the center line of the reserve. If this step is taken soon it will interfere with few vested rights. It will provoke very little opposition. It will protect the heaviest, largest and best bodies of timber in all these mountain sections. It will preserve all the most important sources of water supply and natural reservoirs–snow banks, ice fields, alpine lakes –the main reserve and resource for our midsummer irrigation. There can be no objection to including the strip of barren land between the upper limit of timber growth and crest of the mountain or range, in the timber reserve. It is more or less covered with spruce scrub and willows, and is in reality the beginning and best of our ice and snow reserve for midsummer water supply. You are aware that points of timber extend upward on either side in sheltered places almost to the crest. In fact they will often be found passing each other like interlocking fingers. It is better to have a few large reserves than a great number of small ones. The latter plan will lead to confusion and greatly add to the expense of their government and protection. This is one great reason for my plan of continuous reserve along the range from the north to the south boundary of the State."

Large Irrigation Enterprises.

There appears to be a rivalry between what may be called the private irrigation enterprises and those conducted under the provision of the Wright Act. From various portions of the State comes news of large reservoir and canal schemes suggested, or well under way. The rivalry is of the friendliest character, and is welcomed by all who have the development of the State at heart.

A notable recent event was the convention held at Fresno on the 21st to consider the feasibility of inaugurating inland navigation of the San Joaquin valley by means of the improvement of the river of that name and the construction of canals which should be available both for irrigation and transportation. That such canals are perf ctly feasible is shown by the fact that all the large irrigation canals in India are constructed for the express purpose of filling both wants—irrigation and navigation. It was decided to lay the matter before Congress and ask for aid in carrying out the plan.

It is reported that the proposal to organize a Wright law district at Oakdale to complete the partially built canal from the Stanislaus river at that point, has been abandoned and that the work will be undertaken with private capital. The Oakdale Irrigation Company has spent something like $100,000 already in the work. A dam was built across the river just below Knight's Ferry, part of which has since been washed out, and the canal was dug nearly to Oakdale, with two small gaps left uncompleted. Three flumes several hundred feet long need to be built, but it is claimed that $10,000 to $15,000 would complete the canal to Oakdale so that water could be delivered on the great body of exceedingly fertile land in that vicinity. One thing is certain, there are few large bodies of land that are better situated for irrigating than this, and few that would respond more readily to the intelligent application of water. It is a pity that some plan cannot be decided upon for the immediate completion of the system.

The 178 canal scheme in Kern county is again actively under discussion and it is said that capitalists have been interested who will undertake the work. The plan is to issue bonds to obtain the necessary funds, and considering the certainty of a good return upon such an investment there should be little difficulty in carrying out this idea.

Work was some time since suspended for the season on the Hemet dam, in the northern part of San Diego county. The location is so well up in the mountains that the climate is too severe during a portion of the winter months for masonry work to be properly done. The dam is now between 50 and 60 feet in height, and is to be 150 feet when completed, with foundations reaching 20 feet farther into the earth, or 170 feet all told, of solid masonry. The reservoir will be twice the capacity of the famous one at Sweetwater, and the engineer of the Hemet dam is the same one who completed the Sweetwater structure—J. D. Schuyler of San Diego.

The dam being built by the Sharon estate on the Chowchilla river, in Merced county, is an immense structure. It will be 110 feet high and 600 feet long across the top. The reservoir thus formed will cover 1200 acres of land and the water will be 40 feet deep. It is expected the structure will cost $400,000, and besides furnishing water for irrigating the lands of the estate, there will be a large amount available for disposal to others.

The Rosenthal colony lands in Tehama county have changed hands partially and it is reported that it is the design of the new owners to construct a canal from some stream in the Coast Range and irrigate these lands.

A Great Arizona Enterprise.

Brief mention was made recently of an extensive irrigation enterprise that was on foot in the valley of the Colorado river. The Denver *Republican* now furnishes full details of the scheme, as follows:

Articles of incorporation of the largest capitalized irrigation company ever organized in Colorado have been presented to the Secretary of State and duly recorded. The company is known as the Arizona and Sonora Land and Irrigation Company. The capital stock is $7,500,000. The incorporators are Samuel N. Wood, F. P. Earnest, Charles H. Dow, J. C. Beatty, James H. Frank and Frank A. Miller. The directors are the gentlemen named as incorporators. James N. Carlile, Charles M. Kittridge, Frank Church. The officers are C. H. Dow, president; James H. Brown, first vice president, J. C. Beatty, second vice president; Frank A. Miller, secretary.

The company owns 1,500,000 acres of choice mesa lands in the northwestern portion of the State of Sonora in the Republic of Mexico. It also has 60 miles frontage on the southern border of Arizona, east from the Colorado river. The object of the company is to construct a canal which will head at a point 28 miles above the town of Yuma, Arizona, from the Colorado river. The canal will be carried into Sonora by concession from the Mexican Government, and it will make productive what is estimated at 1,000,000 acres of land.

It has been figured that the cost of this canal system, from its source to the boundary line, which is where it empties into one of the sloughs near the coast of Sonora, and from thence into the gulf of California, will roughly approximate $2,000,000. The width of the canal will be 100 feet on the bottom. The canal heads near Stevenson's island, a rocky protuberance which rears its head above the surface of the water in midchannel of the Colorado river.

This is the only point on that river for a great many miles from which an irrigation canal can be taken. From this point it is not only practicable, but comparatively a simple and inexpensive matter.

At Stevenson's Island it is proposed to erect a dam and lock which will not in any way interfere with the navigation of the river. The lock will be so constructed as to raise the water 12 feet above low water mark. A bill is to be presented to Congress to obtain permission to construct the proposed lock, and it is believed that there can be no objection to it since it will assist rather than impede navigation by overcoming the heavy fall at this point in the river. There is little doubt that the measure will meet with legislative sanction.

The advantages of this canal not only lie in the increased quantity of land made subject to redemption, but it will form a most important factor in furnishing necessary water supply to people who take up land there. The entire property of the company consists of 296,080 acres of choice semi-tropical fruit and farming lands, held in fee simple, and a concession from the Mexican Government of 1,500,000 acres in one tract, comprising all of the mesa lands in the northwestern part of Sonora. The title comes direct from the Mexican Government, and is devoid of any restrictions or conditions whatever.

District Progress.

A meeting of land owners in the neighborhood of San Dimas, La Verne and Glendora, Los Angeles county, was held last week, to take steps for the formation of a district under the Wright Act. The San Jose Ranch Co., which owns several thousand acres of land in that section, was represented and is in favor of the enterprise, thus setting, by the way, a good example to large land holders elsewhere.

The scheme of the projectors of the district is to obtain irrigation water from San Gabriel and San Dimas canyons. The combined water in these canyons is never less than 2400 inches, and for many months in each year is over 6000 inches. It is proposed to dig a tunnel, over a mile long, through the mountain separating the San Gabriel and San Dimas canyons, and then conduct the water from the former canyon through the tunnel to the San Dimas canyon stream. Then to conduct the confined waters in an immense cement ditch to an $80,000 reservoir that has already been provided for on Carrion's ranch, west of Lordsburg. It is planned that the land in the proposed district be bonded for $20 an acre. That will yield a sum of over $700,000 for obtaining the water and distributing it on the land. About 38,000 acres may be brought under irrigation by the district.

Many land owners, whose property will be included in the domain to be irrigated, inform us, says the Pomona *Progress*, that they are very much in favor of the plans for the new district, and, looking at it from the stand of an outsider, we believe that no better plan for the enhancement of the value of the great tract of land about San Dimas has ever been proposed than this. There are dozens of our experienced fruit growers who say that for fertility of soil and freedom from frosts the San Dimas valley is among the very best in all this region. The orange orchards up there are unusually thrifty, and the nursery stock from there is first-class. It has been shown what wonders a little water will do on the soil there, and it is a reasonable certainty that with complete irrigation all over the valley, that may become some day a mammoth orchard.

Land that is now worth $100 an acre in the San Dimas country will easily bring $200 or $250 when irrigation becomes a sure thing. The Wright Act has been the means of bringing thousands of acres of dry land in this State under cultivation as orchards. There are great tracts of acreage property that have been quadrupled and quintupled in value from dry and grain lands into the finest fruit lands, in only a year or two, by the formation of irrigation districts. The San Dimas people cannot fail to increase the usefulness and value of their acreage property by the formation of a district as soon as possible, providing their plans for obtaining irrigation water are feasible.

Three hundred thousand dollars worth of bonds of the Perris district have recently been sold to Eastern capitalists at a fair price, and will be delivered on February 1st.

An offer of 85 cents on the dollar is said to have been made for $750,000 worth of the bonds of the Central district, Colusa county. The law requires that no bonds shall be sold for less than 90 cents.

The residents of the Jamacha Irrigation District will hold an election on January 30 for the purpose of voting upon the issue of $700,000 in bonds to secure water rights and construct a distributing system, says the Otay *Press*. It will be remembered that the Jamacha district has acquired the rights of the San Miguel Water Co., and will thus own its water. It is estimated that the natural flow of water will afford all that will be required for some time without the erection of expensive reservoirs.

The question of the taxation of the property of irrigation districts has come up in several localities, and it was finally referred to the Attorney General, with the result that he has given the following opinion, that such property is not taxable: "Irrigation districts formed under the law are *quasi* public corporations, organized for a public purpose, and the property is for the use of the public —that portion of the public and their lands within the district. Therefore I am clearly of the opinion that the property of such irrigation districts is not assessable, either for State or county taxes."

That the Wright law operates beneficially in forcing speculators to bear their proportion of the expense necessary in enhancing the value of their lands, can be seen from the following extract from a local paper in regard to the working of the Alta district: "By a careful analysis of the assessments paid to Alta Irrigation district, it is found that more than one-half of the assessments are paid by nonresidents of the district, who have invested in real property in this district for the purpose of speculation; and by those who have a little surplus capital and are desirous of placing it where they can reap a benefit from the labors of others without any great effort on their part. As the assessments in this district are about one-half for interest in bonds, etc., that expense is paid by nonresidents, leaving only the expenses of running the water to be paid by those who use it, and this money is also expended in the district for labor and reverts back to those who first paid it and is kept in our midst."

A dispatch received in this city from Chicago last week says: "To transform the dry, hard wheat lands of Northern California within the next twelve months into beautiful fruit lands is the purpose for which it is stated the Stockton and Lodi Irrigating Canal Company was incorporated under the laws of Illinois with a capital stock of $2,000,000. Before spring opens the work of irrigating the California wheat lands will be well under way, the promoters declare.

"The company will build a complete system of canals," said S. R. Walker, one of the incorporators, "and the land will thereby be made doubly valuable. We shall employ the lock system for transportation and the canals will be fed by neighboring streams and by great reservoirs that will be built in the vicinity. It is a venture that has been successfully tried in other parts of the State, and we are sanguine of our success. I am not at liberty to divulge the names of the stockholders, but I can say that they are prominent in business circles in Chicago."

"What was the object of incorporating in Illinois?" was asked.

"The offices of the company will be in Chicago, and as it has Illinois capital and Illinois men, it was thought advisable to incorporate in Illinois."

"How soon will work be begun?"

"Before spring opens," returned Mr. Walker. "We shall put a large force of men at work immediately in order to get through before the beginning of the year 1893." It is reported in San Joaquin county that the new company was organized to carry out the plan of the old Mokelumne Ditch and Irrigation Company, for the irrigation of a large body of land lying south of the Mokelumne river. The canal will be taken from that stream near Westmorelands bridge and will run to the vicinity of Lodi.

A Novel Exhibit.

The people of Stanislaus county, who are interested in the subject of irrigation, are discussing the feasibility of making a novel display at the Chicago Exposition. The idea is to prepare a large working model of the dam now being constructed across the Tuolumne river by the Modesto and Turlock irrigation districts, showing the entire plan of the work, with the canal headgates and all the other detail of the enterprise. This structure is claimed to be the largest overflow dam in the world, and a model such as the one proposed would be a valuable object lesson for those interested in the science of irrigation.

Provision has been made for a display of irrigation development at the Chicago fair, and already steps are being taken in other parts of the State for preparing models of irrigation reservoirs, canals, pipe lines, etc. The people of Stanislaus county owe it to themselves that an adequate display be made of the great work undertaken by them.



In a Country Store?

[Written for the RURAL PRESS by I. H.]

I opened the door and surprised them,
Caught in the obvious act,
Kissing just back of the counter,
A plain, undeniable fact.

He blushed like a very schoolboy;
She turned in confusion away.
I, an old woman of fifty,
What word of reproof could I say?

Lovers abashed at detection,
Plainly, conviction was clear;
Ah! so you think; but it happens
They had been married a year!

Quickly dispatching my errand,
I left them, but still in my heart
A glow as of sunshine, an echo
Of music that will not depart.

Twenty years hence, friends, may some one,
When I shall have long been away,
Still find you kissing like lovers,
Just as I found you to-day!

Against Wind and Tide.

People in Maysville always shrugged their shoulders when Mark Lamson was mentioned, and usually the expressive gesture was followed by some depreciating remark.

"Comes of bad stock," old Judge Lennox would say, in his pompous dictatorial manner. "All the Lamsons were worthless, and Mrs. Lamson was a Hodge, and everybody knows what they are."

The house in which Mark was born, and where he scrambled up to manhood, was a large farm house, tumbling to pieces inside, with a roof always being patched against leaking, doors without locks and with shaking hinges, windows that rattled in every wind, ceilings that dropped plaster whenever a heavy foot shook the upper rooms and furniture in the last stage of shabbiness. His father and mother were slatternly in dress, shiftless in household management, and the handsome bright boy was over-indulged and neglected as their own indolence suggested.

But Mark Lamson inherited none of the leading traits of his parents. Probably in some remote ancestor there was a mixture of energy, resolution and ability of which the Maysville gossips had never heard, and for which they certainly gave Mark no credit. It was in vain that the principal of the Maysville high school declared that Mark had graduated with the best record he had ever given in the school. It was useless for the lad himself to keep his life free from blame, and earnestly endeavor to do his duty. Maysville could not forget that he was a Lamson, and his mother was a Hodge—"bad stock!"

As he passed from boyhood to manhood, Mark began the unequal struggle against fate and circumstances, that was dictated only by his own energy. His father had been able to get bread from the farm by a lazy tillage that gave the bare necessities for the table; his mother had a very small income that gave the three clothing of the poorest description, and both were in open-mouthed wonder that Mark was not content, as they had been, to dawdle through life and "make out" with what they had.

And Mark, struggling to attain better things, with only a vague, undisciplined longing for improvement, met no encouragement at home or abroad. He tried to obtain a situation, but employers were shy about giving work to a Lamson. He met with a cool reception at the Maysville social gatherings, having no knowledge of how to repair his own linen or keep his poor clothing even tidy. Boy-like, he imagined a new suit and gay necktie were all-sufficient for a party, and did not heed the frayed cuffs and broken collars at which the Maysville belles turned up their noses.

But, in spite of his father's lazy comments, his mother's fretful remonstrances, Mark Lamson, finding no employment outside, determined to see if the farm would not find him in work.

"Oh, yes; do as you please," his father said. "But there is no money for new fangled fixings, and the land is about worn out. Plenty of it, to be sure, but 'tain't worth shucks."

So, single-handed, Mark undertook the work of bringing up the old farm. Early and late he toiled, repairing fences, weeding, picking stones, rooting out dead stumps, preparing his land, without one hand stretched out to help him, one voice to wish him success. Thomas, the only man his father employed, gave a surly refusal to aid, upon the ground that his regular routine of shiftless farming took all his time, and Mark patiently submitted.

He was twenty-one years old, when into his dull, monotonous life came a new stimulus—a hope, bright as a vision and almost as baseless. He fell in love! He did not walk in cautiously, counting his steps and weighing his chances, but he fell in plump, suddenly, hopelessly.

There had been a warm discussion at the judge's about inviting Mark to the party that was to celebrate Essie's eighteenth birthday and her final return from boarding school. But the pet of the house had a will of her own and a lively recollection of Mark's handsome face and boyish gallantries, and insisted upon his being invited. Mark, carrying in his memory only a pretty little girl, found himself confronted by an undeniable beauty, a face to win homage in far more pretentious circles than Maysville boasted, and a general grace of manner none of the girls of his acquaintance had ever extended to him.

The touch of the soft little hand offered to greet him riveted the chains Essie's face had cast about Mark's heart, and made him her slave then and there. He had starved all his life for sympathy, and his first half hour with Essie filled his longing heart with content. She remembered all his boyish aspirations; she entered into all his hopes and ambitions. The party was the beginning of an intercourse that stimulated anew every good resolution, gave a new vigor to every hope of Mark's life.

There are women who carry in their own hearts an overflowing fund of sympathy, who can sink self utterly in the presence of another person's interest, and throw their own power into their neighbor's work without officiousness or offense. Essie Lennox was such a woman, young as she was. She could give her whole mind to every detail which she had carried to her, from the cutting of aprons for a neighbor's child to the gentle soothing of an invalid's terror of death; from her mother's preserving kettle to the comforting of a newly bereaved widow or orphan. Nothing was too deep or solemn, nothing too transient or trivial, for that tender, ever active interest and sympathy that made her the idol of Maysville as well as the comfort of her home.

And in her home she found no one whose claim seemed to her stronger than Mark's. The village was essentially democratic, and the fact that Essie was the only child and heiress of the richest, most influential man in the place did not prevent her from visiting Mrs. Lamson upon terms of perfect equality. She was fond of the weak, amiable woman, strongly as she censured, in her youthful strength, the easy-going indolence that made her home such a scene of confusion and discomfort, and in her gentle, pleasant way, she endeavored to brighten the home for Mark by suggestions and offers of help that fell to the ground. It was like fighting a feather bed to try to rouse Mrs. Lamson to any active improvement, and, rebuffed there, Essie could only help Mark by words of sympathy that were like the wine of life to his love.

An hour with Essie sent him back to his uphill work full of new hope, every energy stimulated, every hope brightened. He had not dared to set out before him in plain words the hope of one day winning her heart to answer his own, for there was all the humility of true passion in that young, ardent heart, but he realized a new force, a new spur to ambition.

Essie never sneered at him, as the neighbors had become accustomed to doing. Essie never threw cold water over his plans for improving the land; Essie was never sarcastic over the clashing of his poverty and his ambitions. As he saw her more frequently, he ventured to tell her of wider, wilder hopes of some day escaping from the drudgery before him, and making his way to a city, where his education might give him a start in more congenial occupation.

"Father and mother seem to need me, now," he told Essie one day; "they are old and they have no other child. I think it is my plain duty to stay."

"I think it is," was the quick reply; "your mother could scarcely bear a separation."

"And while I am here, I must do the work that lies under my hand," he said, "hard as it is; But Essie," and his face brightened, "do you know that already I have made the farm pay double what it has ever done. Next spring I can hire help out of money I saved from the sale of last year's crops."

Essie, all eager interest, entered into the discussion of the capabilities of such a lot for turnips, such a patch for wheat, the possibilities of a dairy, the best culture for fowls, as if she had never studied music or filled her head with French and German verbs.

But the horror and wrath of Judge Lennox, when, after two years of mild courtship, Mark took his fate in his hands and asked permission to marry Essie, cannot be described.

"A Lamson!" he cried, when having dismissed Mark he returned to the bosom of his family. "A Lamson for Essie's husband! The fellow wants my money to spend after all his father and his grandfather have squandered."

"Do you really and truly think Mark is a spendthrift, papa?" Essie asked quietly. "Does he ever lounge about the stores or taverns, as Harry Carter and James Rayburn do?"

"I—Well, no, I never saw him," was the reluctant admission.

"Did you ever hear that he drank or gambled, or even smoked?"

"N--o—I never did."

"Is he not regular at church?"

"Ye-es."

"But, oh, Essie!" struck in Mrs. Lennox. "What shabby, half-washed shirts he wears, and his fingers all out of his gloves, and half the buttons of his coat gone!"

"Poor Mark!" said Essie, gently. "He needs a wife."

"Well, he need not look here for one," growled the judge.

"I heard Mr. Thompson say last week," said Essie, quietly, "that there is not a better farm in Greene county than Lamson's."

"Such a palace of a house!" the judge sneered.

"Mark is hoping to put up a new house on the place next year. He has had builders over from B——, but they say the old house is beyond repair, and it would cost less to have a new one."

"And where is the money to come from?"

"Where the improved farm came from," said Essie; "from Mark's industry, perseverance and energy, in the face of the hardest discouragements ever a young man had fight."

"Eh?" said the judge. "What? What?"

"See what he has done," said Essie, still in an even, quiet tone that carried conviction far more than an excited one. "Eight years ago, when he was but a boy, he put his shoulder to the wheel and took his play-time between school hours to weed and clear away stones. Nobody helped him. He was ridiculed, sneered at, discouraged on all sides. He had the poorest farm in the place, and he has made it one of the best. He has put every spare dollar into books on agriculture, improved machines, good stock. He has now four men at work for him, good horses, good cattle, good poultry, and he will have a good house. Papa, do you not think it will be a pity to have the new house in the care of Mrs. Lamson, to ruin as she has the old one? Outdoors, the management is all left to Mark, and see what he has done! But a man cannot make a home comfortable alone; he needs a wife."

"Well," said the judge, "let him have one, but not my child."

"Still he loves me," said Essie, "and I love him!"

"Pshaw!" said the judge, and marched out of the house.

But prompt as he was, he was just and he loved Essie. He had let prejudice influence him against Mark all his life. Now he took pains to find out how much of his dislike was well-founded. Grudgingly enough was the verdict given in Mark's favor. Maysville did not willingly acknowledge it had been wrong in its estimate, and shouldered upon Mark all the faults of his ancestors. But the facts were strong, and Judge Lennox found himself confronted by them. Slowly, for he was not easily convinced, he took respect into the place of contempt, and, after a month of patient investigation, sent for Mark.

* * * And so having imparted to him the result of his investigation, and expressed regret for his participation in the common prejudice, he made both Mark and Essie happy.

Womans' Sphere.

[An essay read by MRS. L. CANFIELD before the Farmers Institute at Dufur, Oregon, November 24th, 1891, and furnished for publication in the RURAL PRESS.]

This backneyed subject has been talked about, written about, and studied over, ever since Eve first entered the garden of Eden, and according to Hebrew writers, her Creator found she was out of her proper sphere: from that time to the present she has been prone to follow in the footsteps of her predecessor, and it seems that no amount of judiciary training or ogling is sufficient to keep her within the prescribed limits. Ever since Adam's time men have been watching and fearing, lest woman should assert and maintain her own individuality, knowing that inherent in her nature was a desire to reach out beyond her surroundings for attainments that were withheld from her.

With all the superior mental culture to which men have attained, they differ widely in regard to these limits, each man narrowing or extending them according to his own selfish or liberal nature.

Each nation has its own restrictons in regard to the boundaries by which woman should be governed. "Thus far and no farther shalt thou go" has been the rule for ages, but ofttimes she has over-stepped her boundary lines.

Science, art and literature were at one time withheld from her, and we are told that she was sold in the public market place like a beast of burden; and even to-day we read of her being hitched to a cart with a dog, and hauling vegetables to market. Her sphere! where is it? Among the untutored, it is menial servitude; among a little more enlightened class it is looking after the comforts of home and keeping her husbands buttons sewed on; that ought to be sufficient scope to satisfy the most ambitious woman to-day. Her inclinations should never lead her into a world of her own, where she can lose for a moment man's identity, and claim for herself her direct kinship to the living God. No. Why? Because of the old tradition that for ages has clung to the human mind, that after all woman was created from man's rib; she should therefore be obedient to his will, and why indeed should she wish to look higher or beyond him? Is not the pedestal upon which he stands sufficient for her admiration and what more can she want than his love and protection?

We find from historical research that the church is greatly at fault and the principal cause of woman's sphere having been fixed or limited. Men have blindly followed the teachings of those ancient lawgivers as though they were really and truly the instruments of divine inspiration, and it was so long before the teachings of the old patriarchs could be modified, mens ignorance and superstition made them fear to do otherwise than abide the decision of old St. Paul, who said: "Let your women keep silence in the church and be under obedience, and if they will learn anything, let them ask their husbands at home."

Of course the Latin fathers and Greek philosophers of those days taught the inferiority of woman, and St. Paul's ideas of women were a mere reflection of the times when Tiberius and Nero ruled the Roman empire without mercy after the fall of the Republic under which the liberties of women were exercised to a great extent when Rome was at the height of her glory, but we are told their sphere was, through jealousies, narrowed by Augustus. Later, the church looked upon them as "daughters of the devil, and that man alone was created in God's image." Hence centuries are required to outgrow and overcome false theories and false doctrines. The customs of to-day are far in advance of the Apostolic age, and the following not long since came from the lips of an ordained minister in the pulpit, just before election, at a grand temperance rally:

"The whisky element cannot rule against the prayers of so many thousand women. The Lord will not permit it. He will *not* turn a deaf ear. Their prayers must prevail."

Thus you see this modern apostle had more faith in woman's intercessions with the Lord than in man's. Nevertheless the women prayed, the men voted, and the whisky ring went into power. Now, as the men are the most powerful, suppose they turn the table—pray awhile and let the women vote.

The following gem from Whittier is expressive:

"The outworn rite, the old abuse
The pious fraud transparent grown,
The good held captive in the use
Of wrong alone.

These wait their doom from that great law,
Which makes the past time serve to-day,
And fresher life the world shall draw
From their decay.

O, backward looking sun of time!
The new is old, the old is new,
The cycle of a change sublime,
Still sweeping through."

Woman physically is not fitted for military duty, yet we have authenticated accounts of her ability in commanding large bodies of soldiers and marching in open field against the enemy and winning many victories.

We have not time to recount the heroic deeds of women, but history, both ancient and modern, is full of glowing accounts of her successful adventures, her sacrifices for humanity, from the lowest depths of poverty

and crime to wealth and affluence, and from the garret to the castle, she has suffered martyrdom for those she loved and sacrificed every thought of self for others.

In politics, the higher class of English women exert a powerful influence over the lords and peers. We are told that during the last century "the beautiful Duchess of Devonshire electioneered openly at the polls," and at the present day men and women of high and low social cast are combining and forming political leagues, founded by the leading men and women of England, which will doubtless make a great change in the political world of our mother country.

Are the women not overstepping their boundaries? Shall American women stand back with bated breath to await the outcome of the experiments of those old countries, where wealth and royal trappings have been wrung from the heart's blood of her working classes, and where needed reform has awaited the force of circumstances?

Woman's sphere is beyond the ken of man to fix. She has thus far been kept subservient to his laws, under circumstances, not that "might makes right." Her sphere, like the spheres of countless stars that revolve in space, has no beginning nor no ending; it is as exhaustless as the ocean, and as endless as eternity. Upon her weakness or strength nations rise and fall. In her, power through direct inspiration from the source of all knowledge, is given to mould and fashion the minds of the greatest men. Truly "women are the wardens of the world, to whose keeping the keys of the future world are confided." And, although limited by conditions beyond her control, yet her influence goes out beyond her fixed boundaries of action, and like the noiseless tread of angels' feet, enters many a forbidden spot, and though not seen by mortal eye, its hidden forces are felt and a change is wrought.

Rest in your graves ye bearded patriots who founded governments on monopolistic principles. Woman's sphere has broadened a little since with reverend head you placed the government in the hands of God, leaving the woman out. They constitute the one hundredth part of the flock, and the good Shepherd is calling them in.

The signs of the times are similar to those when "the flocks were feeding on the hills and the stars sang together in the heavens" for the glory of the new dawn that ushered in a Christ. The coming dawn will usher in a reform as great as that of the Christian era. Women will be unshackled and become independent individuals capable of governing themselves.

History recounts from age to age the fact of women entering every school of learning or branch of industry ever opened to them and competing successfully with men. Then why set for them boundary lines? Will not their own inclinations lead them into that which they are best fitted for? Can a light-running vehicle run in the worn out ruts of an old lumbering coach? Is there any justice or equity in one individual circumscribing the limits of another individual's course of action? And what is right in part must be right in all, and if so the rule must work for both man and woman.

Senator Stanford, speaking of his endowment to the Leland Stanford Jr. University, says: "We have provided that the education of the sexes shall be equal, deeming it of special importance that those who are to be the mothers of a future generation shall be fitted to direct the infantile mind at the most critical period."

Professor Jordan, of the same university, says: "This higher education should help men to form new opinions worthy the evidence each new day brings them."

"How, I pray you, will you limit woman's sphere, after the liberal education the future offers?"

When the thongs of superstition, selfishness, bigotry and aggressiveness, that have bound men's souls for generations, have been removed by education, when the human mind has been brought up to a higher state of development, when the church can more clearly comprehend the true spirit of Christianity, and practical religion instead of symbolic religion governs the masses; when they no longer do right through fear; when their intellects are broadened in a sufficient ratio to the divine, that each one shall become a law unto himself, we shall have no need of setting barriers for others or building fortifications for ourselves. The great law that controls the universe and the destiny of man, is no respecter of persons. Equity and justice shall be meted out to every one, and the work of each individual will be given as he or she is able to bear.

This working over and over again, the crude elements of nature, is the only way to reach the most refined principles, and it is only through this refining process of the human mind, that we are to be brought into harmony with ourselves, harmony with each other and harmony with God, and of course it must be brought about by this constant friction in the social, religious and political systems, by which we are governed, and when this state of civilization is reached, the bone of contention, "woman's sphere," will have been buried with the musty traditions and barbarous customs of an undeveloped age.

Ye clouds, that in yon starry sky,
Your leaden folds hang down;
Roll back your softened draperies,
And show your silvery crown.

Through mists of years you've floated thus,
Though lighter you have grown
And storms have burst, through thunders blast,
And fierce the winds have blown.

But on beyond, your darkened face,
We see the torches bright,
That gleam from out the future sky,
And light the darkest night.

YOUNG FOLKS' COLUMN.

A Rainy Day.

[Written for the RURAL PRESS by AUNT SUSIE.]

"O dear! O dear! I don't know what to do! Mamma, can't you think of something for me to do? I just hate rainy days!"

"Why, Jamie Grey, what would become of the flowers and trees if it never rained?"

"Well, I don't care. Folks in the city can go out when it rains, and here in the country there is just nothing to do but look out of the window and watch it rain, and rain—and rain!"

"Come to this window, Jamie, and watch the birds."

"O mamma, what lots of robins! My! there must be hundreds of them! Just hear them twitter! Oh, look at them in that puddle taking a bath! How can they like it this cold day? One, two, three, four, five, six. My! I can see six in that one puddle. How they do make the water fly! See each little head go under the water and up again quick."

"Yes, Jamie, and it seems as if I could hear them say: 'Oh, this is such fun! I just love a rainy day. Of course I'm all wet, anyway, but I like to take a bath. Oh, how nice and cold this water is! How could that little boy looking out of the window make a fuss when his face was washed this morning, and how could he say just now he hated a rainy day? Those long, delicious worms we had for dinner to-day never could have come up out of the ground if it hadn't rained and made the ground soft, and how could the grass grow if it never rained? Boys are so hard to please!'"

"O mamma, do you think the birds said that?"

"Well, my dear, they looked as if they did. It is true, isn't it?"

"Yes, I s'pose so. But see! A dear little linnet has come to rest on the window sill. He turns his head this way, and that as if to say: 'Can I rest here awhile out of the rain?' Yes indeed, dear little linnet, stay as long as you like. I'd gladly put some crumbs on the sill for you, but if I should raise the window, you would be frightened and fly away."

"O mamma, I have just counted twenty robins in that one cherry tree. Isn't it fun to watch them?"

"Yes, my boy. You see even a rainy day in the country gives us something pretty to look at and think about. See, those robins that were in the water taking a bath have gone to the peach tree to rest and are shaking themselves to get dry. See their heads go over their necks to smooth their feathers, while more come to the pond to bathe. There! our linnet has flown away, and now here he is back again looking as saucy as ever. He seems to say: 'Don't you wish you could catch me? But you can't. Just raise that window a grain and away I'll fly.' About like the bird in the song you like so much."

"Once I saw a little bird
Come hop, hop, hop;
So I cried, little bird,
Will you stop, stop, stop?
I was going to the window
To say 'How do you do?'
When he shook his little tail
And away he flew."

"O mamma, the clouds are going away. It is going to clear off. Oh, see the sun! Now for a rainbow! There it is, clear way down on the trees and bushes. My, what a big one; reaches way over to the other side."

"Yes, and see the fainter one above it."

"Oh, isn't it pretty, mamma? I don't believe rainbows are half as pretty in the city, for you can't see the colors shine on the trees."

"I thought my little boy was wishing he lived in the city this rainy day?"

"No, mamma, I've come to the conclusion there is lots more to see in the country on a rainy day than in the city. But tell me what you used to do when it rained when you lived in New York?"

"Well dear, I'll tell you what I saw one day just after a cold rain, each drop seemed to have frozen on the pavement, and it was all I could do to walk. I was on my way to my class in the Sunday school, held in the 'Children's Hospital,' when I met a most pitiful looking little girl. She had on a thin ragged dress, her feet and legs were bare and blue with cold and stuck to the icy pavement, she shivered, and the hand she held out to me was thin, and her whole appearance showed the most dreadful poverty. I did not have my purse with me as I intended to walk to the hospital and back, but my heart ached so for the poor child, I said, "Tell me where you live, and to-morrow I will go to see you and take you some food and clothes." She gave me a street and number, and I passed on to my class.

The next morning I took some food and clothes and went where she told me. It was one of the poorest tenement houses, and I had to go up three flights of very dirty, shaky stairs to find the room. I knocked, and the same little girl opened the door. She said, "I didn't go out this morning to beg. I thought you'd come. Mother is awful sick."

I followed the child to a miserable bed in one corner of a very small room. On the bed lay the poor mother with a feeble baby by her side, there was no fire in the cracked, rusty stove, and only a box for me to sit on. The poor woman said, "My husband is out of work, and we are all starving and freezing."

I opened my basket, and gave them food, which they eagerly devoured. After chatting with them awhile, I went home, saddened by what I had seen, and determined to do what I could for them, so went to the gentleman who had charge of the "church fund," and he had coal and food sent to them, and found work for the father.

Jane, the little girl, looked quite pretty in the clothes I gave her, and was much pleased with the idea of going to the sewing class, held every Saturday morning for poor children. I had her in my class, and the poor child tried so hard to learn to sew. Each child was given the garment made, if it was well sewed.

You ought to have seen the boys sew! One little fellow about ten years old, made an unbleached cotton shirt for himself, button-holes and all, and a prouder boy you never saw, when his teacher passed it from class to class for all to see how neatly he had made it.

"Well Jamie, do you think a little boy with a good home and a bright, open fire to keep him warm, ought to fret when it rains, even if he does live in the country?"

"No, mamma, and I'm sure I won't do it again. The sun has set and I can't go out to play now, but to-morrow I'll just have a fine time playing in the puddles with my new rubber boots on, Santa Claus brought me; it won't do to make the water fly all over me, as the robins did, but I'm sure I can have lots of fun."

DOMESTIC ECONOMY.

Three Things Observe with Care.

[Written for the RURAL PRESS by A. F. B.]

My dear housekeeper, you may not have a convenient kitchen, and you may not believe in "fixing it up," but three things—that magical number three—I beg you to put in the room in which you spend so much time.

1. A pin cushion. It will save you many a journey, and you can keep on it even the large needle for sewing up the dressed and stuffed turkey or chicken. Hang scissors on the cushion as a part of the outfit.

2. A clock. Perhaps you are blessed with the "kitchen clock" of which we have heard. If not buy a little alarm clock. You can time your baking or other work. You can urge your little folks to improve the record in dish washing, and the work will be hastened thereby.

3. An easy chair. Minutes of rest save hours of weariness.

GIRLS, LEARN HOW TO COOK and mothers, teach your daughters housework. At the age of eighteen I married a farmer and moved on a farm. Before this time I had been either attending or teaching school, and was at home but little. When I commenced housekeeping, you may be sure I was armed to the teeth with recipe books, but alas! they would neither bake the bread nor raise the cakes, and it took a good deal of time and patient labor to get the knack of these things. Many a time have I wept bitter tears at the sight of my ill-luck; and, girls, if you would avoid this bitter and shameful experience, learn now while you have some one to teach you, and do not leave it until you are a good many miles from mother b[illegible] for you commence "experiments."—A Wif[illegible] of Three Years.

MINCED VEAL.—Cut cold veal into small bits; rub some butter and flour to a cream, according to the amount of veal. Stir into boiling milk, also the grated rind of a lemon. Let these boil until they become of the consistency of cream. Sprinkle a little flour, salt and white pepper over the cut veal and add it to the cream. Stand where it will keep at the boiling point, but not boil; when hot, squeeze lemon juice over it and serve at once on toast.

HOT MEAT SALAD.—Chop bits of meat very fine. To a coffee cup of minced meat add one chopped onion and boil in gravy or water enough to cook the onion; add salt and red pepper to the taste. Have ready the yolk of one hard boiled egg rubbed to a powder and mixed with a teaspoonful of mustard and vinegar, enough to make the whole pleasantly sour when poured over the meat. Spread over slices of buttered toast and serve hot.

A NICE BREAKFAST DISH can be made made from the tough ends of porterhouse or short steak which are unfit for broiling. Stew them slowly for two hours and let them cool, next morning cut them up in small pieces and set on the stove, with the water in which it was boiled, add a bit of butter, pepper and salt, thicken with flour and serve with toast. This meat is also nice to use for hash.

MICHIGAN SAUSAGE.—To 50 lbs of meat add 20 oz of fine dairy salt, 2 1-2 oz of allspice, 3 oz of black pepper, 2 1-2 oz of ginger, 1 1-2 teaspoons of cayenne pepper, 1 1-2 oz of saltpeter, and 1 oz of sage. Mix all thoroughly with the meat and you will have the best sausage in the land.—Gutelius Snyder, St. Joseph county, Mich.

TOAD IN THE HOLE.—Cut cold meat into dice and put in a greased baking dish. Beat one egg light, add to it one pint of milk; stir into it gradually six tablespoonfuls of flour, beating stiffly all the time. Strain through a fine sieve; add half a teaspoonful of salt and a little pepper. Bake one hour. Serve in a baking dish.

LEFT-OVER CHICKEN OR TURKEY.—Pick all the meat you can from the bones, also every bit of dressing, and put it in a spider. If you have any gravy, so much the better; pour it over the meat, and add a cup of water, a bit of butter, pepper and salt, and let it come to the boil. French fried potatoes go nicely with this dish.

GINGER COOKIES.—One cup of sugar, 1 cup of molasses, 1 cup of lard or part butter, 1 tablespoonful of soda, 1 tablespoonful of ginger, 1 tablespoonful of vinegar. Boil the sugar, molasses and lard. When cool enough not to scald the flour, knead hard; roll thin; bake in a quick oven. They are very nice.

MEAT FRITTERS.—Make quite a stiff paste of mashed potato and flour. Fold just as you would turnovers. Put a spoonful of minced meat into the squares of pastry and fry in hot fat. Have the fat smoking hot and keep the fritters in a sieve or something of the sort that they may not fry to pieces.

CREAMED CODFISH WITH CRACKER.—Prepare the codfish as usual and when almost at the boil put in a few split crackers, which will swell and thicken it, then drop several eggs in it, letting them cook soft. When taking them out be very careful to keep them whole.

AN OLD-FASHIONED DISH.—Take a dozen good-sized apples and core them, place them in a bean pot with half a cup of sugar and a little water, let them bake till quite soft. They will keep whole and are delicious eaten with cream.

BEEF SCALLOPS.—Fill some small tins two-thirds full with minced beef, a little chopped onion, pepper and salt. Moisten with gravy and fill the shells with finely mashed potato. Put a bit of butter on the top and brown.

DEVILED HAM.—One pint of chopped boiled ham, one tablespoonful of flour, one teaspoonful of sage, the same of pepper, one-half cup of boiling water. Press in a mold in a cool place. When firm serve cut in slices.

ESCOLLAPED MEAT.—Prepare alternate layers of minced meat and bread crumbs. Season each second layer with pepper, salt and onion juice. Moisten with gravy. Brown in the oven.

ELECTRICITY AND THE TIDES.—A Canadian electrician claims that electricity causes the tides, and demonstrates it by electrifying a rubber comb by rubbing it through the hair, and then drawing it over the top of a glass filled with water, the result being that a tidal wave follows the comb.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, JANUARY 30, 1892.

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[NEW THIS ISSUE.]

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Seeds, Plants; Etc.—J. T. Lovett Co., Little Silver, New Jersey.
Harrows—Cutaway Harrow Co., Higganum, Conn.
Oxford Down Sheep—W. A. Shafor, Middletown, Ohio.
Incubators—Petaluma Incubator Co., Petaluma.
Semi-Annual Statement—Grangers' Bank of California.
Percheron Stallions for Sale—J. C. Smith, Oakland.
Horses—M. W. Dunham—Wayne, Illinois.
S. F. Training School for Nurses.

See Advertising Columns.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

The Week.

The rain, which began on Monday and continued during Tuesday, visited a large area of the State and was earnestly welcomed. It was not a heavy rain, for at wettest points it was but little over an inch, and shaded down to small fractions elsewhere. Its extension was good, however, and southern coast points were included. The dispensation was enough to reawaken confidence, and in some cases to confer considerable benefit. The best of it is that continuance is to be looked for. We ought to get a good soaking before the end of the month.

Winter work is well advanced and the clear weather has given opportunity for a vast amount of it. The area seeded is very large and a favorable season will give us a vast surplus. Orchard-planting has also been active and trees are regaining prestige in some regions where they have recently been neglected in the interest of raisin vines. We shall, probably, finally come to a fair degree of diversity in planting, so that all can have something which will be fashionable and profitable.

The Mining Debris Question.

Apparently by general assent the work of the Miners' Convention, held in this city last week, has been accepted as furnishing a new and satisfactory basis upon which both hydraulic mining and valley interests may proceed toward a final and satisfactory solution of matters which have for a decade or more been bones of contention between them. The proceedings of the convention show that a most commendable spirit was maintained throughout, and that the claims which were put forth by those who organized the meeting were justified by the behavior and declared sentiments of the large and representative convention which assembled. We hardly expected so much from the assembly, as was indicated by the tone of our comments in last week's RURAL, but the greeting and subsequent treatment accorded to the representatives of the valley interests who were present, indicated that the miners' assembly had a sincere desire to settle the matter upon an honest basis and this assurance has been generally accepted. If the future justifies the present, the San Francisco meeting, of last week, will be looked upon as one of the most important events of our industrial history.

Though the sessions were protracted and the proceedings many, the whole matter was crystallized in the memorial to Congress and in the resolutions adopted, and in them the miners approve several clear propositions, which we catch up as follows:

The Board of Engineers constitued by Congress reported that there are many millions of dollars which can be obtained by hydraulic mining, and that works can be constructed which will permit the resumption of hydraulic mining and will not only restrain the material producing the damage complained of in the past, but will also restrain the debris now dislodged, but still remaining in the canyons.

That Congress at once take steps to put into practical and effective operation the means suggested by the engineers in order that mining may be again resumed in the manner indicated without the injury complained of in the past.

They recognize the fact that until Congress takes proper action for the erection of suitable works for the restraining of mining debris, hydraulic mining is absolutely restrained by the courts, and as law-abiding citizens, they recognize that the laws must be obeyed and the decrees of the courts respected.

These propositions practically cover the subjects heretofore at issue and recognize the principles upon which existing court decisions rest. Action looking toward desired ends is entrusted to an Executive Committee which was appointed, and from the work of this committee must come further assurance of the miners' disposition. It is also arranged that conferences shall be held between this committee and those representing valley interests, and that an effort will be made for united action in certain directions. As the matter now stands, the outlook must be considered favorable for a satisfactory solution of the whole question providing Congress can be induced to act upon the recommendation of its own advisers, and provide the means for the public works necessary to make hydraulic mining legal and innocuous.

Dairy Progress.

The spirit of dairy progress, as has been shown by frequent items in our columns, is at large among dairy producers of the Pacific coast. There has never before been such a wide awakening on the subject of better machines and processes, and of cooperation among producers for more intelligent and profitable work all along the line from the milkpail to the market, as is now discernible. It is true that this awakening comes rather late, and is forced upon us by the results which Eastern dairymen have been for some time enjoying, but it is none the less fortunate. We have continually claimed that California was not getting all that to her belonged in the dairy business. We have been largely content to supply our own people and fight on the defensive against Eastern butter and oleomargarine. In this line of our production our policy should be aggressive, as it is with fruits. Our winter climate gives us advantages in pushing our fresh grass winter butter east of the Rockies, and our geographical position gives us decided advantages over Denmark in the production of canned and packed butter for the Pacific ports of all countries fronting on our ocean. It seems to us there can be no doubt but that we can by proper steps in production, packing and marketing, extend our butter product in a most gratifying and profitable way.

The first steps in this direction have already been taken. The first would be the introduction of improved machinery methods and policies. The second would be effective organization among our producers, so that they can have the means of exerting a united influence in improving local markets and seeking out distant ones. We have fairly begun to take these steps; we have the spirit of dairy progress and we have a strong Dairymen's Union. Now let these two agencies strive together toward desirable ends, and the results will be surprising.

Creamery is a single word which has come to be the synonym for all kinds of dairy progress, and rightly so; for it is the creamery movement which has led to the better handling of the milk for quality of product and profit in it, and it is the creamery which has topped the market with its output. But to cry "creamery" does not insure such rewards. The factors of success in a creamery enterprise are several, and among them are the following: Adaptation of local conditions, which includes climate, feed, cows and labor; investment, which should not be greater than the conditions warrant; management and support, which means not alone that the enterprise must have first-class dairy skill, but that there shall be dairy proprietors who are willing to buckle right down, with capital and personal effort, to a business which comes every day in the week and every week in the year. We have, fortunately, suffered lightly from the work of "creamery boomers," whose effort is to place buildings and machinery at exorbitant prices wherever they can arouse excitement on the subject, whether any of the factors of success which we have named above exist or not. We believe a few such ventures have been planted on this coast to the chagrin and loss of those who were wheedled into them. The people should beware of such "creamery boomers," and when a man comes into a region and proposes to get together a big lump of money to start a creamery where there are no cows or experienced dairymen to speak of, look out for him, no matter how smooth his tongue may be or how big his watch chain is.

The great dairy States of the West have suffered immensely from the work of these boomers, and their expensive buildings and outfits are lying idle in many places. The evil is so great that such operators have been denounced by trustworthy agricultural journals and by reputable dealers in dairy machinery, who can clearly see that to get their goods into a concern which is to be a loss and a byword in a community is of greater injury to them than any profit which such sales can possibly return.

Our attention is called to this phase of the subject at this time by perusal of the proceedings of the Indiana Dairymens' Convention, held this month at Indianapolis. It was there clearly shown that the rushing into expensive creamery building at the beck of interested boomers was working great injury and loss, and it was just as clear that creamery enterprises properly undertaken, under favorable conditions and conducted with full knowledge of the details of the business, were successful. The outcome of the discussion was that the association appointed a special committee to issue a printed bulletin "telling farmers what they should do as well as what they should not do—in other words, setting forth the conditions under which a creamery could be successfully operated, and stating the probable necessary cost of its construction and equipment."

This will be an important work and one worthy of the Indiana State Association. Our effort shall be in the same direction. We believe, as we have just said, that legitimate dairy progress will build up this important interest of our coast in a most gratifying manner and increase the profits of those engaged therein, but creamery booming, as of other booming, we have had quite enough to open our eyes, and if we can't see it and stop it, there must be something the matter with our optic nerve or the gray matter which lies behind it.

Successful Cooperation in Fruit Marketing.

PALM REST ONTARIO, CAL., Jan. 25.

TO THE EDITOR:—I notice on first page of the RURAL of Jan. 23d an article headed "A Movement Among Raisin Producers," by which it appears that the raisin growers of certain sections are thinking and moving toward cooperation in the marketing of the products of their vineyards. That this is the right step and in the right direction there is no question, and one the fruit growers in general throughout all California will have to take or work for a bare living seems evident. In this particular section the principal interest in fruit production centers on the orange and lemon, though the raisin varieties of grapes are grown to some extent. There were probably 50 carloads of raisins grown within a comparatively small radius hereabout. The larger portion of the crop was consigned to a house in Chicago through a party here who acted as agent, there being apparently no other mode of disposing of them. The sales were made as follows: The agent here stemmed, cleaned and sacked the raisins after they were delivered at the packing-house for three-eights of a cent per pound, and advanced to the grower two cents per pound after the goods were sold; the balance, if any, over and above the expense, viz., of stemming, sacking, freights and commission, was returned. In most cases there was something over and above the cost; usually the goods brought about 2¼ cents. The price realized has been so low raisin growers here are somewhat discouraged and are feeling around cautiously for the next best thing to follow. The most of them are in a splendid frame of mind to listen to any feasible plan of cooperation.

The Southern California Fruit Growers' Union, with headquarters at 233 West First St., Los Angeles, established in April last on the cooperative plan, has met with very encouraging success. Its 20,000 shares of stock, at $5 per share, have been sought after with commendable earnestness, and the quantity of fruit pledged to the managers of the enterprise on Dec. 15th last amounted to about 450 carloads. They now have packing-houses arranged and plans laid on a foundation large enough to handle the entire orange crop of Southern California. While the organization has as yet done but little in the way of handling the orange crop of this season, the good effects of the organization are very apparent, as speculators who, previous to the Union's getting under way, were talking of offering 50 cents per box for Seedling and $1 a box for Navels are now doubling that offer with poor success. Some of them have been forced to leave the field altogether. I am the local director in this colony, and the association will handle on the cooperative plan fully two-thirds of the entire citrus crop of this colony this season.

The RURAL PRESS is doing immense good in waking up the growers to business principles in combining to market their own products instead of supporting an army of Shylocks in the capacity of middlemen, who absorb all the profits, leaving the growers only the scraps. I. C. WOOD.

We are very glad to have the above crisp note on this important subject, and to record the evidence of successful work by our friends in Southern California. Let the reader study carefully the points made in the article on page 91, entitled "Statements About Dried Fruit Prices." If it does not there clearly appear that, by the testimony of those engaged therein, the dried fruit crop has been made the victim of a conspiracy by dealers, we cannot read English.

As our correspondent remarks, the producers are now in condition for effective cooperative action, and it is just the time to do something to make the repetition of last fall's experience impossible. The committee appointed by the Fowler Farmers' Institute met in Fresno and decided to embrace the whole dried fruit interest, as well as the raisin product, in their effort for cooperation. The committee adopted the following resolution:

Resolved, That the call for the meeting of raisin and other dried fruit producers of California shall be for the purpose of considering the question of organization of all the growers in the State into one organization, to better control and market their products; that the meeting be called at Fresno on Thursday, February 18, at 10 A. M.

This will be the occasion for a general assembling of all who desire to do something in their own behalf. We understand that the committee appointed by the Marysville Fruit Growers' Convention will participate in the meeting. All local societies of fruit producers throughout the State should send representatives, and all individuals who can go on their own account should do so. Let there be a meeting widely representative of the State and the keynote of the future of our dried fruit interest will be sounded clearly in the ears of all men.

The State Press.

Watsonville *Pajaronian:* "All of California is not within the boundary of San Francisco, and not all of California—and not even the best part of it,—is visible from the railroad lines."

Gonzales *Tribune:* "The settlers are the pioneers of civilization and the upbuilders of our commonwealth, while their persecutors—the land grabbers—are the enemies of progress, and are responsible for the present undeveloped condition of a great portion of the State."

Sacramento *Bee:* "The State Miners' Convention was really a harmonious meeting of farmers and miners anxious to adjust the differences existing between them and to find some means of resuming hydraulic mining without injury to the navigable streams or to the homes and farms of the valleys."

Fresno *Republican:* "A grand jury which, for political or personal reasons, will whitewash such a gang of scoundrels as that which has been bleeding the State through the Whittier reform school, is not an institution of value to the public. It is more than worthless. Its capacity for harm is limited only by its opportunity."

Stockton *Mail:* "Major McKinley and his associates in the last Congress settled the question of lower freight rates against the people of California for the next ten years. Andrew Carnegie did not forget Major McKinley's good offices, for he sent him a check for $5000 to assist him in defeating his Democratic competitor for the Governorship."

Ventura *Unit:* "The railroads persist in charging rates that will prohibit the planting of beans. The cost of production is $1.80, the freight to Chicago is $1.10 and beans are worth in Chicago $2 90. The railroads absolutely demand every cent of the profit of the farmer's labor, and are doing apparently everything in their power to prevent immigration and retard the development of this coast. Only one course is open to the farmers, and that is to plant some crop that can be shipped by water."

Sacramento *Bee:* "It strikes us very forcibly that there is a far dirtier nest of corruption for the investigation of a Grand Jury right in the Courts of San Francisco than can be found anywhere else. It is easy enough to howl "boodle" in a general way, and to pass Grand Jury resolutions denouncing Buckley, but what the people want is some definite and specific action against some particular official. Let the coming body investigate the question as to whether or not there are boodlers and blackmailers on the Superior Bench in San Francisco."

Benecia *New Era:* "The Mining Convention met in San Francisco, Wednesday, to endeavor to devise a plan whereby the business of hydraulic mining may be restored to its former condition. No one objects to hydraulic mining; it is the damage inflicted on the farmers and to the rivers of the State that is objected to. If some means can be devised whereby the debris can be impounded, we have no doubt that the whole State would favor its resumption, as it is estimated that a loss of $1,000,000,000 has been suffered by the hydraulic mining interests since the mines were shut down."

Salinas *Index:* "It is a serious mistake in the public mind to imagine that a few political knaves are the main factors in political debauchery. It is only the existence of a low public sentiment that makes political rascality possible, and which attracts machine politicians as carrion does a vulture. And it is a mistake, too, to imagine that men who have acquired wealth through devious practices, and are so independent in circumstances that they can afford to be honest, will indulge in a luxury of that kind. On the contrary, turpitude seems to feed upon ill-gotten gains, and there is no hope of reformation until jury-fixers, legislative bribers and schemers who make a trade of politics are ostracized by a healthy public sentiment."

The Sutter County *Farmer* says of the Mining Convention: "The valley counties also had their delegates there and are in joint unison with the miners as far as river improvement is concerned, but they will hardly support the theory of improvement with the idea of an excuse to resume the work of running more mining debris into the streams, and the miners should not ask it of them. The valley representatives are also present to show their good will toward other branches of mining and will lend their aid toward any movement to foster or benefit the same. What interests the farmer's rights and concerns the preservation and protection of his property, will be the question on which he cannot be denied the privilege of being heard, even among the hydraulic mining advocates, and, supported by the courts of the State, and with right and justice on his side, he will be heard."

Sacramento *Record-Union:* "The publishers, editors and writers upon newspapers in the lesser communities of the Union more nearly than any others are in communion with the body of the people. They reflect the local and individual sentiment in the several sections that in aggregation make up what we term public opinion. They are intimately known in their individual estates to their communities; their characters, aims, purposes and methods are bare to public view, and maintenance of their positions is wholly dependent upon their faithfulness to their communities and the respect they command from them. It is the rule, in seven cases out of ten, with the rural newspaper that merit determines the measure of its success—not the mere success of money getting, but that greater success which is framed in the confidence and esteem of a reputable clientage and in achievement in building up a section."

Bakersfield *Democrat:* "The sending of a 17-year-old boy to the State prison at San Quentin by a magistrate of our neighboring county of Stanislaus is a picture not to be regarded by well-meaning men and women as a mark of our advancement as a civilized and progressive people. We do not believe in allowing thieves to go unpunished, whether they be 17 or 70 years of age; and at the same time, while the taxpayers of this State are annually mulcted for the support of two reformatories for minors, it seems too bad that boys should be sent to herd at San Quentin with the most dangerous ruffians and hardened criminals. No one at this late day will claim that a State penitentiary can have any softening or ameliorating effect upon the mind of any person immured therein and cut off forever from society. We put bad men there, not in the hope of making them better, but because their presence is a menace to the well-being of society so long as they are at large. It behooves Governor Markham to prevent any more punishment of juvenile offenders by sending them to San Quentin."

Woodland *Democrat:* "That the movement to pass a constitutional amendment providing for the election of United States Senator is becoming popular there is no longer any doubt. The Lower House of Congress is nearer to the people than the Senate, and is held in greater respect by them. Representatives are elected by a direct vote of the people, and no good reasons can be given why Senators should not be elected in the same manner. Representatives are usually elected on account of their ability and peculiar fitness. It is rarely the case that they are charged with having bought the office. How is it with the Senate? It is notorious that Senatorial seats frequently go, not to the best and ablest man, but to the candidate with the largest bank account and the strongest corporation backing. Men are frequently elected by legislatures who would not dare to offer themselves as candidates before the people. As a result the Senate has degenerated until it is made up principally of millionaires and corporation lawyers."

San Jose *Mercury:* "The Board of Supervisors has at the present time before it the consideration of an ordinance for the suppression of roadside dives. The ordinance is not intended to be prohibitory. Its object is simply the regulation of the liquor traffic in the county in such a way that disorderly resorts may be impossible. It is beyond question that some sort of regulation is needed. At the present time men whom the stricter regulations of the city have deprived of the privilege of opening a saloon have established their dives along the Alameda, Alum Rock avenue and other highways of the county and have thereby brought the criminal classes into close neighborhood with some of our best suburban districts. Nor are they confined to the highways and suburbs of cities, but have succeeded in locating themselves on the crossroads of quiet rural localities, where the absence of police supervision renders them even more annoying and dangerous to the community. It is manifestly injurious to have such places in neighborhoods where respectable people have their homes, and where children have to pass to and fro between their home and the schoolhouse."

Woodland *Democrat:* "The Miners' Convention which assembled in San Francisco on Tuesday, concluded its labors on Thursday evening and adjourned *sine die*. Those who anticipated a stormy session and distracted councils were happily disappointed. It was an orderly, peaceful, business-like convention, and the harmony and good feeling that characterized its deliberations augurs well for the reestablishment of the most cordial relations between the miners and the valley people, and the probability of an early and satisfactory solution of the debris question. * * For the first time in many years the agricultural and mining interests are united in an effort to devise some plan by which tailings may be impounded and restrained from flowing down, destroying the navigability of our rivers and devastating our grain fields, and, happily for all, the enmity and war that has heretofore existed between the two classes promises to be a thing of the past. * * * The satisfactory outcome of the conference between the farmers and miners will certainly be of great benefit to the commercial interests of the State."

Marysville *Appeal:* "The Miners' Convention has closed its labors, and from all accounts the work done there has been satisfactory enough to farmers and miners. The hydraulic element has advanced the *theory* that dams can be so built as to restrain the debris from their mines. They want it tried and want the Government to stand the expense. Tacitly, they say in their resolutions, that, should the means proposed prove a failure, they are willing to desist, because they do not wish to engage in an occupation which will destroy public as well as private property. Such a system of dams and settling reservoirs, as have been suggested, might possibly prove to be the solution, though many people in the valleys doubt it. In justice to the miners, however, it becomes the duty of the Government, which sold them the land, to make the outlay and give the plan a trial. Should it succeed, contentment and peace will prevail. Should it prove to be useless and not a restrainer, then the valley people can protest, and if the miners are true to their convention obligations, they will desist. In the meantime, those hydraulickers on the Feather, Yuba and American rivers, who are now preparing to begin operations, either next month or during March, can gain the good will and assistance of the valleys in securing Congressional aid. by refraining from committing court contempts, and doing that which a representative body of their own number has declared to be destructive to the rivers."

The Nicaragua Canal.

Extract from Warner Miller's address before the New York Chamber of Commerce, December 15, 1891: The distance from San Francisco to New York around Cape Horn is 15,660 miles, by way of the canal 4907 miles, making a saving of 10,753 miles, or nearly half the distance around the globe. The same is true, of course, of Portland, Or., of Puget Sound, of Alaska and all the west coast of the United States. The building of this canal will, in my judgment, quadruple the population of the Pacific Slope within ten years of its completion. If you have watched the growth, or lack of growth, in California or the Pacific Coast, during the past ten years, you will find that the progress has been very slight, and the reason is that products of California will not bear transportation across continent by rail. All their wheat goes to Liverpool around the "Horn;" their lumber, if it goes at all, must also go around the same way, but at present but little goes. It will not bear the burden of transportation. The building of the Nicaragua canal brings California 10,000 miles nearer the rest of the civilized world than it is to-day. California has a most delightful climate, a most fertile soil, and is capable of maintaining a population of many tens of millions. This is also true of Oregon and Washington; but until this canal is built, there will be no great influx of immigration into these States. Not only will this canal build up the trade in California and of the Pacific Coast in connection with the East, but it will also give us the control of the trade of Japan and of the east coast of China.

Life in the Country.

Santa Cruz *Sentinel.*

In England it has always been the thing for those who can afford it, to live on country estates; and here in America, where it is so easy for every family to enjoy country life, if so inclined, there is coming to be more of a disposition to give free rein to the natural love for trees and good air and plenty of room. The motor lines and cable lines and electric roads bring the suburbs of big cities within easy reach. This is probably more true of American cities and towns than of any other places on the globe, and the convenience is rapidly spreading and becoming cheaper with each succeeding year and its inventions; but there is a country beyond the suburbs that is still more desirable, more free and less expensive. If only the disposition to hug the cities could be driven out from the heads of many who have no good reason for hugging the cities, and replaced with an appreciation of country life, even without all the luxuries that can be imagined, there would be a greatly improved state of things, and the country would all the time grow more attractive. There are many people between the rich and the poor who could have as many luxuries in one place as the other, with the balance in favor of the country in the matter of health and rest. The difficulty in the way of country contentment, with too many, lies in the notion that to go in the country and live in a small, economical way, is to leave behind forever the dear hope of getting immensely rich some day. Jumping from toil and deprivation in a day into the realm of wealth, with great buildings to rent and luxurious surroundings crowding their delightful presence into one's daily life, is always associated in the mind with a persistent adherence to the city. Envious comparisons and a dead strain of ambition to get money soon do their work and the hungry dream of dollars is over. It takes a man with pretty good ideas of life to understand how little there is in it beyond health and the daily comforts that keep it good. Anything more is like a gravestone—valuable as a record for other people to look at.

Faults of Our State Government.

Ontario *Record*, Jan. 20th.

Our State Government is enormously expensive. We spend more on our various State departments and public institutions than many Eastern States of double our wealth and population. The average official, no matter how efficient he may be, seems inspired with a desire to suck the public teat as dry as possible while he has access to it. Our Supreme Judges charge up their Pullman car "tips" to the State, and our minor State officials draw $5 a day for hotel bills when off on junketing trips (about one-half being perquisites), and a multitude of sins is covered under claims allowed for "personal toilet." Every time the Legislature meets big appropriations are log-rolled through so that there may be a surplus for all "the boys."

Our Government is too much at long range. Some Boards of Supervisors administer the affairs of counties larger than an average State. In the nature of the case, th y must often act without proper information, and it is no wonder that they are among the most abused citizens in the commonwealth. If they choose to build fine courthouses the people must pay for them. Pressing matters may suffer between their stated meetings, but there is no other power to appeal to. If the assessment and levy of taxes, relief of indigents, care of roads and bridges, and many such matters, were managed through some simple township organization, as a rule better results would be secured. Our counties are large and the centralization of the government at the county seat imposes large expenses for travel and hotel bills, in addition to the usually heavy taxes. The State Constitution provides for township government; that may not be feasible, but a simpler form of municipal organization might be provided, adapted to country districts, that would give more general opportunities for local self-government.

There is no sense whatever in the present system of double assessment and tax collection, one for county and another for the municipalities. It simply provides more officers at the expense of the people. The system costs Los Angeles county more than $30,000 a year extra, and this county probably pays a third as high a tribute to the plan. The last Legislature passed a law making it possible for municipalities to adopt the county assessment and have municipal taxes collected by the county. The Los Angeles County Grand Jury makes the wise suggestion that this provision be obligatory instead of optional.

Litigation is enormously expensive and as slow as it is costly. It costs several hundred dollars to administer on a small estate. If creditors foreclose on a hotel, for instance, they will find it stripped of furniture to pay costs, and finally sold to meet the fees of courts and lawyers, leaving them the cement sidewalks and a chunk of experience about as stony. Merchants universally say that it costs more to collect a small debt by process of law than the face of the account. The result is that they will lose a small bill rather than sue for it.

Take a minor matter by way of illustration. There are justices in this county whose fees amount to almost as much as the salaries of the Superior Judges. Our constables must be paid about two days' wages for nailing a notice on a tree. Does it seem probable that quiet country communities of one or two thousand population all over Southern California have legitimate police work enough for a constable and one or two deputies to draw fat salaries from the county treasury every month. Vag hunting and other less creditable means are adopted to create business. Decent men, hunting for work, are decoyed by these public plunderers to pick oranges, that they may "run 'em in" and get more fees and mileage. Back of this is the hard-working tax-payer putting up the money that supports these leeches.

We are no "calamity howler," but we are profoundly impressed with the need of some radical retrenchments. The marvelous wealth of our State, the comparative ease with which money is made, have caused us to be lenient and careless. But we are a tax-cursed and office-burdened people, and it is pleasing to see some faint signs of a coming storm of wrath that may do some little damage but will benefit the country like a January rain.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

ACORNS FOR POULTRY. — Oroville *Register:* Joel Garst of Wyman's ravine is one of the most successful chicken raisers in Butte, and pays close and careful attention to his fowls. During December, 30 pullets of his laid 40 dozen eggs, and from the 1st to the 17th of this month they laid 22 dozen eggs. He found out that live oak acorns pounded up so that the hens can get the meat, forms a splendid article of food, besides being very cheap, for by a few hours' work, a man can gather bushels of them.

Colusa.

COTTON-GROWING.—J. T. Bowden in Colusa *Sun:* You cannot make cotton-growing a financial success on $100 an acre land. You must have cheap land, and if not cheap labor, you must have labor trained to cotton-growing. Low-priced cotton won't stand competition with eight mule teams and combined harvesters. The experiment on Mr. Moulton's low land east of Colusa, last year, shows a gross yield of $30 per acre, and should with trained labor show a net yield of from one-half to one-fourth of that. The want of summer showers is an advantage to cotton-growing in California over the East, as it vastly cheapens the cultivation and facilitates the harvesting. On the lower end of the McConnell ranch and Mr. Moulton's around the Tall House, and similar lands where it is rich and too low to make grain-growing safe, cotton-growing can now be made a success.

Contra Costa.

EX-U. S. SENATOR FAIR BUYING BLOODED SHIRE STALLIONS.—Antioch *Ledger:* Ex-U. S. Senator Fair visited the Hyde Ranch stock farm for the purpose of inspecting the stock. This stock farm is making a specialty of Shire horses, and as these horses are taking the lead and rapidly superseding the Percheron and Clyde stock in the San Francisco market, they have attracted the Senator's attention. Senator Fair was so favorably impressed with the English Shire stallion, Weston Squire, that he bought him for the sum of $2750, and will take him to his Sonoma county ranch near Petaluma. J. H. Schneider, the manager of the Hyde ranch, was willing to part with Weston Squire because he has a two-year-old from the old horse that promises as much as his illustrious sire. Mr. Schneider has received a handsome offer for this young stallion.

BEET SUGAR NOTES.—*Ledger:* E. C. Burr of the Alvarado sugar beet refinery is here to superintend the planting of some beet land that had been prepared and was all ready for the seed. He is very hopeful of the prospects, and is more confident than ever that he will build a refinery here this summer. Mr. Burr stayed here most all the week, superintending the planting. He now has three seeders in the county—two in Antioch and one at Brentwood. The following is a corrected list of those who have agreed with Mr. Burr to plant beets: H. F. Beede, 10 acres; Amos Graves, 5; Sanford Robinson, at least 20; J. S. Walton, 40; E. L. Emerson, 30; Henry Heidorn, 10; Jos. Ruckstuhl, 10; John McQuade, 10; Andrew Walker, 14; Robert Harrower, probably 10; Gen. Veale, probably 20; Joe Miller, 15; M. Minto, probably 10; Jas. Hobson, probably 10; Wm. Fleckhammer, probably 5; J. D. Wightman, 5; C. Chrestianson, at least 1; James O'Hara, at least 1; Fred Mienken, at least 1; Wm. Shafer, at least 1. Total, 138 acres. In addition to the above, we understand Mr. Putnam is negotiating to rent 160 acres of land from Gen. Veale with a view to plant beets. We understand that Henry O'Hara of Bay Point and a number of others are talking of planting beets. The test promises to be pretty thorough.

Fresno.

ADAPTED TO SUGAR BEETS.—Fresno *Expositor:* One of the greatest industries for Fresno, which the future will develop, is the sugar beet industry. Experiments have shown that the beets grow here to perfection, and there are tens of thousands of acres in the county suited to this crop. It has been ascertained that large profits will be made at this industry, and without doubt this is destined soon to become one of the greatest of Fresno's elements of wealth.

FARMING BY STEAM.—White's Bridge Cor. *Expositor:* A. J. Chaney is at the head of a company to purchase land and farm same in the Pinoche district, also to dam that stream and use the water for irrigation. Their intention being to seed 3000 acres this season, caused them to bring to our plains a steam power with a capacity of 100 acres a day—that is, with the power, the company can plow, harrow and seed at the same time this amount of land. After the grain ripens, the same engine harvests it, and when the time arrives, hauls the grain to the nearest shipping point. The engine is a straw burner.

Lake.

FARM WORK. — Lakeport *Avalanche:* The farmers of this country are making the most of this fine weather and the excellent condition of the soil to put in their grain crops, Many are well nigh done and the outlook for large yields is good, as far as can be indicated at this time of the year.

Los Angeles.

OIL AND ESSENCE MANUFACTURE.—L. A. *Express:* Dr. S. C. Woodbridge has secured a new steam press for the extraction of oils. This machine has a capacity for exerting 100 tons pressure. At present it is used for the expression of castor oil, and the firm has purchased considerable quantities of castor beans, paying one cent a pound for beans in the hull and 2½ cents for the hulled product. The quality of castor oil is very superior, being entirely free from offensive odor. Fine grades of orange and lemon oil are also manufactured from the culls resulting from frosts, windstorms and accidents in picking citrus fruit. Heretofore the fruit thus damaged has been considered almost worthless in Southern California, and large quantities have been buried by orchardists. The works first went into operation in February, 1891, but considerable loss resulted from fire and a boiler explosion. Everything is now in good order, with increased facilities. Lemon juice and lime juice are prepared for the market, and the preparation of essential oils, in addition to those already mentioned, may be undertaken as the business increases. In the East the castor hulls have been used for fertilizing purposes. They contain five per cent of nitrogen, three percent of phosphoric acid, and two per cent of potash. This form of fertilizer has been found specially valuable for tobacco culture in Connecticut, and may be tried with a fair prospect of success in certain varieties of fruit trees.

GRAIN CROP PROSPECTS.—San Gabriel Cor. L. A. *Express:* The farmers are all busy putting in grain. More grain is being sown this year than ever before in this valley. The early sown grain is up and growing nicely, and the orchardists feel more sanguine of getting good returns from their crop than they did just after the windstorm. San Gabriel valley never looked more prosperous.

Monterey.

FARMERS SEEDING.—King City Cor. Gonzales *Tribune:* The town is dull now, very dull, owing to the diligence of its farmers in seeding their land. Reed & Frisbee, who leased the San Lorenzo ranch of C. H. King, are putting in 6000 acres of land in grain, one-half of which is in wheat and the other half in barley. Fourteen teams of eight horses each, besides the steam plow, which is equivalent to six teams o eight horses, are pushing things, in anticipation of the downpour that is to come to make them all happy. On the Dunphy ranch the same activity prevails, though Lynn, Jenks, Downing, Matt Williams and Shermantine have about finished seeding. On the San Bernarbe, David Leese, J. J. Long & Sons, Arce Bros. and Dianovich are working with might and main to get their lands seeded. Willoughby, notwithstanding his partial failure of last year on the Walker ranch, is as busy as a beaver—never looking backward, but hoping for the best.

Orange.

SUGAR BEET FACTORY.—Santa Ana *Blade:* Frank J. Capitain, the promoter of sugar beet culture and the erection of refineries on the co-operative plan, says that a refinery, to be built near Garden Grove or Anaheim, is an assured fact. 2,700 shares of stock have been subscribed, which justifies sending for machinery, and the Directors will soon be in a position to ask for bids and offers of location. It is desirable to locate the factory in a locality that will possess the necessary requirements, such as an abundant supply of pure water, easy access to railroad facilities. and in close proximity to the farms where the beets are grown.

San Benito.

FAVORABLE TO FARMERS. — Hollister *Free Lance:* In several localities of the county, notably Quien Sabe valley, no satisfactory plowing could be done until very recently, owing to the extremely moist condition of the ground. Generally speaking, however, our agriculturists have had rain just to suit them, and everywhere the plow, the seed-sower and the harrow are at work. A most promising outlook.

San Diego.

VINE-PRUNING. — Escondido *Advance:* The Highland Valley raisin growers are pruning their vines. The prospect is very good for the coming season.

San Joaquin.

HIGH RENT FOR UNCULTIVATED LAND.—Stockton *Independent:* A Chinaman who has signed a lease for 70 acres of land on the Sargent ranch came into town to induce the property owner to give him fairer terms, claiming that he could not make anything in paying $10 cash rent for unbroken land. The land owner met his tenant liberally and a satisfactory agreement was reached. The transactions in this case show the profit to be made in the tule lands situated so the markets can be easily reached. The Chinese renter takes the land in its rough state with rank tules all over it, and surrenders it two years later, when it is thoroughly cultivated and in condition to bring a larger rental. The first year he clears the land and sows potatoes and onions. He divides his crop with the owner of the land, taking the one-half for all his work and expense. The second year will be more profitable to both the land owner and the Chinaman, for the renter will be able to pay $10 an acre cash, $5 of the amount to be paid in June and the other $5 in December. After the land has been well broken up for crops of potatoes and onions, it will bring a better rent.

San Luis Obispo.

GRAIN-SEEDING NOTES.—Simmler Cor. S. L. O. *Tribune:* There have been many more acres seeded to grain than ever before, and the rains have started all the early-sown grain, and also started some few farmers who have adobe land, and therefore could not plow until the rain came and made the ground soft. This is not a common thing, for nearly all the Carisa is a sandy loam and can be plowed at any season of the year. The farmers around Goodwin are also wideawake and up to the times, and are putting in all the grain that they can get to put in. The farmers here that raised grain last year were mostly so poor that they had to haul away their grain and sell it as soon as it was threshed, and many of them sold themselves short of seed and feed, and now cannot put in as much grain as they would have done if the seed could have been had here.

Sonoma.

ANOTHER STALLION GOING EAST.—Santa Rosa *Democrat:* It is now definitely stated that another of our fine-bred Santa Rosa horses will leave the Pacific for the most remunerative and appreciative field in the East. Mr. McFadyen will soon start for New York with the handsome stallion Redwood, 2:21½, by Anteeo, dam Lou Medium by Milton Medium. He follows the lead of Anteeo, and may be taken to the same breeding farm at Morisstown, Pennsylvania. Redwood leaves behind him a progeny as promising as those of his now illustrious sire. Redwood is about 16 hands high, of splendid form, was foaled in 1885, and is regarded as one of the handsomest and best-bred horses on the coast.

WOMEN IN HOP FIELDS.—Sebastopol *Times:* Not only in picking hops, but at a much earlier period of the year, are women employed in hop fields. Experience shows that they can train the vines in a manner far superior to the Chinese, whose place they are rapidly filling. Mr. Otis Allen states that he has had more applications from women for this kind of work than he can fill, and recommends them to his brother hop growers.

POULTRY FIGURES.—A. Armstrong in Petaluma *Courier:* A gentleman who lives within five miles of Petaluma gave me the figures on what he has made off of 500 hens the past year. They are as follows:

Commencing with 500 hens on the 1st of January, 1891.	
Sold 4658 doz eggs at an average of 30 cents a dozen	$1,397 40
150 hens sold at $5.50 a dozen	68 75
18 doz broilers at $4.50 a dozen	81 00
Increased flock, 100 pullets, at $7 a doz	60 00
Gross receipts	$1,607 15
Cost of feed for the year	700 00
Net profit	907 15
Which gives a profit of $1.80 for each hen.	

Some may discount this statement on the ground that 30 cents a dozen is too high an average for the year around, but the answer is that this gentleman shipped directly to a grocery firm in San Francisco, and thus saved the commission usually paid to middlemen. I wanted to get figures from another gentlemen who keeps 500 hens and ships to a commission house, but could not, as sickness in his family interfered with keeping a strict account.

CITRUS CULTURE.—Petaluma *Courier:* Joseph Naylor says: "Dr. Burdell's trees are well laden with fruit. He has oranges, lemons, limes and mandarins. His orange crop is certainly cleaner, plumper and in quality much superior to the average Los Angeles orange. The fruit is most delicious and in a week or ten days, when the crop is ready for the market, I will show as fine samples of oranges as can be seen anywhere on this globe. When we take into consideration all that we raise here, the butter, potatoes, the corn, the fruit, the berries and the oranges, the only wonder to me is that we are not overcrowded with population."

SALE OF A SUFFOLK PUNCH STALLION.—*Courier:* Ex-Senator Fair has purchased, through Dr. W. H. Carpenter, from Theodore Skillman, a fine Suffolk Punch stallion, three years old, imported from England, by Mr. Skillman, paying $2000 for him. It is the intention of the Senator to breed the stallion to some of the Biehler mares.

Tulare.

PASTURE PROFIT.—Visalia *Delta:* Ben Parker is having his 40-acre tract plowed preparatory to seeding it to alfalfa. Ben says he can make more from an alfalfa field, owing to the location of his land, than he would be able to from an orchard. He figures that he can pasture three animals to the acre for 10 months in the year, at $1.50 per month each; that is, his pasture land would pay him $45 per acre per year, or $1800 per year for the 40 acres; and there will be very little labor connected with the business.

THE SCALE DESTROYER.—Tulare *Register:* Messrs. Motheral and McDonald visited the Page & Morton fruit farm and found the orchard remarkably clean, though there were a few scale bugs among the pear trees. They made an important discovery also, one which will create a change in the time of spraying trees. They found the brown-necked scymnus, both in the larvæ and the perfected state. It was not heretofore known that the scymnus propagated in the winter, but since this has been learned spraying will be done in December so that these friends of the orchardist will not be destroyed. The scymnus is about the size of a pin-head, has a black body, a brown neck and a brown head. It has wings and can thus travel from tree to tree. It reproduces rapidly and is very voracious, eating scale bugs at all hours, day and night. The larvæ has the general appearance of that of other ladybirds, being of a light grey color, one-sixteenth of an inch in length, lighter streak down the back and the sides dark. At this time of the year it is sheltered in the crevices of the bark. This parasite is long lived, both in the larvæ and the mature state. In several localities it has almost eradicated the scale, but it has not become generally distributed.

HAY SCARCE AND HIGH.—Grangeville Cor. *Delta:* Hay comes high, but people must have it. Alfalfa hay is selling at $9 in the stack. J. N. Hoyt drove over to Fresno last week and was charged $1 per day for keeping his team on grain hay, as that article sells for $20 per ton in Fresno.

PEANUT GROWING.—Major C. J. Berry in Visalia *Times:* Last season my duties as superintendent of the Visalia Fruit and Land Company's orchard were to plant out several hundred acres of fruit trees. After the trees were planted—at a meeting of the Board of Directors—the question came up, What shall we plant between the rows of trees in order to utilize the ground and make some money? It was agreed that part of the ground should be planted to peanuts. I carefully prepared the soil by thoroughly pulverizing same, bought the peanuts for seed in San Francisco, costing us 8½ cents per pound laid down here. Upon receipt, broke the nuts in two parts, soaked them 24 hours in water; made drills in the ground four inches deep, and each drill three feet apart; planted the nuts in the drills about 12 inches apart, and cultivated and hoed the weeds out during the season. If all the land had been measured, it would have been about 15 acres. The results are 402 sacks of peanuts of a very excellent quality indeed. They should be planted in the early part of May and dug the last of October. In order to make the nuts of uniform color, they should be sulphured. My experience shows me I planted them too close together. I recommend the drills to be four feet apart and the nuts in the drill two feet apart. They are wonderful growers and need that room. Cultivate to them all the time and cover the runners only, leaving the crown out.

AMONA FARM NOTES.—Cor. *Delta:* Many of the ranchers about here have been very busy since the rain breaking up their ground and putting in seed. Most of the orchards about here are looking fine, having had their accustomed yearly dressing down and cleaning down of waste material. Several vineyards in this vicinity have been used temporarily this winter as pasture for sheep.

Yuba.

BROWN'S VALLEY FARM ITEMS.—Cor. Marysville *Democrat:* The Bernoulli farm is being cleared and cultivated, about 200 acres having been plowed and sown to grain. About 25 men are employed in grubbing, plowing and fencing. This farm has heretofore been used as a sheep range, and consists mostly of level, easily irrigated land, which can be cleared and cultivated at comparatively little expense. The soil and climate are well adapted to the production of grain, plums, peaches, grapes, oranges, figs and other fruits. The work of constructing the long irrigation flume is being pushed as rapidly as possible, and the canal will probably be completed by next spring.

ARIZONA.

FRUIT NOTES.—Phœnix *Herald:* In 1890, the raisin grape first appeared in quantity sufficient to warrant an attempt to produce raisins in commercial quantities, and this season one firm—Messrs. Adams & Logan—has shipped six carloads of as fine raisins as were ever put on the market; and the fact that the crop reached the Eastern cities before the California raisin growers had begun picking their grapes surprised the East, made a good price for the product, and established Central Arizona as the most promising field for the production of the raisin in the United States. To-day, there are upward of 5000 acres of grape vines, of one variety or another, nicely growing in Maricopa county. Hon. J. Harbert has returned from Los Angeles, where he went to buy orange trees for the Improvement Co., the directors of that enterprising corporation having decided to largely extend their citrus acreage. He contracted for 13,600 trees, which will be forwarded at once. About 80 acres will be planted at Arizona Falls, in extension of the company's present orchards. The balance of the trees will be distributed among other favorable points in the valley.

NEVADA.

A NEW CREAMERY.—Carson *Tribune:* Herman Springmeyer shipped to San Francisco this morning 500 pounds of butter manufactured at the Carson Valley Creamery from milk furnished by his own cows. Springmeyer has determined to establish a creamery on his own ranch, and to that end has ordered the necessary machinery from the East and will begin the erection of the building early in the spring.

GRAIN AND HAY NOTES.—*Silver State:* Last year in Humboldt county there were 4063 acres devoted to the cultivation of grain. The principal growers are as follows, with the number of acres of grain grown last year after their respective names: Kruse, 320; Larson, 300; Pitt, 250; Johnson & Morkenberg, 220; Thies, 240; Jeperson, 200; Hatton, 160; H. C. Marker, 200; Brown & Munk, 200; Marzen, 120; Downs, 125; Tomlinson, 150; Dumas, 110; N. P. Dann, 115; Anker, 115; Fuss, 110; Carpenter, 155 and Killebrew, 150. Then come the following, each with less than 100 acres: O'Kane, 30; Smith, 40; Billups, 10; Coffee Charlie, 15; Cleary, 30; Mortenson, 40; Jensen, 40; Grannis, 40; Welsh, 50; Clark, 80; Hauskins, 50; Harrison, 43; J. C. Damm, 40; Ludvig Munk, 35; Nelson, 45; Hansen, 45; Reed, 20; Olsen, 20; Bastian, 30; Moore, 5; Hanson, 30; Westfall, 40; Markwell, 30, and John Damm, 35. The Jerry Fenton ranch was rented by Messrs. Brown and Munk, and ex-Senator P. N. Marker's vast domains, on the tules, were rented to numerous individuals. For most of the above segregations, we hereby take pleasure in acknowledging publicly our thanks to Mr. Joseph Dumas. The prime alfalfa growers, as nearly as we can ascertain at this date, are as follows' with the respective number of acres appended: Marker Bros., 2000; Joe Marzen, 1500; Joe Hill, 350; Carpenter, 200; Thies, 150; Larsen, 150; Ruddell, 120; John Hill, 125; Ed Emmons, 100; J. R. Brown, 100; Harrison, 100; Fuss, Westfall and Downs, 80 each; Judge Brown, 70; Pitt, 150; Anker, 40, and Jno. Reed, 100. Of course, there are other important hay growers among us. Much of the hay is being converted into bales. There are seven presses owned and operated as follows: Marzen, Marker, Joe Hill, John Hill, Ruddell, Carpenter, Harrison and Clark. Mr. Marzen has two presses, one of which is not operated, nor is Joe Hill's brand new one in operation. Most of the hay is shipped to San Francisco. Hay brings, delivered in San Francisco, $11.50 per ton. Not all the grain from the valley has been shipped.

GOOD HEALTH.

The Keeley Cure for Dipsomania.

A Pacific Coast Branch Established at Los Gatos.

The RURAL recently called attention to the great value of the "Keeley Cure" for dipsomania, which is now attracting much attention in all parts of the country. Yet, notwithstanding the evidence of its value, it is regarded as of little importance by many. The medical profession especially seem to place but little confidence in it. One of their writers, speaking of Dr. Keeley's and other specifics for alcoholism, says: "All this notoriety about specifics is the veriest trash, and will soon pass away as one of the day's wonders." But the people at large, and most of the secular press, are disposed to regard it as a great boon to humanity, although many sad failures are from time to time reported. So far as can be learned, from 85 to 90 per cent of all who take the treatment receive perfect and permanent benefit. The doctor claims that 95 per cent are cured. It is an unfortunate circumstance in the history of medical practice that no treatment of disease is successful in all cases.

THE MATTER AND METHOD OF TREATMENT

Is as follows: The patient is first provided with a bottle of his favorite liquor and told to partake of it freely, and when satiety provokes disgust the doctor commences his regular treatment, which consists first in giving a hypodermic injection of a preparation, the name or nature of which has not yet been given to the public, but which the doctor explains to his patients is intended for a "bracer" and which he says also regulates the effects of the chloride of gold which is taken internally. The mode of preparing this last is also unknown to the world, as it is not a simple chloride of gold, but compounded with other ingredients. The patient after receiving his hypodermic injection is given a bottle of the chloride, which he is instructed to take once every two hours during the day, at his room or wherever he may be. He is also instructed to visit the doctor's office four times a day to receive a hypodermic injection. When this service is performed the patients are required to form in single column with bared arms and pass before the doctor or one of his assistants for treatment. The amount of the injection varies with the condition of the patient, as shown by the tongue and pulse. The primary object is to increase the temperature of the body by accelerating the pulse. The effect is instantaneous. The general effect of the treatment is an almost total obliteration of the appetite, a quieting of brain action—in short, giving the entire system a complete rest, or rather state of lassitude. A dislike for any kind of alcoholic drink is also set up within three or four days.

TREATMENTS FOR OTHER DISEASES AND HABITS.

Dr. Keeley also treats patients for the opium and morphine habit; for the excessive use of tobacco, especially cigarette smoking; also for neurasthenia, a peculiar nervous weakness. Each of these habits receive the same general treatment as for dipsomania, but with menstruums somewhat modified and carrying different chemicals, suited to each particular case.

THE USE OF A SOLUTION OF GOLD

For the treatment of disease is nothing new. It was in vogue some five centuries ago, and known as *aurum potable*, and was chiefly employed as a tonic and was by many regarded as a restorer of youth—an elixir of life. It is also used at the present day, but Dr. Keeley seems to have been the first to employ it as a specific for drunkenness.

IT IS A SECRET REMEDY,

And it is chiefly for that reason that the medical faculty, as already stated, takes but little interest in the matter. It is held by the profession as a fundamental principle that they shall not take any notice of, or hold any communication with, any person who employs any secret remedy. This practice may have some reason in it; but the evidence is cumulative that it costs the world many thousands of lives every year, a hundred times as many as are saved by adhering to it. It is, moreover, well known that many really valuable medical remedies have been brought to light by persons not enrolled as members of the profession in any of its branches, and who totally ignore all medical rules. Many maladies once thought incurable by the faculty are cured to-day by remedies not first introduced by professionals.

The rule may have a small value; but humanity would be immensely benefited by its total abrogation. Science marches triumphantly over many of the ancient landmarks of professional ignorance and prejudice, and good common sense often wins victories over maladies which our professionals of to-day pronounce incurable. It would be far more humane to seek for and utilize truth, wherever found, than to build barricades around it and compel it to come in through prescribed gates or stay out altogether. In this respect, the medical faculty is far behind the age, and is daily losing the good will and respect of progressive men and women. Does Keeley cure? That he does cure fully 85 per cent of those who come to him goes without saying; but there *are* those who derive but little or no benefit from his practice. In fact, there are

THREE KINDS OF CASES WHICH KEELEY CANNOT CURE,

And which have been stated as follows: "There is the wealthy class who go to him and think they are cured, and then they find themselves out of business. They have no intellectual pursuits and no longer see the enjoyments of the race course or the club, so that in some instances they have resumed the old habits. Another class is composed of those afflicted with a species of insanity. They are usually intellectually brilliant, or have been, but there is scarcely enough brain force left to build upon in an effort to change their mode of life. A third class is the thoughtless young man or boy, who usually belongs to the wealthy class, and is there, as he says, to 'please the old man.' These look upon it as a vacation, and go away from Dwight in some instances only to return. 'I'm here again, doctor,' remarked one on his second visit. 'The boys said I could not drink, and I thought I would show them I could.' But the doctor told him to go home again; that he could not and would not waste his time on such patients."

A KEELEY INSTITUTE FOR CALIFORNIA.

So great has become the popularity of this cure that Dr. Keeley has begun to establish Institutes in various sections of the country for local convenience. One of these has recently been established at Los Gatos; a beautiful and healthy location six or eight miles west of San Jose, in the foothills of the inner coast range of mountains. We understand that another will soon be established in this city, where "it is useless to remark," it is greatly needed. A large number of patients is already under successful treatment at Los Gatos. The first graduate left the institution, fully entitled to graduation honors, on the 15th inst. It is stated that much joy was manifested on the occasion. The gentleman's wife and two little children went to Los Gatos, and were rejoiced to bear the patient home in triumph, "clothed and in his right mind."

We trust that such may be the result with thousands—in fact all who may be in need of such a course of treatment.

A Family Secret Exposed.

TO THE EDITOR OF THE RURAL PRESS:—I have just found out how Mrs. A. keeps her family in such pretty and new looking clothes, and I am going to give your readers the benefit of my knowledge.

Some of her envious neighbors called her extravagant, when instead only a few cents' worth of Diamond Dyes, which are quite easy to use, have made the children look as if twice that number of dollars had been spent on their clothes, while her own dresses and Mr. A.'s suits, although they always look brand new, are often dyed over with these dyes. Since I learned this, I have used Diamond Dyes several times and always with success. They are the only dyes I have ever found that do not crock or fade. Yours truly,

MRS. K. S., Moline, Ill.

Northwestern Breeders' Association.

H. D. McKinney, Secretary above Association, writes: "I will say for Quinn's Ointment that I have used it with most satisfactory results and recommend to my friends." For Curbs, Splints, Spavins, Windpuffs, Bunches, works like magic. Trial box 25 cents, silver or stamps. Regular size, $1.50 delivered. Address, W. B. Eddy & Co., Whitehall, N. Y.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap. Will be sent direct from warerooms if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California Street, San Francisco.

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LABORING MEN! TAKE CARE!

LOSS OF TIME IS COSTLY!



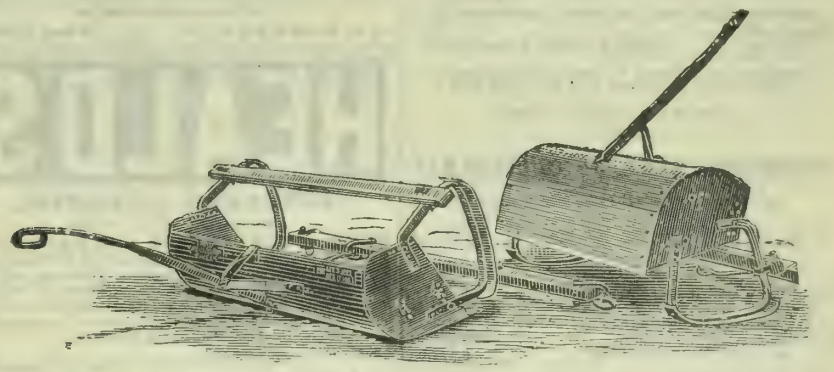
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THE GREAT REMEDY FOR PAIN,

CURES

RHEUMATISM,

Sprains, Bruises, Cuts, Wounds, Soreness, Stiffness, Swellings, Backache, Neuralgia, Sciatica, Burns.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

FRESNO AGRICULTURAL WORKS

FRESNO, CAL.

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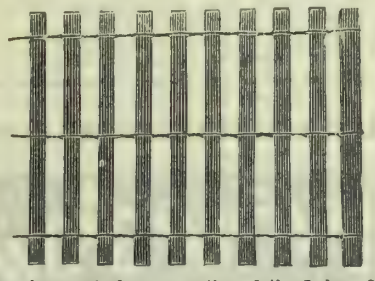
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Cheap, Durable and Effective.

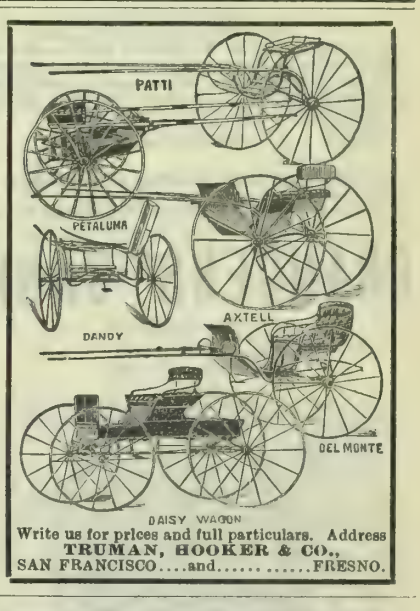
Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

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The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.



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DO NOT FAIL to SEE THE "DOMESTIC"

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ASK YOUR GROCER FOR IT.

J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres. CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,

INCORPORATED A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

RAISIN GROWERS, ATTENTION!

POSITION WANTED AS FOREMAN ON A RAISIN farm, by a married man with five years experience in growing and packing raisins. Wife can take charge of packing department, being a first-class packer. Prefer taking position January 1, 1892, but can come at any time desired. Best of reference given as to capacity, honesty, etc. For particulars, address C. N., Box A. this office.

LOWEST PRICES. EASIEST TERMS. LARGEST STOCK. Oldest Music House.

PIANOS

DECKER BROS. FISCHER.

KOHLER & CHASE, 26 O'Farrell St., S. F.

SEMI-ANNUAL STATEMENT

OF THE

GRANGERS' BANK

OF CALIFORNIA,

Amount of Capital actually paid in U. S. Gold Coin, Surplus paid up and Reserve Fund..... $811,963 28

STATE OF CALIFORNIA } City and County of San Francisco. }

A. D. Logan and A. Montpellier being each duly sworn, severally depose and say that they are respectively the President and Cashier and Manager of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

(Signed) A. D. LOGAN, President,
(Signed) A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 10th day of January, 1892.
(Signed) JAMES L. KING, Notary Public.

SEMI-ANNUAL STATEMENT

SHOWING THE ACTUAL CONDITION OF THE

GRANGERS' BANK OF CALIFORNIA,

AND THE VALUE OF ITS ASSETS AND LIABILITIES

At the Close of Business December 31, 1891, viz:

ASSETS:

Loans on wheat, real estate and other securities	$1,530,589 58
Due from banks and bankers	2,225 96
Real estate	135,708 51
Office furniture, fixtures and safe	6,075 00
Cash on hand	258,250 78
Total	$1,932,799 83

And said assets are situated in the following counties in the State of California, to-wit: Alameda, Butte, Contra Costa, Colusa, Fresno, Merced, Monterey, Placer, Stanislaus, San Mateo, Sutter, Solano, City and County of San Francisco, Tehama, Tulare, Yuba and Yolo.

LIABILITIES.

Capital stock paid in U. S. Gold Coin	$763,210 00
Surplus paid up and reserve fund	48,743 23
Due depositors, banks and bankers	1,075,054 00
Dividend No. 17	45 792 60
Total	$1,932,799 83

STATE OF CALIFORNIA } City and County of San Francisco. }

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GRANGERS' BANK

OF CALIFORNIA,

SAN FRANCISCO, CAL.

Incorporated April, 1874.



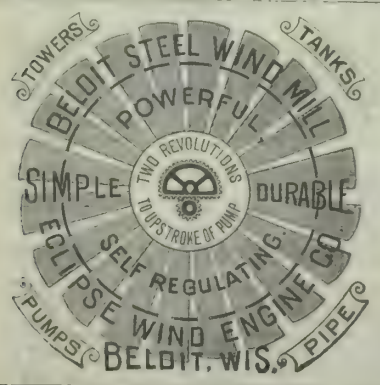
Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1 1892 A. MONTPELLIER, Manager.



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AGENT FOR THE BELOIT STEEL WINDMILL AND Manufacturer of the Rose Deep Well Pump. No. 1111 Ninth Street, SACRAMENTO, Cal. Catalogues Free.

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Special university preparation, depending not on time, but on progress in studies.

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FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.

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Music Books.

Ne Plus Ultra Piano Collection.
160 pages. Brilliant but easy pieces.

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160 pages. Latest and best songs.

Ne Plus Ultra Song and Chorus Collection.
Each song has a ringing chorus.

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Every style of dance music; not difficult.

All these books are large sheet music size.

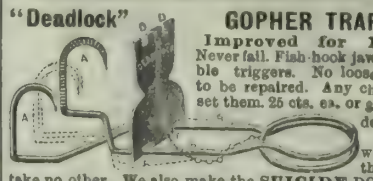
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GOPHER TRAPS.

Improved for 1892. Never fail. Fish-hook jaws. Double triggers. No loose joints to be repaired. Any child can set them. 25 cts. ea., or $3 a doz delivered. Ask or write for them and take no other. We also make the SUICIDE DOUBLE-END TRAP. Price 30 cts. each. The only trap which catches coming from either end. Send for both traps.

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BEST TREE WASH.

"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 90 9-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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ELM STREET, DALLAS, TEXAS.

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—OF THE—

Mexican Phosphate & Sulphur Co.,

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Growers in San Bernardino County—notably Riverside—and Butte County—notably Palermo—can attest its merit.

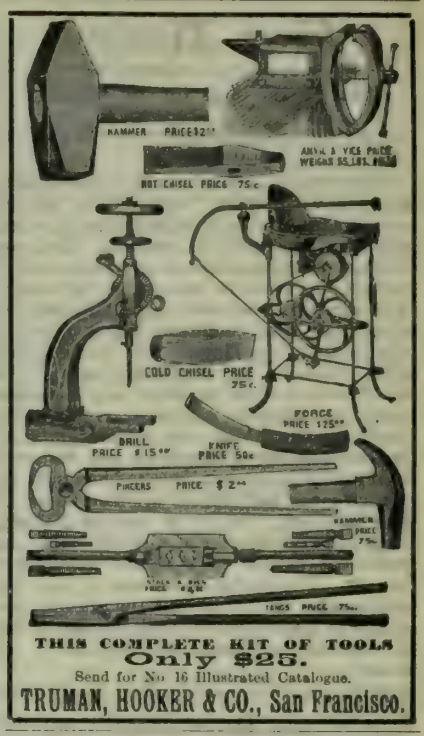
We guarantee uniformity in its analysis, and seek correspondence with bonafide purchasers of a reliable fertilizer.

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H. M. NEWHALL & CO., Agents,

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Sheathing Lath,

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No. 6 and 9 Best Quality Steel Wire in Long Lengths.

We have a very large Stock and will sell low.

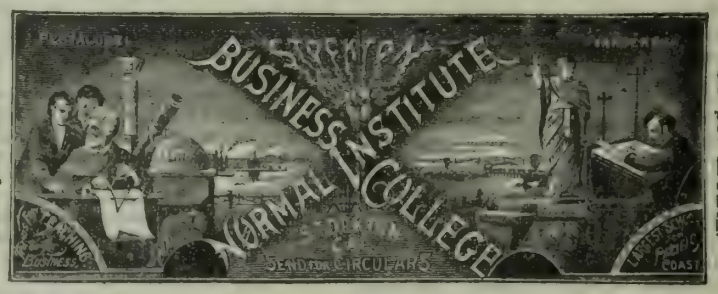
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1892—Wholesale and Retail—1892.
General Agent Winans' Pat Carriage Co., Mich.; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers. Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.

Stockton-Fresno Business College.

EXCELLENT BOARD $10 per Month.



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THE LEADING FEATURE OF THE SCHOOL IS ITS HOME.

Tuition One Year (52 Weeks), $75.

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SUPERSEDES THE PLOW
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THE GREATEST IMPROVEMENT OF THE AGE.



A Complete Revolution in Plowing
Requires less than half the Power of any other Gang Plow.
STRONG AND DURABLE—MAKES A PERFECT SEED BED

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BREED'S UNIVERSAL WEEDER

Every practical farmer is especially interested in any implement that will tend to lessen the amount of his labor and increase the production of his crops and is constantly on the outlook for such implements. During the last few years the methods of cultivation of crops have become almost entirely revolutionized. The deep root pruning process is going out. Surface culture is going to become universal. For this purpose no implement equals the **BREED WEEDER.** Investigate. Send for circulars.

General Agents, KNAPP, BURRELL & CO., Portland, Oregon.

FLORIST AND GARDENER.

Ornamental Horticulture at the World's Fair.

CHICAGO, ILL., Jan. 11, 1892.

TO THE EDITOR:—It is the desire of the Department of Horticulture that the planting of hardy shrubs for decorative purposes be completed by May 1, 1892, especially of such trees, shrubs and plants as will be found in the appended lists.

The Department wishes to impress upon all those who expect to make competitive groups, as well as those who loan or donate trees, shrubs or plants, that under no circumstances will poorly grown or badly rooted specimens be accepted. All material must be better than ordinary nursery stock; in other words, it must be shapely, vigorous and large enough to be effective. For instance, shrubs like *Deutzia crenata flora plena* should be three to four feet high with six to eight canes; *Spirea collosa* should not be less than 18 inches in diameter; evergreens must be characteristic of the species and varieties they represent.

The plans for this section of the Horticultural Department are now being prepared, and will be completed by the 1st of March. In order to follow out those plans, and to insure the harmonious effect as a whole, it is necessary that the Department be given full control of such plants, trees and shrubs as are contributed or loaned for this purpose. Those used for the general decoration of the grounds, and not planted as grouped exhibits for competition, will be cared for at the expense of the Department.

A complete list of all material to be supplied must be furnished the Department not later than March 1, 1892, and blank forms for this purpose will be furnished upon request. All plants sent must be correctly named, and duplicate invoices must be sent with each consignment.

ROSES FOR THE OPEN GROUND.

A most unique and beautifully designed rose garden is now being planned to accommodate not less than 50,000 plants, besides special areas for large groups. This garden will be of classic design, with temples, arbors, archways and trellises.

The "great masses"—the people—have never had an opportunity of seeing a typical rose garden. Now the time has come, and nothing should be left undone to insure a most magnificent display.

Rose plants may be on their own roots, budded or grafted. Those on their own roots must be from not less than 3½ inch pots, of the current year's growth; or they may be one or two years old, dormant plants. Well-rooted budded plants, with the buds dormant, will be admitted, thus giving an opportunity for showing a greater variety. The above remarks apply to H. P. and other hardy roses. Teas, Noisettes and other kinds will require different treatment, and it is suggested that strong plants in five inch pots be carried over in cold frames to be planted early in the spring of 1893.

It is expected that large and substantial premiums will be offered for roses, as well as for other plants, in addition to the awards that will be offered by the National Commission.

J. M. SAMUELS,
Chief, Dep't of Horticulture.
JOHN THORPE,
Chief, Bureau of Floriculture.

To Grow Refractory Plants from Cuttings.

SANDERS, FRESNO CO.

TO THE EDITOR:—Allow an old stager in the work to tell how to propagate plants from cuttings, especially such as are refractory about striking roots. The ends to be attained to insure success, are to give the bottoms of your cuttings heat, moisture and exemption from contact with the atmosphere. Give the tops moisture and dense shade. Here is the way I do it. Say I wish to start 200 refractory roses or other plants from cuttings. I dig a straight V-shaped trench due east and west, 16 feet long, eight inches wide at top, both sides sloping like a V to the center in the bottom. I make my cuttings about nine inches long with a bud near the top of each. I set these an inch apart along the north slope of my trench. Then I fill up the trench pressing the earth firmly about the cuttings. Then take an 18 foot board—a fence board will do—nail it to stakes at each end of your row of cuttings, so that it stands on edge two inches south of your row of cuttings. Put up another board in like manner a foot north of this one, then nail in end pieces and you have the tops of your cuttings in a box. Cover your box with old grain sacks and sprinkle them to thorough wetness in the hot part of every day.

Now about the bottoms of your cuttings. If you've followed my directions the bottom ends of your cuttings are eight inches under ground, forming a straight row two inches south of your box. Now dig a little trench along the south side of your box, but be sure to have five inches, at least, of earth between the bottom of your trench and your cuttings. Fill this trench with water two or three times a week, so that the bottoms of the cuttings shall be kept constantly moist. The water should be poured into the trench only in the hottest part of the day, so that it shall be, at least slightly, warmed by the sun before it reaches the cuttings.

A few years ago the daughter of my friend Rev. Mutersbaugh of Reedley, was bemoaning the waste of valuable citrus wood when the orange and lemon trees were pruned. I gave her the directions that I have written above; to-day she has dozens of thrifty citrus trees from just such a 16 foot row as I have described. Another lady in Los Angeles to whom I wrote instructions about propagating cuttings, writes that she has produced more of the rarest products found in her locality than she could buy with $20 from the nursery. She adds, "Write up this matter of raising refractory plants from cuttings, for the RURAL PRESS, or I will do it and will use your name in doing so." Believing that she has good cause for her request I've written it up.—W. A. SANDERS.

The State Floral Society.

At the last meeting of the State Floral Society in this city the following report was submitted:

This meeting marks the close of another year of our society's history, a year which, in point of growth and prosperity of our organization and gratifying success of its undertakings, is the most satisfactory it has seen. The reports of the Secretary and Treasurer will give you definite details of our growth in membership and improvement in finances, which are pleasing to those who have labored long and loyally for such results, and should be acceptable also to the public, in that larger membership and friends signify that we shall be able to exert ourselves more and better in affairs which tend strongly to develop the floriculture of of the State and more widely disseminate the love and devotion to the floral arts, which are so elevating, refining and humanizing in their influences.

I learn from my reading of journals devoted to floriculture and gardening in this country and abroad, that great progress is being attained in beauty-cultures everywhere, both those pursued from commercial motives and from love of the work. Never within my memory have the general discussions of floral topics, the introduction of new varieties, and the holding of special and general exhibitions been possessed of greater merit nor commanded wider attention than during the past year. It is gratifying to know that, through the efforts of our society, California can justly claim an honorable place in the world's advancement in floriculture. The world has a right to claim that a State with our peerless advantages for the growth of all that pleases the eye or delights the heart should not be laggard in this respect. We can see our progress in the continued improvement of private gardens, the increase of private plant collections, as well as in the improvement of our floral shows, the enrichment of public conservatories and the stimulation of the business of the florists.

It is especially important that such activity, progress and extended interest should characterize floral affairs at this time, because of the approaching World's Fair at Chicago and the effort which is being made to realize on that occasion the grandest display of floral materials and affairs the world has ever seen. The chief of the floricultural branch, Mr. John Thorpe, is a man eminently qualified for such an undertaking, and he is enjoying the heartiest cooperation of all Eastern societies and individuals. I think it would be very fitting for our society to declare by resolution its approval of his plans, as thus far disclosed, and offer him our cooperation in any service on this coast which he may desire to advance.

Our own floral shows of the past year are too fresh in your memory to warrant any extended characterization by me. We owe much to the intelligence, taste and devotion of the committee which carried these ventures to success. It is plain now that we are warranted in some extension in our preparations for these shows. We must have larger space for displays and more room for the accommodation of our patrons. At the fall show many exhibits might almost as well have been set up in a desert, for they certainly bloomed and blushed unseen.

A new and very promising feature of this year's fall show, as you will remember, was the enlargement of the list of awards by subscription funds from wealthy connoisseurs and patrons of floriculture. Notable aid to Eastern displays is gained in this way, and we hope that the generous hearts of our California friends are but just beginning to be warmed up in this direction.

After all, the most notable evidence of progress of the year now closing is the appearance of our proceedings in neat pamphlet form, issued as a regular monthly bulletin of the society. If I am rightly informed, this is the only publication of the kind in the United States. It is a great credit to our organization, and will, I believe, prove a strong factor in our future progress and success.

In closing, I desire to return thanks to all my associate officers, who have by their kindly watchfulness made it almost impossible for me to offend or err, and thanks also to the whole membership of the society for their most cordial cooperation in all matters looking to the society's welfare.

EDWARD J. WICKSON, President.

In consonance with the recommendation of the president, the secretary was requested to prepare and forward to Mr. Thorpe an expression of the society's confidence and desire to render assistance in his important work of developing the floral features of the World's Fair.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JAN. 19, 1892.

467,144.—CALF WEANER—R. Arborn, Los Angeles, Cal.

467,285.—INCUBATOR—J. W. Atkinson, Milpitas, Cal.

467,364.—GARDENING TOOL—T. W. Breen, Saucelito, Cal.

467,370.—STOVE PIPE DRUM—M. P. Farnham, Germantown, Cal.

467,480.—CULINARY BOILER—J. L. Hawkins, Fresno, Cal.

467,287.—GAS BURNER CUT-OFF—J. E. Hogan, Oakland, Cal.

467,288.—PNEUMATIC CLUTCH—B. Jennings, San Jose, Cal.

467,187.—STAMP MILL—J. M. McFarland, Virginia, Nev.

467,296.—BEAM FOR CULTIVATORS—F. P. McFeeley, Oakland, Cal.

467,298.—TEMPLET FOR BOILER-HOLES—J. McNeil, S. F.

467,289.—HOISTING APPARATUS—Mount & Warnock, Spokane, Wash.

467,381.—WRENCH—Parsons & Davis, New Kamilche, Wash.

467,302.—ASPHALT MIXER—Pitchford & Cooper, S. F.

467,444.—DISH WASHER—M. Stone, Fallbrook, Cal.

467,290.—PAINT CAN—C. M. Symonds, S. F.

467,458.—STEAM ENGINE—C. W. Tremain, Portland, Oregon.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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People's Reform Meeting.

Hon. Chas A. Sumner will speak at Liberty Hall, 865 Broadway, Oakland, Saturday evening, January 30, on: "The methods of the monopolists, and the way in which they can be most effectively confronted and overthrown." After adjournment there will be a conference of parties interested in taking early steps for organizing the People's Party in Alameda county.

Oxford Down Sheep.

Mr. W. A. Shafor of Middletown, Ohio, one of the most successful breeders of sheep in this country, has this to say regarding his experience in finding the best breeds and getting best results:

In 1880 I entered into partnership with my uncle, John R. Shafor, in stock raising and dealing. He had a flock of Southdown and a flock of Cotswold sheep. But his Southdowns were too small and his Cotswolds too tender to be as profitable as he thought they should be, so we began studying the different improved mutton breeds, in view of changing to a breed which combined size, quality and hardiness. After careful examination of the then most popular breeds in England and America, we decided to try the Oxford Down. And 12 years experience in importing and breeding has convinced us that we did not make a mistake.

I go to England each year to select and bring home our sheep, while my uncle looks after the farm and our business during my absence. But he is now 73 years old and wishes to retire from active business life. So we have decided to dissolve partnership March 1st, 1892. I shall continue importing and breeding Oxford Downs, as I consider them the best and hardiest sheep for the various climates and conditions in this country.

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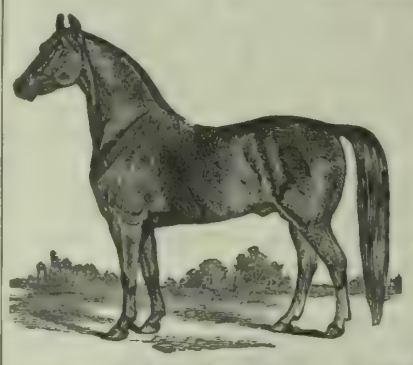
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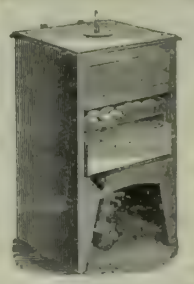
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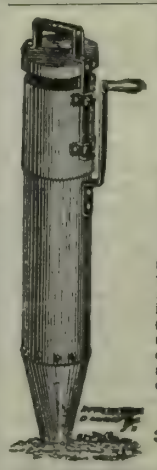
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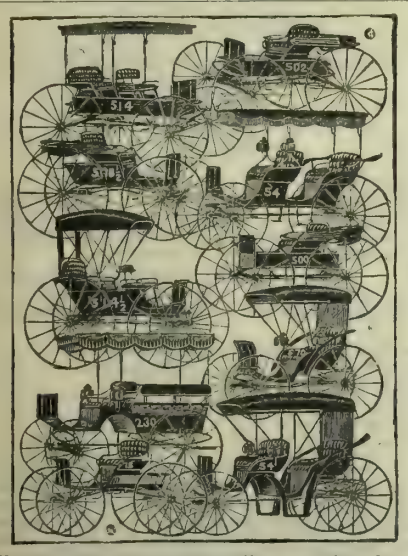
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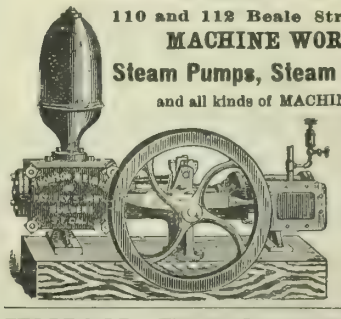
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 27, 1892.

Owing to limited supplies, trading in farm products is restricted. Wheat continues to go out freely. The export movements to date, with flour reduced to wheat, aggregate about 650,000 tons, which is over 200,000 tons in excess of the exports for the like time in the season of 1890-91. Money continues easy in the absence of either a speculative or legitimate demand. So far, the season has been very favorable for crop purposes in the northern and central counties, but in the southern part of the State there are complaints of a light rainfall. Up to Jan. 26th of this season, the precipitation in the southern part of the State has been only about one-half of the fall during the like time in 1890-91, while in the central and northern counties, it averages fully 100 per cent more. Notwithstanding the light rainfall in the southern counties, farmers there are buoyed up with the knowledge that in a majority of like former seasons, they had heavy rains in February and therefore they can reasonably look for its repetition in this year.

Foreign Grain Review.

LONDON, Jan. 25.—*Mark Lane Express:* English wheat made a further decline of 1s.; foreign wheats are 6d. lower, California being quoted at 40s.; Red Winter, 38s. 4d. Foreign flour dropped 6d., American selling at 41s. Corn was irregular. American selling at 22s 3d. Oats are firmer, American selling at 18s. 3d. Barley was dull. To-day's market was weak. English wheat dropped another 6d.; flat corn, 22s.; oats and barley were neglected. English and American flours were in slightly better demand.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.	June
Thursday	8s1d	8s0½d	8s1½d	8s1½d	8s1½d	8s1½d
Friday	8s ½d	8s1½d	8s1½d	8s1½d	8s1½d	...
Saturday	8s1d	8s1d	8s1d	8s0½d	8s1½d	8s1½d
Monday	8s1½d	8s1½d	8s1½d	8s1½d	8s1½d	8s1d
Tuesday	8s0½d	8s0½d	8s0d	7s11½d	7s11½d	

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	41s0d	41s9d	40s3d	Held higher.
Friday	40s6d	40s6d	40s3d	Not much inquiry.
Saturday	40s6d	40s6d	40s6d	Firmer.
Monday	41s1d	40s9d	40s6d	Rather firmer.
Tuesday	40s9d	40s6d	40s6d	Steady.

To-day's cablegram is as follows:

LIVERPOOL, Jan. 27.—Wheat quiet but steady. California spot lots, 8s 2½; off coast, 40s 6d; just shipped, 40s 6d; nearly due, 40s 6d; cargo s off coast, quiet; on passage, weaker; Mark Lane wheat, turn easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Jan.	Feb.	Mar.	Apr.	May
Thursday	170½	171	172¾	173	171½
Friday	170¾	170¾	172½	173½	171
Saturday	171	171½	172¾	173½	171½
Monday	172	172	173¼	173½	172
Tuesday	171	172½	172¾	172¾	171

The following is to-day's telegram:

NEW YORK, Jan. 27.—Wheat, $1.02½ for February $1.03⅜ for March, $1.04 for April, $1.02½ for May and $1.01 for June.

CHICAGO, Jan. 27.—Wheat, 91¼c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer 1892. H	L.	Seller 1892. H.	L.
Thursday	178½	177½	....	....	150½	150½
Friday	177½	176½	....	....	....	....
Saturday	177½	177	....	....	151	151
Monday	176½	175½	....	....	....	....
Tuesday	174½	174	....	....	....	....

The following are to-day's recorded sales on Call:

Morning session: Buyer season—800 tons, $1.73⅜; 200, $1.73½; 200, $1.73¼; 300, $1.73 per ctl. Seller 1892 200 tons, $1.48; 100, $1.47½ per ctl. Afternoon session: Buyer season—300 tons, $1.77½; 100, $1.72½; 100, $1.72; 100, $1.71½; 200, $1.71¼; 200, $1.71½; 2900, $1.71; 300, $1. 0½; 1500, $1.70½; 100, $1.70½; 400, $1.70¼; 100, $1.70½; 200, $1.71½; 500, $1.71. Seller 1892—100 tons, $1.47; 100, $1.46½ per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892. H.	L.
Thursday	110½	110	103½	1 32½	....	....
Friday	110	110½	102½	102½	95½	95½
Saturday	110½	110	....	....	....	....
Monday	1 8½	1 7	102	102	....	....
Tuesday	108	107½	....	....	....	....

The following are to-day's recorded sales on Call:

Morning session: Buyer season 100 tons, $1.07½; 100, $1.07½; 100, $1.07½; 400, $1.08; 100, $1.08½; 900, $1.08½; 100, $1.08½; 300, $1.08¼ per ctl. Afternoon session: Buyer season—600 tons, $1.08½; 300, $1.08¼ per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Jan. 22.—*Bradstreet's:* The wool markets still report a quiet demand for both domestic and foreign wools Manufacturers are waiting for the opening of the next London sales, which are expected to forecast the movement of prices for the year. Letters which have been received from prominent London dealers state that every indication points to higher prices. The continent will be a heavy buyer at these sales. Holders in London have refused offers at the prices of the last sales. In domestic grades there is only a moderate movement Ohio and Michigan wools are not quite as firm as a week ago, otherwise no change is to be noted in the markets as far as prices are concerned. The trade in carpet wools is still of a retail character.

NEW YORK, Jan. 24.—Light business is reported at all seaboard points, unwashed especially being neglected. Sellers of fall grades have to adopt a humoring policy with buyers, as the dry goods trade has only a streaky style of activity, and but few large parcels of raw material have been in treaty for fine work. Sales of Australian are heavier, with the price favoring buyers now at 32@41c. Foreign wool clouds the situation here by its heavy collections in England, and lower prices prevail than have ruled for the past six years. The sales of domestic this week are not instructive. In a price way nothing has improved. Disclosed shadings are meaningless at the moment. Accounts of London sales are looked for with much interest, and are expected to give a more general decided tone one way or the other over here. The sales at New York are 239,000 pounds of domestic and 388,000 pounds of foreign, the latter mainly common. At Boston the sales were 1,866,000 pounds of domestic and 775,000 pounds of foreign, chiefly Australian Philadelphia had fair business in purchases for immediate want of mills There is everywhere cheap and abundant offerings abroad to operate against free buying.

Dried Fruits.

NEW YORK, Jan. 22.—Interest in California prunes seems gradually to be broadening out and prices are hardening as inquiries increase. Most of the holders now ask 7½c for 40s to 90s in sacks, and 8¼c for the same assortment in boxes.

NEW YORK, Jan. 24.—Apricots are neglected and irregular. They are quoted: 7c for sacks; 9@10c for boxes of good quality. There is renewed activity in prunes. Cheapness enlarges the consumption, and also a realization of the excellence of Coast grown prunes. Five sizes sacks are quoted at 7⅜c; four sizes 7c. Designated sizes brought the full last quoted rates Several carloads of prime yellow peaches moved speculatively, Philadelphia making the price. The retailers' trade wants 6¼c.

Eastern Hop Market.

NEW YORK, Jan. 24.—Hops have again advanced. New prices check sales, but no yielding feeling is entertained by holders. Spot prices follow futures closely. The country tone is strong, and has been met in a number of instances. The exports for the week were 1350 bales. State, ninety-ones, 22@27½c; nineties, 14@20c; Pacific ninety-ones, common to choice, 21@26c; nineties, 13@20c.

Eastern Raisin Market.

NEW YORK, Jan. 24.—We have entered into the two dull months for the use of raisins, but the lull can and may be, broken speculatively, as prices continue favorably low. This, of course, does not mean there is a pressure to slaughter goods, for the fact is solid holders of strictly prime parcels seem inclined to wait and participate in possible chances of at least fractional advances. Nominal quotations are: Two crown bags, 3¼@4c; three crowns, 5c; all boxes range from $1.10@1.35.

Miscellaneous.

NEW YORK, Jan. 24.—Honey, firm. The demand is improving for pure strained in grocery flasks. Lima beans, $1.85 a bushel; full spot price for prime. Offers from the Coast at $1.75. Prompt shipment all rail.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 25, 92, were as follows:

Flour, qr. sks	113,781	Bran, sks	3,627
Wheat, ctls	156,079	Buckwheat "	....
Barley, "	24,333	Middlings "	1,023
Rye, "	20	Chicory, bbls	192
Oats, "	769	Hops, "	222
Corn, "	1,613	Wool, "	270
*Butter, "	384	Hay, ton	1,669
do bxs	166	Straw, "	67
do bbls	1	Wine, gals	24,650
do kgs	....	Brandy, "	11,320
do tubs	....	Raisins, bxs	2590
do ½ bxs	160	Honey, cs	7
†Cheese, ctls	410	Peanuts, sks	70
do bxs	54	Walnuts "	189
Eggs, doz	36,490	Almonds "	74
do " Eastern	49,050	Mustard "	71
Beans, ctls	3,609	Flax "	....
Potatoes, sks	19,072	Popcorn "	....
Onions, "	1,354	Broom corn, bbls	....

*Overl'd. 153 ctls. †Overl'd. 200 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Jan. 24, '91.	July 1, '91 to Jan. 24, '92.
Flour, ½ sks	177,011	297,998
Wheat, ctls	770,541	1,091,377
Barley, "	176,187	28,207
Oats, "	213,618	295,357
Wool, bales	5,790	5,733
Hops, "	333	329
Rye, sks	....	3,29-
Potatoes, sks	2,101	34,466

Cereals.

The wheat market continues to go from bad to worse, in sympathy with steady declining foreign markets. As early as November in last year, the writer indicated that lower prices could be looked for after the turn of the year, and those who acted on the note of warning by selling have no cause to complain. Our distance from the European demand markets will always cause the carrying of stocks over the holidays with us an unsafe proposition unless prices here rule at about the cost of production. The low rates of for outward charters at this port are in favor of wheat holders, but with continued favorable crop weather, disengaged vessels arriving will probably prefer to discharge their crews and tie up for new crop business, in which case, if wheat-selling offers increase, ships will have the advantage and our wheat market suffer with declines in values abroad. Sales in our market continue to be largely made by speculative holders, several of whom have met with severe losses. The receipts of wheat from Oregon and Washington are light The decline here and an absence of much of a demand are against shipments to us. The tonnage in the Columbia river shows a slight gain, and this, too, in the face of a free export movement foreignward. The available supplies of wheat up north are running low.

The receipts of barley are only fair, barely enough to meet current requirements Light rainfalls in the Southern part of the State have created an enlarged demand in that direction. This call combined with a fair to free inquiry from other parts of the State is rapidly reducing the available supply in, and as both Oregon and Washington have depleted their stocks by free shipments overland, it now looks as if we are liable to see better prices in the near future. It is claimed that brewers are not carrying large stocks of brewing goods, preferring to follow the course of the market than to carry large supplies

Corn is easy. The reduction in quotations appears to have stopped shipments into this State from the Central States. The export demand is light. The stock of corn in this State is light, and were it not for the fear of Eastern corn, the market would unquestionably do better.

Rye is firm at another slight advance, but buckwheat is easy at shaded quotations.

Feedstuff.

Both bran and middlings are strong at a slight advance. The demand is largely from dairymen, although it is said that there are many buyers taking the two to feed stock in the counties reporting a scarcity of pasture or range feed

Rolled barley continues to meet with a free movement.

Feed root vegetables are steady with a fair demand.

Hay continues strong under a free demand for feeding. It is said that in several of the Southern counties more hay has been and is being fed out by fully 25 per cent. this season than for years past. This is due to stockmen being compelled to feed in several localities so as to carry their stock over until the expected February and March rains bring out good pasturage.

Fruit.

Apples continue to come to hand quite freely. Poor keepers and defective kinds are in light supply, which naturally sends consumers to the better grades. The East is sending us a few straggling consignments.

Continued heavy receipts of oranges keep the market in buyer's favor. Cool weather continues to retard the destribution demand. Trucksters are running on windfall and frosted oranges, and as they are of poor quality, consumers who took them condemn this season's oranges. Choice, smooth-skinned oranges meet with a fair sale both here and for shipment north The reduction in overland freight on oranges from $1.25 to $.90 is calculated to increase the shipment eastward.

Dried fruits are reported virtually unchanged in quotations. Everything warrants the assertion that the market appears to be shaping into better position for the selling interest. While saying this, the situation does not justify looking for better prices, except, perhaps, it be for very choice large-sized prunes and other favorite fruits, and at the same time permit the marketing of supplies now in hand, so we can enter the new crop season untrammeled.

Raisins are slow of sale, yet there are many dealers who still hold to the opinion that the trade will absorb all now in hand before the close of the spring months.

The Salem, Oregon, *Statesman* says that the price of hops there has reached 21 cts. per lb. for choice, and adds that "a prominent commission merchant of Salem, in speaking of the hop market, said: 'There are about 800 bales of 91's in Marion county, which the growers are holding for 25 cents, and I think they will get it before the 1st of April. There are only 88 bales of 90's in the county, and the prospect for a good crop of hops this year is exceptionally fine, besides there will be no old hops on the market, as the 91's will be consumed by the time the next crop comes on, which will have a tendency to make the prices higher. There will be an increased acreage in this county this year of probably 300 acres. Oregon's '91 crop was between 15 000 and 18,000 bales against 40,000 bales in Washington. The average number of pounds to the acre in this State last year was about 1150.'"

The San Francisco market is very strong, with 25 cents named by some dealers. The stock here is light.

Vegetables.

The market continues to feed in a small way, with garden truck from the southern counties. The high prices restrict the demand. The weather is all that can be desired for gardening in the bay and river counties. It is the general belief that there will be a decided increase in the acreage to be devoted to truck.

Roots are fairly steady with a good inquiry ruling. Cabbages continue to move off at steady prices.

Onions fluctuate, but the general tone of the market is to strengthening prices. The bulk of receipts are poor keepers, which is accepted as indicating a short supply just before the new crop season which, if proven correct, will create better prices.

Live Stock.

Bullocks, if of handy size and in good to choice condition, are wanted, and to secure them slaughterers pay a slight advance. The scarcity of feed continues to cause stockmen in the southern counties, and also in parts of Arizona, to market their stock, and this marketing reduces buyers' bids for grades below good. Mutton sheep are fetching another advance. Although the higher prices restrict the demand, yet the light obtainable supplies keep the market up. Lambs are scarce and higher. Calves are reported firmer. No changes are reported in hogs. Good to choice milch cows for the dairy are wanted.

Miscellaneous.

From reliable advices up to Jan. 27, the following summary tonnage movement is compiled:

	On the way— 1892	1891.	In port— 1892.	1891.
San Francisco	224,460	296,241	*124,813	*48,811
San Diego	15,47-	21,-69	4,24	.....
San Pedro	1,935	6,519	4,159	
Oregon	29,447	31,823	40,920	13,464
Puget Sound	18,864	14,389	.....	
Totals	309,121	378,231	185,804	62,520

*Engaged for wheat, 1892, 7?,(90; 1891, 6,064

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891	1890
Wheat, ctls	9,919,393	6,4 8,089
Flour, bbls	661,2-9	628,288
Barley, ctls	7-8,3-6	191,078

Grain bags, standard hand sewed, are firmly held at 7¾@7¾c.

In the poultry market low and unsatisfactory prices still obtain for turkeys. Hens and roosters are higher, with large-sized well-conditioned scarce and in quick demand. Ducks and geese are also strong.

Beans are fairly firm for white kinds, but weak for dark varieties. It looks as if a strong bear movement is under way to depress the market so as to buy up supplies.

Honey is very firm, with buyers forced to pay full prices to meet their requirements

Wool is stagnant, owing to there being no assortments to draw from. During the past week there was received at this port from Australia 1672 bales and 149 bales from Honolulu.

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½@	3½	
Do do prime	3½ @	4	
Do do choice	4 @	4½	
Do sliced, common	3½ @	4	
Do do prime	4 @	4½	
Do do choice	4½ @	5½	
Evap. unbleached, ring 50-lb boxes	7 @	8	
APRICOTS.			
Sun-dried, unbl. com.	3 @	4	
Do do prime	5 @	5½	
Do do choice	6 @	6½	
Do bleached, prime	7 @	—	
Do do choice	7½ @	—	
Do do fancy	8½ @	9½	
Evap. choice, in boxes	9½ @	10	
Do fancy, do	10 @	10½	
FIGS.			
Sun-dried, black	3 @	3½	
Do white	3½ @		
Do do washed	@		
Do do fancy	— @	—	
Do do pressed	— @	—	
Smyrna boxes	— @	—	
Do sacks	— @	—	
GRAPES.			
Sun-dried, stemless	3 @	3½	
Do unstemmed	2½ @	3	
NECTARINES.			
Red, sun-dried	3½ @	5	
Do Evap., in boxes	6 @	—	
White, sun-dried	5 @	6½	
Do evaporated	6½ @	7	
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½ @	—	
Do do prime, do	4½ @	—	
Do do choice, do	5½ @	—	
Do do fancy	6 @	6½	
Evap unpe'd, choice	6 @	—	
Do do fancy	7 @	7½	
Sun-dr, pl'd, prime, bl.	10 @	11	
Do do choice	11 @	12	
Do do fancy	12 @	13	
Evap, peeled, in boxes, choice	15 @	—	
Do do fancy	16 @	17	
PEARS.			
Sun-dried, quarters	3 @	4½	
Do sliced	4 @	5	
Evap, sliced, in boxes	6 @	—	
Do ring do	10½ @	—	
PLUMS.			
Pitted, sun-dried	4½ @	—	
Do evap. boxes, choice	— @	—	
Do do do fancy	— @	—	
Unpitted	2 @	2½	
PRUNES.			
Cal. French, ungraded	5 @	5½	
Do graded, 60 to 100	5½ @	—	
Do do 40 to 60	6½ @	8	
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₩ bx	$1 50 @	—	
Do fancy, do	1 75 @	—	
Layers, ₩ bx	1 25 @	—	
Loose Muscatels, common, ₩ bx	1 00 @	—	
Do choice, do	1 20 @	1 30	
Do fancy, do	1 50 @	—	
Unstem'd Muscatels, in sacks, ₩ lb	4 @	5	
Stemmed do do	5 @	5½	
Seedless do do	6 @	—	
Do do ₩ 20-lb bx	1 15 @	—	
Sultanas, unbl, bxs	1 15 @	1 40	
Do bleached, in bxs	1 30 @	1 60	
Halves, quarters and eighths	25, 50 and 75 cents higher respectively than whole boxes.		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 27, 1892

Limes, Mex	7 50	@	—	Do Lady Apples	75	@ 1 25
Do Cal	75	@ 1 00		Do Eastern, bbl	3 75	@ 5 00
Lemons, box	1 25	@ 3 50		Beets, sk	—	@ 1 00
Do Sicily	5 50	@ 7 00		Carrots, sk	35	@ —
Oranges, Winter small box	50	@ 1 00		Okra, dry, lb	15	@ —
Do Seedlings River Side	1 25	@ 2 00		Parsnips, ctl	—	@ 1 25
Los Angeles	1 00	@ 1 50		Peppers, dry, lb	12	@ 18
Do Navels— Los Angeles	1 50	@ 2 50		Do green	15	@ —
Riverside	2 00	@ 3 50		Turnips, ctl	50	@ —
Duarte	2 00	@ 3 50		Cabbage, 100 lbs	60	@ —
Apples, box	50	@ 90		Garlic, lb	2	@ 3½
Do choice	1 00	@ 1 25		Squash, Marb, bu	4 00	@ 8 00
Do extra choice	1 50	@ —		Pumpkins, ton	7 00	@
				Tomatoes, box	1 25	@ 1 50
				Asparagus, lb	15	@ 20
				Peas, green, lb	8	@ 10

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 27, 1892

BEANS AND PEAS.			
Bayo, ctl	1 75	@	2 05
Butter	2 20	@	2 65
Pea	2 45	@	2 70
Red	1 75	@	2 05
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 10	@	2 45
Lima	1 70	@	2 10
Vld Peas, blk eye	1 35	@	1 65
Do green	1 70	@	2 50
Do Eastern do	2 55	@	2 75
Do Nilas	1 30	@	1 45
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
Do good to choice	27½	@	—
Do Giltedged	32½	@	—
Do Creamery rolls	32½	@	—
Do do Giltedge	33	@	—
Eastern	20	@	32½
CHEESE.			
Cal. choice mild	13	@	14
Do fair to good	10	@	12½
Do gilt edged	14	@	15
Young America	12	@	15
EGGS.			
Cal. ranch, doz	26½	@	—
Do do selected	28½	@	—
Do store	22½	@	26
Eastern	22½	@	27½
FEED.			
Bran, ton	21 00	@	22 00
Feedmeal	26 00	@	—
Gr'd Barley	23 00	@	24 50
Middlings	24 00	@	25 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food ₩ cwt	1 50		
HAY.			
Wheat, per ton	13 50	@	—
Do choice	15 00	@	—
Wheat and Oats	12 50	@	—
Wild Oats	11 00	@	—
Cultivated do	12 50	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	12 00	@	—
Straw bale	50	@	60
GRAIN ETC			
Barley, feed, ctl	1 02½	@	1 08½
Do Choice	1 10	@	—
Do Brewing	1 10	@	—
Do do Choice	1 16½	@	—
Do do Giltedge	1 20	@	—
Do Chevallier	1 15	@	1 45
Do do Giltedge	1 48½	@	1 52½
Buckwheat	1 70	@	2 10
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 26½	@	1 30
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 27½	@	—
Surprise	1 50	@	—
Black Cal	1 60	@	1 90
Do Oregon	1 45	@	1 55
Gray	1 30	@	—
Rye	1 65	@	1 75
Wheat, milling. Gilt edged	1 77½	@	—
Do Choice	1 73½	@	—
Do fair to good	1 72½	@	—
Shipping, choice	1 72½	@	—
Do good	1 70	@	—
Do fair	1 68½	@	—
Common	1 66½	@	—
Sonora	1 65	@	1 77½
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
FLOUR.			
Extra, City Mills	5 00	@	5 25
Do Country Mills	5 00	@	5 25
Superfine	3 15	@	3 45
NUTS—JOBBING.			
Walnuts, Cal. lb	7	@	—
Do Choice	8	@	—
Do paper shell	8	@	9
Do Chilli	7½	@	9
Almonds, sft shl	11	@	—
Paper shell	13	@	—
Hard Shell	6	@	7½
Brazil, lb	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3	@	4
Filberts	13½	@	14
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin	75	@	1 20
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	50
Do do Salinas	95	@	1 20
Do do Oregon	1 00	@	1 20
Sweet's	1 00	@	2 25
River Reds	25	@	40
POULTRY			
Hens, doz	5 50	@	8 50
Roosters, old	5 50	@	7 00
Do young	6 00	@	9 00
Broilers, small	4 00	@	—
Do large	5 00	@	—
Fryers	6 00	@	—
Ducks	6 50	@	10 00
Geese, pair	1 75	@	2 50
Turkeys, Gobbler	11	@	13
Turkeys, Hens	14	@	16
Do Dressed	14	@	18
Manhattan Egg Food ₩ cwt	1 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	11	@	—
Light	12½	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	12	@	13
White	7½	@	—
Flaxseed	2 50	@	2 80
Hemp	3½	@	4
Mustard, yellow	3 25	@	3 75
do Brown	3 00	@	3 25
WOOL			
SPRING, 1891			
Humb't & Mend'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	15	@	—
Cala'v & F'th'll	16	@	—
Oregon Eastern	14	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Mend'cino	14	@	18
HONEY			
White Comb, 2 lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6¼
Beeswax, lb	22½	@	—

Live Stock.

BEEF.				MUTTON.			
Stall f-d	2½	@	—	Wethers	10	@	10½
Grass fed, extra	2½	@	—	Ewes	9½	@	10
First quality	2	@	—	Lamb, yearling	10½	@	11½
Second quality	5	@	—	Do Fall	12	@	18
Third quality	4½	@	—	HOGS.			
Bulls and thin Cows	3	@	3	Light, ₩ lb, cents	4½	@	—
VEAL.				Heavy	4½	@	—
Range, heavy	4½	@	5½	Feeders	4	@	—
Do light	6	@	8	Stock Hogs	5½	@	—
Dairy	7	@	9				

Lessons in Volapük.

The International Language of the Entire World.

LESSON 14.

Indefinite Pronouns

Alim, everyone.	Nos, nothing.
Ans, some.	Som, such (a one).
Pos, something; anything.	It, self (after a personal pronoun).
Ek, some one; anyone.	Balim —votim, each other; one another.
Nek, no one; nobody.	

Indefinite Adjectives.

Alik, each every.	Nonik, no; not any.
Anik, some; any.	Sembal, a certain, one (*a* or *an*).
Balvotik, one another.	Somik, such.
Bofik, both.	Teldik, many a.
Lölik, whole; entire.	Valik, all.
Mödik, much, many.	Votik, other.
Mödumik, several.	
Nemödik, a little; few.	

Exercises.

Alim kel vipom del'ön gudiko sötom lifön gudiko —Kel hetom neki binom flen alima—Ek kanom logön kelosi man et givom ciles okik—Ans obas binoms gudik e ans olas binoms flenik—No kanol lemön bosi plo nos—Cil obik labom buki alik keli elemol plo om—Nim teldik binom smalikum ka dog, ab nemö tiks binoms smalikum ka mug—Ans olas sagoms nosi, votiks sagoms bosi—Puls e j puls mödumik äröpoms ve jol fluma bilü dom fata olik—Li lemol ai mödikum ka selol?—Man sembal kel äkömom bletimo al lom obsik älogom nevelo kati, e äsagom das ävipob lemön obsiki—Ek li-osedom obe bukis anik, bi epöl'üdob obikis?—If ukömol büfo blod olik ukömom ogivob ole bosi gudik—Ven ologob jipuli smalik olik okidob ofi.

Some of you should come to our house where we have something good which father bought us, three days ago—Somebody was here yesterday, when you were at your uncle's house buying the books you wished to give your sister's children—Some men give nobody anything and have no friends—Many a man loses nothing if he gives part of what he has to his friends—To hate one's self is better than to hate one's friends—Nobody can buy coffee for ten cents a pound—Who can tell what anybody should give me for the horse I bought day before yesterday?—Some of those dogs will run into the river if you do not tie them.

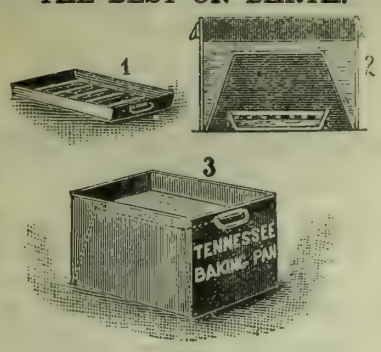
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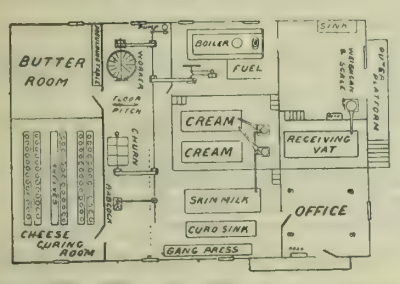
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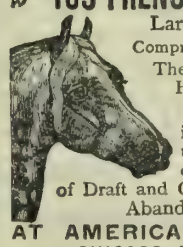
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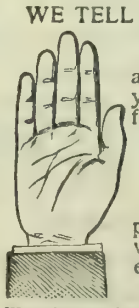
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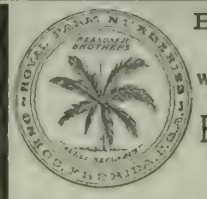
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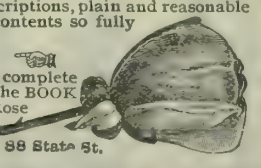
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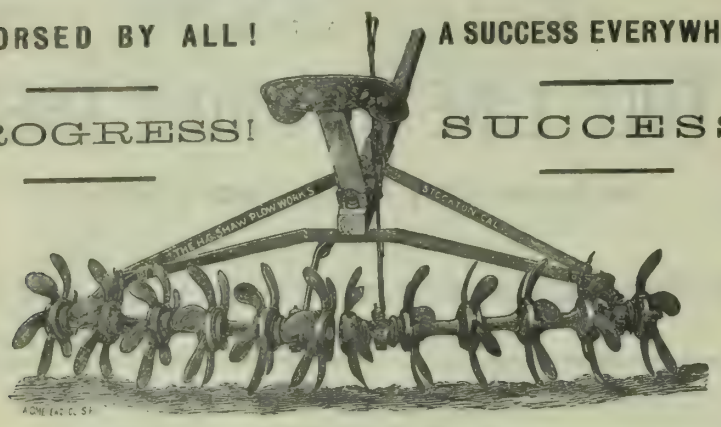
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H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Your Morgan Spading Harrow, as a cultivator, is a comp ete success, and I heartily recommend it to all orchardists and vineyardists as being a perfect ma hine. Respectfully yours, L. C. RICE.

BAKERSFIELD, CAL., Dec. 22, 1891.

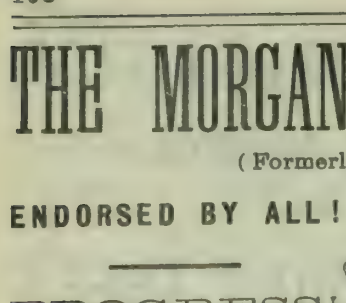
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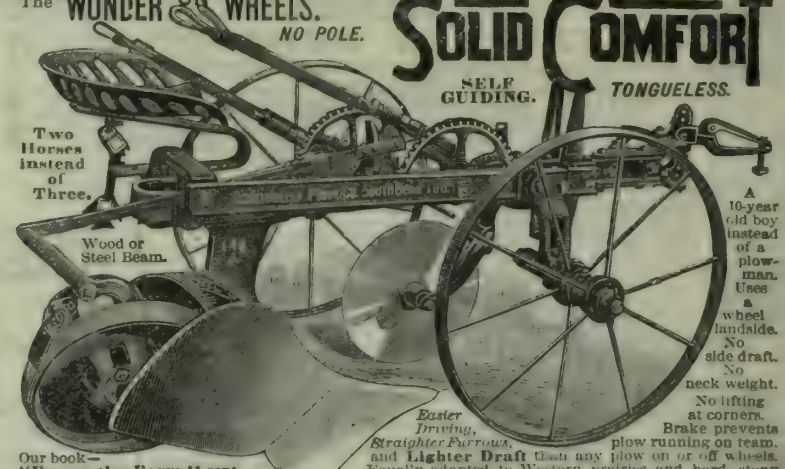
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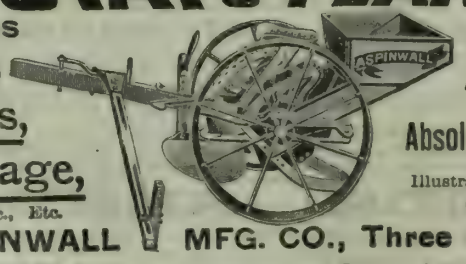
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PACIFIC RURAL PRESS

Vol. XLIII. No. 6. SAN FRANCISCO, SATURDAY, FEBRUARY 6, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

In a California Hopyard.

The engraving on this page gives the reader a glimpse within the precincts of a California hopyard. A hopyard at blooming time is one of the most beautiful sights in agriculture. The expanse and hue of the verdure, the graceful tracery of the vines, the profusion of the bloom—all are characteristic, and are as striking in their way as are blooming or fruit-laden trees or vines.

There are many ways of supporting the clinging hop vine and allowing it extension enough to perform its work in such a way that cultivating and other arts of the husbandman may be pursued. This is done in most hop-growing localities by poles and by poles and strings on the wigwam principle. Other styles of trellising have also been devised. The engraving used herewith is from a photograph recently taken in the hopyard of A. Menke, situated on the American river, in Sacramento county. It shows a style of training hops with upright posts, horizontal wires along each row of plants and across wires at intervals to strengthen the structure. The vine is taken from the plant to the wire by the use of a string, and when picking time comes the string is severed from the wire, as shown in the picture, allowing the vine to fall into the embrace of the pickers. The hanging strings show the points of attachment to the wires.



SCENE IN THE HOPYARD OF A. MENKE, SACRAMENTO COUNTY.

This system of training hops has advantages in allowing a very free growing of the vine, but it has sometimes proved unable to withstand strong wind when the solid banks of foliage oppose its force. All kinds of hop trellises are somewhat the prey of storms, but if we remember correctly, Mr. Menke suffered an unusual amount from a storm not long ago, and local critics were disposed to conclude that a return to the old way of poling would be safer. However, a way to make this method of trellising may have been found.

Daniel Flint, so well known to our readers as a leader in hop matters, uses a style of hop-training somewhat similar to the one shown in the engraving, but he uses lower uprights, redwood stakes 8 feet high, 2x2 inches, set in the ground one foot and the stakes eight feet apart. On the tops of these stakes wires are run at right angles, being held to the top of each stake by a staple. This lower training brings the vines within reach of the pickers. It would also much lessen the danger of blowing over in high winds.

THE WORLD'S FAIR FUND.—The charges concerning the administration of the California World's Fair Fund, made by the Los Angeles *Herald* (reprinted in another column), are serious enough to demand investigation. If the Commissioners are violating the law and frittering away the State's money, it is the business of the State government to put a stop to it. The Governor could not employ himself better for a few days than to look into this matter and report to the people upon it. He has not probably the authority to suspend the Commission or to veto its action, but a public condemnation by him of any abuses in the administration of the fund would practically accomplish the same result. California has made generous provision for the great fair and the money must not be wasted.

TIMBER LANDS.—Another lot of swindling "locators of government timber lands" has been run down by the San Francisco police. Government timber lands are well worth the attention of those who still have rights to make locations; but be very careful to deal only with locators or agents who can show good standing. The woods are full of timber frauds.

STATE PREMIUMS AT THE WORLD'S FAIR.—The World's Fair Commissioners of Illinois and of Missouri have decided that a part of the money appropriated by those States to secure State exhibits at Chicago shall be paid as premiums to those showing the best livestock from those States. In this way $20,000 of the Missouri and $40,000 of the Illinois appropriation will be given to individual exhibitors, who by their stock displays make a good showing for Illinois and Missouri. Perhaps our State Commission can take a hint from these States as to a way in which State exhibitors can be stirred up to do their best.

THE FRESNO CONVENTION OF DRIED FRUIT PRODUCERS.—The convention on Feb. 18th, to which we alluded last week, will be held under the auspices of the State Board of Horticulture, and a notice to that effect has been issued by B. M. Lelong. It is to be a general convention, and all interested will be admitted to participation. The movement for the meeting started with the raisin producers, and we have an idea its scope would have been broad enough if it had confined its work to the raisin interest, but possibly not. At all events, let the meeting be large enough to be influential and representative.

THAT ORANGE RATE.—The Santa Fe company in carrying oranges East at a 90 ct. rate has antagonized the Trans-Continental Association, but it has gone behind the Southern Pacific at a great rate. Recent dispatches are that the Santa Fe is moving all the oranges.

What Lawn Grasses for Dry Lands?

This is the question: none is so frequently asked: none so difficult to answer. We do not attempt to prescribe at this time for any but the region of San Francisco Bay and the coast of the central part of the State: possibly the advice will be good farther away but we do not commend it. We would like to have our readers tell us how far our statements accord with their experience.

Bermuda grass is grown from root fragments, which can be made by cutting roots in a hay cutter or otherwise, scattering the fragments along in shallow furrows or sowing broadcast and harrowing in. Bermuda grass will endure less water and more neglect than any other grass we know of. It will remain green except when browned by frost and will regain its verdure very quickly. But do not plant Bermuda grass if you have any cultivated land which you wish to keep it out of. It is good to stay and it stays in places of its own choosing as well as yours.

A better grass which also grows from roots is Texas blue grass. It is coarser and less handsome than Kentucky blue grass, and it also endures drouth much better. Divide the old clumps into single plants and plant these along in drills as you would cabbage plants. They will soon multiply and will ultimately make a sod which will survive such drouth as we have in the region mentioned above.

The best grass for a large lawn which is partly shaded and on which you expect to do little watering is orchard grass. Plow and harrow well and sow the seed quite thickly covering with a light raking. Thick sowing will partly obviate the disposition of the grass to grow in tussocks and will produce a good-looking lawn.

Another grass which will do well with moderate watering is Australian rye grass. It is replacing Kentucky blue grass in much of the lawn-making around the bay because it will look well with half the work and water which the former requires.

As for choking out weeds probably Bermuda grass will do it best of all grasses mentioned. Give it time and it will occupy the land. Lawns made of the other grasses mentioned can be freed from nearly all weeds by repeated mowing. A few tough weeds will have to be cut out with the hoe or pulled out bodily, but the rank and file of weeds, over the extraction of which so many backs have ached, can be repressed by using the lawn mower instead of the fingers.

So far as our experience goes we do not commend anything but Bermuda grass to go all through the dry season without losing its verdure; the other grasses can, however be kept in quite presentable condition with less water than any other plants we know of.

The Lake County *Avalanche* calls upon local enterprise to establish a fruit and vegetable cannery. Establishments of this kind are profitible everywhere.

THE DAIRY.

Experience with the Silo.

PETALUMA, Jan. 17, 1892.

TO THE EDITOR:—By your request, I will give you some experience with the silo, as desired by one of your readers in the Northwest.

I am now using silage from my silo for the seventh time. Five times I filled it with corn, once with oats and once with rye.

The first year the corn was planted with the grain drill; two rows were planted at once by closing up all but two ducts, thus leaving the rows 35 inches apart. Being rather late, I did not get a good stand, consequently what came up made a fine healthy growth, with plenty of well developed ears. The variety of seed planted was the Yellow Dent. This gave me about 15 tons per acre of superior silage.

The second year we drilled in as before, but used mostly the White Dent variety, unfortunately, as it afterward proved, we obtained a splendid catch. The plants made a good growth, but being so crowded there were no ears, and the stalks were soft and watery, having very little substance; all the lower blades fired. This crop produced the poorest silage that I have made, scarcely worth saving. I cut it with a binder, thereby saving much of the cost of handling.

The third year I planted the large Evergreen Sweet corn in rows about 40 inches apart, with the hills three feet in the rows; cultivated twice, once with a spring-tooth riding cultivator and once with a horse hoe. I secured a fair stand of thrifty stalks, loaded with fine ears; many stalks contained four large ears, and we found a few with six ears on a stalk. A peculiarity of the sweet corn is that most of the suckers, of which the plant is very prolific, produce ears. This crop gave me the best silage by large odds that I have had. Soon after commencing to feed it, my cows, young and old, strippers and fresh, averaged one pound of butter per cow per day. They got no other feed whatever, except on rare occasions; when they were kept in the barn over night on account of stormy weather, a little hay was thrown them. They were confined to a small enclosure where they could have got but little grass had there been any. The winter being unusually cold, and the months, December and January, there was no grass.

The next year being 1891, the season of wonderful rainfall, the land kept wet and cold so late into spring that a poor crop was produced. It was planted in hills as before, and sweet corn seed, gave only average results. Last year I planted the Small Yellow corn; again a late, wet spring retarded the growth, and the crows, for the first time since my residence here, which dates from 1853, pûlled up a large percentage of the young plants. Quite late, the last of June, I replanted where missing with the Black Spanish sweet corn, a quick maturing variety. I gathered a fair crop, with fairly well-eared stalks; the last planting being dwarfed by the earlier planted, did not amount to much.

The oats were put in in the summer after the corn was fed out and used for summer, or rather fall, feeding, being all fed out before the corn was ready to go in. The oats were very rusty and weedy. They were cut with a binder and packed in as close as we could get them, allowed to settle a few days and the silo again filled up. This process was continued until the contents ceased to settle, when they were covered over with about six inches of road dust to exclude the air. When opened, I found about one foot of mold around the walls; the balance was eaten very well and gave very good results. Where not moldy, the cows ate it all clean, weeds and all.

Last spring, the silo was filled with rye cut just in the bloom, cut with the binder for convenience in handling, and the bands cut after pitching into the silo, and spread out evenly and well tramped down; no covering put on. When opened, I found about two feet on top moldy and about one foot around the walls. The cows ate it, but not with as great avidity as the corn or even the oats. It was very tough and fibrous and required much mastication. It should be cut when just out in full head. I intended to have cut it at that stage, but a rainy spell delayed the work. I don't recommend rye where oats can be produced successfully. Rye is too stringy and tough.

I have always used pulverized earth as a covering, gradually lessening the quantity from one foot depth the first season to only three inches the last. This year I used two-inch boards for covering—the same that I construct the platform with on which the cutter stands while filling. Use a 14 A. Ross ensilage cutter and elevator, cutting to one-half inch lengths.

The board covering seemed to give as good results as earth and is much more convenient to put on and take off. I would use some weight on boards if convenient. The boards used this year being very green or wet gave sufficient weight.

I will say to your Garberville correspondent that so far as I can judge from reading, Eastern experience corresponds very closely with California experience; not only my own but also of my neighbor the late I. R. Jewell.

To sum up, the best results have been obtained with the large growing sugar corn, planted in hills about 3x3 feet apart, and well cultivated.

The manner of covering is more one of convenience, having had good results from both earth and boards, and very poor from no covering.

Being in the fog belt near the coast, the dents and other large growing varieties of corn do not mature sufficiently. The plant must not be cut too green to secure good silage. Don't get in a hurry; let the corn on the ears begin to harden; a few of the ears will be quite ripe.

How do I like the Silo? I am better pleased with it each succeeding season. Ten acres in corn give more and better feed than 30 acres in hay did when I used it for winter feed. The ensilage from that amount of land will produce more and by far better butter than thrice as much in hay.

Now, as to cost: The present season I filled one silo 10x21x20 feet, and the total cost, including hire of engine to run the cutter, was $42, exclusive of board of men—had them (12 men) one and three-quarter days.

As to cost of raising corn, I do not consider that it costs me anything except rent of land (about $4 per acre) and seed (about one sack, 130 pounds for 10 acres), for the reason that I am engaged in farming and fruit-growing in connection with dairying, and keep a certain amount of help the year round. The planting and subsequent cultivation is done by this help at a time when they would not be occupied at anything else, or in other words, I hire no extra help or teams to do the work up to filling; and the ground being in fine condition for planting a crop of grain as soon as the corn is removed, amply compensates for any extra labor.

The above silage will feed 25 cows liberally for five months. A. P. MARTIN.

[This is an exceedingly interesting and important record of experience. Now, who else has used the silo, and with what results?—ED. PRESS.]

Dairying and Fruit Growing in Oregon.

[Address by PROF. C. H. SCHMIDT at the Farmers' Institute at Medford, Oregon, Jan. 23d and 24th.]

We are meeting here together for the advancement of agriculture and to profit by each other's experience. The field of agriculture probably is broader than any other field, and agriculture is like a mighty building which requires skilled builders and workmen to make the work progress and prosper. Farming as a profession is what we must look toward for multiplying happy and prosperous homes. This is the great question of the day to make two blades grow where before only one grew, to double the productions of our land, to increase the net income a hundredfold and to keep up the soil's fertility.

We can no longer be satisfied with the returns the farms give; it must be doubled and trebled. Quantity farming must be changed to quality farming; we must learn that in some measure that we feed the plant—the plant will feed us. Exclusive grain-growing and grain-selling spoils not only the farm but the community at large. When we sell $200 worth of wheat we take away $48 worth of plant food from the soil; when we sell $200 worth of butter we take away less than one dollar's worth of plant food.

FRUIT AND FERTILITY.

When we travel through our State we observe numbers of small fruit tracts set out recently, and doubtless there is money in fruit-growing if thoroughly understood, the trees planted in the right soil and afterward well cared for, but it is doubtless, also, that trees need considerable fertilizing material. We are now to a large extent setting out fruit trees on the flat land—without thorough drainage—but will probably soon learn that the rolling land and the hill land is more especially the profitable and lasting fruit land, while our other land will be much more profitably utilized for dairy purposes. The hill land will not only be benefited by manure for the plant food it contains, but it will tend also to serve an important office as a factor in retaining moisture during dry seasons. Dairying will therefore greatly aid fruit-growing indirectly by supplying manure for the trees, but this is by no means the only way; indeed, dairying comes directly to the assistance of fruit-growing, as the elder sister to a younger. Fruit-growing in the summer and dairying in the winter returns a golden harvest the year around. Dairying gives the fruit grower a much larger income, and what there is of great importance gives a sure income. The codlin moth, trying seasons, and sometimes bad markets, may conspire against the fruit grower, but leaves the dairyman undisturbed. Then again, the man starting in as a fruit grower has hard times the first five or six years, and here the gentle butter cow comes greatly to his assistance, paying off his mortgages and placing him on the high road to fortune and independence.

I call your attention to this beautiful picture, which you see here; it is of a wonderful Jersey cow; her name is Bissons Belle. She made 1028 pounds of butter in one year; think of one cow making $250 worth of butter in 12 months. It does not take a section of land to make a comfortable and happy home, when you are engaged in modern dairying. Fifty acres are plenty to make a good home and give all the boys and girls a good education and a good start in life. The speaker has been in many hundreds of such homes, where prosperity and happiness were visible on every hand. Mother had plenty in the storeroom and everything handy indoors, well clad, intelligent children, nicely painted houses and fences, good furniture, a piano and plenty of good reading; there were newspapers, agricultural papers, dairy papers and magazines; those homes were real homes, full of life, full of promise, full of satisfaction; yet the only gold mine they had to draw from was 50 acres.

Let us look a moment and see what income 50 acres will bring. We can feed 20 cows, two horses and half a dozen young stock, and still have 10 or 20 acres for fruit, and you will even see, if we have not cows as Bissons Belle, we will still make a large income. Mr. Goodrick of Jefferson county, Wis., had 20 cows, which the past year produced an average of 320 pounds of butter per cow, and returned a net profit of more than $50 per cow. That is to say, Mr. Goodrick had his feed, his labor, investment on capital paid at common rates, and a net profit besides of over $1000 on his 20 cows. Mr. R. H. Gage of Walworth county, Wis., had 350 pounds of butter per cow last year. Mr. A. Deverent of Deposit, N. Y., had 336 pounds of butter, average of 30 grade Jersey cows; his main feed is corn silage. Thousands of similar results could be cited from our Eastern brother; in fact, a majority of intelligent farmers throughout the East are just practicing what we have been referring to. Why should we not do the same in this State? We have undoubtedly one of the finest dairy countries in the United States, yes in the world—and we have a most excellent market. The city of Portland alone consumes over $2,000,000 worth of dairy products annually, to say nothing about the State at large and the Sound cities, which consume enormous quantities of dairy products, representing many millions of dollars, which to a large extent is coming from the Eastern States. It has been thoroughly demonstrated by Col. Cornelius of Washington county, Oregon, and many others, that under favorable conditions one acre will support a cow, raise feed enough for her the year around. Ten to twenty tons of silage corn to the acre can be grown nearly everywhere in the valleys and frequently on elevated land.

The Eastern States as well as Europe have taught us that grain-raising is starvation to the soil and an absolute hindrance for prosperity and development of the county, while on the other hand, when the gentle butter cow becomes closely associated with the members of the families, the bare floor becomes carpeted, the children get their education, prosperity takes the place of poverty and contentment the place of discontentment. Agriculture becomes as Washington said, the most healthful, most useful and most noble pursuit of man. Let it be recognized that prosperity in farming is education in farming. Only a few years ago Wisconsin and other Eastern States were mainly depending upon grain-farming, but they saw they went backward, and in marvelous short time has grain-farming had to give way to diversified farming and especially to dairy-farming. The earnings of Wisconsin cows alone last year was more than $20,000,000. We can do the same in this State and greatly benefit all classes and all professions. New York, Illinois, Wisconsin, Minnesota, Iowa, Indiana, and other Eastern States have their dairy schools, their dairy associations and model dairy farms, and are holding great numbers of Farmers' Institutes. We are anxiously waiting for our State to follow and lead.

THE VINEYARD.

Grapes and Raisins.

[An essay prepared for the Fowler meeting of the Fresno Farmers' Institute by J. H. LARUE, of Malaga.]

I consider the muscat is the best grape for making layers and large loose raisins for table use, as they have large berries and fine attractive clusters, which will always, I think, be in large demand, especially in the fashionable world, notwithstanding the fact that layers and loose raisins in boxes have been harder to place on the market at good prices than the sacked goods this season. This, however, is the first season that such has been the case, if I have been rightly informed. I do not think this depression will be long lived, especially for the first crop. There will always be a fair demand for choice goods, and fair prices will be the result if the goods are properly handled and placed upon the market in a business-like manner. It cannot be otherwise.

Of the seedless varieties the Thompson seedless in my estimation is preeminently the best. It has long, loose bunches or clusters, fair-sized berries, and are full of meat or pulp, which causes them to weigh heavier than those that have more water or juice. They are prolific bearers, and ripen about the time of the first crop of the muscat. Another great advantage about this variety is that it has little or no second crop. This alone would make it very desirable.

The sultana is a variety on which I am not posted. I would refer persons desiring to plant that variety to vineyardists who have had experience in that line of the industry.

IRRIGATION.

The amount of water used and time for using it depend entirely upon the quality of the soil. However, I would suggest a thorough irrigation in the latter part of the winter for light soils. I have had no experience in the red soils. As soon as the land is in good condition after being irrigated, break thoroughly to the depth of six inches at least, throwing the dirt from the vines, using a single plow close to the vine. It is more easily managed by both man and beast, and by so doing you are less liable to injure the vine. Plow the second time crossways, running one round with the land side next to the vine; then turn and throw the dirt to the vines. Be careful not to throw too much the first round, as it is not best to have the vine choked. A free circulation from below is very essential to prevent rotting, especially in the latter part of the season.

The third and last plowing should be the same way as the second, beginning in the center of the row and throwing the dirt from the vine. The third plowing may be done with a two gang plow, which does the work more rapidly and answers all practical purposes.

SULPHURING AND SUCKERING.

The next important step is sulphuring. This should be done at least twice, first when a majority of the buds are fairly started and again when the canes are from 12 to 16 inches long. The work should be thoroughly done. Things worth doing are worth doing well.

As soon as all of the buds have fully started, the suckering should be attended to with great care, as much depends on that part of the work to secure a good crop and the future of the vine. Suckering should be continued throughout the entire cultivation, as all superfluous growth detracts so much from the crop.

CULTIVATION AND SUMMER PRUNING.

Cultivation is very important and should be done carefully and thoroughly at least every ten days (once a week would be better), as long as the vines will admit of it. After the cultivation is finished take a weed-cutter (an implement made in the shape of the letter A), and go through as often as necessary to keep the vineyard clean.

As for summer-pruning, I pruned three times last season, beginning when the canes were about 12 inches long, by just clipping off the ends. In a few days I went over the

vineyard a second time, clipping off all that had attained the height of the first. I watched the growth very closely, and where the remainder of the canes reached the proper height I clipped them also. Whether it is best for the vine in the future, I do not pretend to say; but I do know that my grapes sunburnt but very little if any last season, while my neighbors who did not summer prune, had a grea many sunburnt, and that very badly.

THE APIARY.

Bee Culture vs. Horticulture.

GRIZZLY FLAT, January 24, 1892.

TO THE EDITOR:—The successful horticulturist is an enthusiast in his business, and I may also add so is the successful apiarist and all men who stand preeminent in their vocations and professions.

The man who plants trees and vines and takes an interest in his work is going to succeed. When he sees the mystic forces of nature respond to his well-directed energies and efforts a genuine pleasure thrills his soul, an intenseness is awakened in his nature, and he lives in a world of his own.

A successful horticulturist is a man of great skill, energy and learning, who canvasses the whole world to get new and improved varieties of fruit suitable for his location, and after grafting, propagating and hybridizing he relies on nature for the fertilization of their bloom.

He knows that several varieties of his fruits require the agency of bees in their fertilization, and he also knows that if stormy weather should come during their blooming time and wash all the pollen off, so that bees had no chance to fertilize them, the young fruit would not swell, but wither up and all fall off; especially is this true of the apple, pear and cherry.

The wind is a great fertilizer to trees that yield an abundance of pollen and whose blossoms are destitute of odor, but often during the opportune period of bloom there is too much wind or too little, and nature therefore does not place all her chances in a single venture, but brings into play bees and fertilizing insects.

A good many plants have the male and female organs in the same flower, and a person would suppose that they would be self fertilizing; but no, nature abhors anything relating to inbreeding, and the pistil of every plant will receive more acceptably pollen from a distant plant, and bees therefore act as agents in the cross-fertilization of their bloom, thus making the fructification of their bloom more certain.

The tiny drop of honey in each flower acts as a bait and encourages the bee in its work. In obtaining this minute drop of honey, the pollen being in close proximity to it, the bee gets more or less dusted with pollen, and each flower visited is mingled more or less with minute grains of pollen from surrounding blossoms, and is thus fertilized.

A bee starting out on a honey and pollencol-lecting trip generally confines itself to one kind of bloom until a load has been obtained. If it commences on apple bloom it will finish on apple bloom.

Without the agency of bees a great many varieties of fruit would be barren.

Professor Frank R. Chesshire, of London, England, states that in each apple matured, five fertilizations are necessary, and that if none are effected the calyx, which forms the flesh of the fruit, instead of swelling, dies and soon drops. Chesshire further states that the bees are not only florists but fruit producers, and the nectar and pollen obtained from the blossoms is their fee for their professional services.

It is stated on good authority that if a strawberry plant be covered with a fine cloth or screen of some kind during their blooming time, so that no insect could visit the plant, the blossoms will fail to form fruit unless hand-fertilization is resorted to.

A Nebraska strawberry grower after repeated failures of crops, bought some bees by a friend's advice, and with the advent of the bees strawberries came in abundance.

The crops of self-fertilized plants are not always reliable. D. M. Ferry, the great seedsman says: "We know it is claimed by some that peas and beans are self-fertilized, but we have learned that they are not always so, to our cost."

Therefore it will be seen that some plants that are said to be self-fertilizing will be greatly benefited by bees.

Mr. Darwin found that self-fertilized plants are very much inferior in vigor and power of constitution to plants that are cross-fertilized by the agency of the bees.

Most all flowers that yield a fragrance are more or less benefited by bees in their flowering season, and if bee keepers will observe, they will find that all the best honey plants are very prolific in perfume.

No doubt odorless flowers depend greatly upon the wind for their fertilization.

Prof. Gray calls the fragrance the flowers' advertisement. It is the fragrance that attracts the bee, not the color of the flowers.

Most all coniferous trees, grains and grasses are very prolific in pollen, and are therefore wind-fertilized.

The fields for improvement by cross-fertilization and the natural selection of the fittest is almost unlimited; the late improvements in strawberries have been accomplished by these methods.

An observing and successful horticulturist, noting the immense benefit derived from bees, is always their friend; no matter if they do suck out the juices of injured grapes or other fruits, he knows that their services are more valuable than the fruit juice they suck out.

As long as there is any natural bloom, containing any nectar to amount to anything, bees will leave the injured fruit alone; it is only when there is a dearth of honey secretion, that they suck up fruit juices. The fruit juice that bees gather is often death to them; the juice ferments and many times kills the whole colony; especially is this true when there are severe cold winters. The bees would always be a great deal better off if they would leave fruit juice alone.

Bee culture and fruit culture being dependent on each other, it is fitting that they should go hand in hand.

All fruit men should have a few bees, and all bee men should have a small or large orchard, as time would allow.

Some persons perhaps will remark: What is the use of going into so many businesses? A man has only time to learn one business in this world, and learn it thoroughly, and be fairly successful with it.

Yes, I will admit that there is considerable truth in that statement; but I think a little different. I think that a person can learn a business fairly well (well enough to make a success of it), and that he will have time to investigate the first principles of many sciences and businesses, thus increasing his observation and learning and enjoying himself better.

The successful horticulturist can take an interest in bees, without in the least detracting from his ability as a fruit culturist.

In California (especially Southern California), there are a great many bee men who are more or less interested in fruit culture, and with these two businesses combined, they prosper exceedingly well; if one business happens to fail, the chances are that the other one will help him out.

I know that there are several raisin growers that are antagonistic toward the bees, and possibly in large vineyards, where raisins are being dried in the sun, if there are hundreds of colonies of bees in the neighborhood, they may become a nuisance. In handling grapes, it is manifest that a certain per cent will be injured, and in the process of curing, the sugar and other saccharine matter that the grapes contain attract the bees, and consequently they will keep at work on the injured grapes as long as anything sweet can be obtained. Of course, injured grapes are not very valuable for raisins.

Bees never injure sound fruit, but work only on injured fruit.

The wasp and yellow jackets are the raisin grower's worst enemies. Certain species of wasps are paper makers and will not hesitate to tear a piece of skin from a grape, thus admitting the bees, and unthinking persons seeing the bees at work jump to the conclusion that the bees are the original trespassers.

This matter of bees injuring raisin grapes to any extent is greatly overestimated. I have the proof of a San Diego Co. raisin maker, who also thinks that the matter is entirely overdrawn; in fact, there are several persons who combine the two businesses in one location, and they find that they do not conflict.

If the raisin makers and bee keepers who are diametrically opposed to each other's businesses would meet and talk the matter over in a friendly bearing, the supposed injuries of the bees would dwindle into insignificance.

Of course, timid persons are continually afraid of being stung, where many bees are flying around; but if they will exercise a little caution and bravery, they will not get stung. Bees never attack anybody at a distance from their hives; it is only when a person is near the hives that they act vindictive and cross. Timid persons should always keep this in mind.

Why would it not be an excellent idea for the raisin makers to tell the readers of the RURAL PRESS to what extent they think bees are injurious to their business (it must be their own personal experience); and also raisin makers, who run apiaries in connection with their business, to give their opinions on bees and raisins?

S. L. WATKINS.

[It is also important that those who dry other fruits than grapes should say a word.—ED. PRESS.]

FLORIST AND GARDENER.

A Californian in Hawaii.

H. J. Rhodes of Carpenteria recently exhibited a number of interesting plants at the meeting of the Southern California Horticultural Society, and read an instructive paper on Hawaiian Vegetation. The following extracts are taken from the essay:

"The situation of the Hawaiian Islands within the tropics renders them particularly suitable for the growth of every kind of fruit and plant known to tropical or semi-tropical climates. The mercury seldom drops below 56 degrees, or rises above 80. The result is a very even temperature, and the most delicate plants are perfectly at home.

"It is well worth a trip to the islands to see the wealth of trees and plants, and especially the palms. They are simply magnificent, and words can scarcely describe their beauty. Side by side may be found the palms from California, and the most delicate plants from the East Indies; the hardy palmetto from South Carolina and the most beautiful varieties from Java and the South Sea Islands, all growing together with the same luxuriance.

"Among the most striking is the *Eurvodoxia Regia*, or Royal Palm. Many of them reach the height of 50 feet, with smooth, symmetrical stems and a crown of leaves, some of them 12 to 15 feet long. The Sugar Palm is also very beautiful, growing quite as tall as the Royal Palm, but entirely different in appearance. It throws out long bunches of fruit stems that look like tassels, are often seven or eight feet in length, and give a very fine effect to the plant.

"There may be seen *Cocus Revoluta*, with stems a foot or more in diameter, and fronds three to four feet in length; also *Cycas Medina*, with stems 8 or 10 feet high, and fronds 10 feet long.

"The most striking and graceful of all is the cocoanut palm, that rises sometimes over 100 feet, with leaves sometimes 20 feet in length, with immense clusters of large nuts. They are scattered all over the islands, but mostly near the sea. There are large groves, and some of them are very old, being large trees when Captain Cook discovered the islands. The unripe nuts are very refreshing. The milk (or rather water, for it is clear and sparkling) has a slightly vinous flavor, and is very palatable, while the meat can be eaten with a spoon. In that state they are called custard nuts.

"Among the many fruits growing there, the mango is by far the most prominent. It bears immense quantities of delicious fruit. From February to October it forms a large portion of the food of many of the natives, especially the children. The fruit is considered public property, and is appropriated by any one wherever found. At the earliest streak of dawn the native children can be seen foraging for mangoes. They would be greatly surprised and indignant if they were refused the privilege. In many cases it is the only breakfast they get. The fruit is very nutritious and wholesome.

"There are very few fruits indigenous to the islands, but many have been introduced. A variety of Eugenia grows in the mountains, known as mountain apples. The guava grows in great abundance, but it is said to have been imported. Strawberries grow wild in some places. A few are grown for market, but the quantity is not large.

"They are beginning to raise grapes; the Isabella is the variety mostly grown. The Bread Fruit grows abundantly and is fine eating when baked. It has the flavor of a good squash and it is largely used by the natives. It is one of the most beautiful trees growing on the islands.

"Pineapples grow in great perfection, and large plantations are being planted. Bananas are grown largely for export; some steamers carry away as many as 7000 bunches at one trip. The variety exported is the Chinese Dwarf. There are many varieties grown there, and some of them are very fine.

"Oranges grow wild and are of good flavor, but somewhat fibrous. On the slopes of Mauna Loa grows a small shrub bearing a fruit not unlike a cranberry in appearance, but fine flavored. The natives call it Ohla. I shall import some of it into California to test it. If it would grow here, it would be a great acquisition. It is found at an elevation of 4000 feet, and I think it would do well here.

"There is one thing more I will mention, and that is coffee. It is found growing wild on all the islands, and is far superior in flavor to anything that I have tasted elsewhere. It promises to be a great success.

"Sugar has been their main dependence, but since the passage of the McKinley tariff bill they are turning their attention to other things. Eventually the McKinley bill will be a blessing to them, but it is pretty hard on them now, as it takes off $40 per ton from their sugar, and that much from 125,000 tons means considerable money and they will miss it."

FORESTRY.

Forest Notes from Australia.

LAMANDA PARK, Los Angeles Co., Jan. 24, 1892.

TO THE EDITOR:—The Forest Conservator's Report of South Australia for 1891 has just been received. The climate and conditions of that colony have many points of similarity with those of California, and consequently there is a considerable interest in their tree work for our citizens. In forestry, as in ballot reform, land transfer, railroad management, etc., this new community is far ahead of us.

The forest administration is now under Mr. Walter Gill, a distinguished and able man. He has in his charge 29 forest stations containing 227,135 acres.

The sugar gum has for a number of years been considered the best all-round forest tree adapted to South Australia. The last report shows the sugar gum (*Eucalyptus Corynocalyx*) to be still in the lead. Of the trees planted last year by the Forest Administration, there were of

Sugar gum, *E. Corynocalyx*	200 200
Blue gum *E globulus*	38 600
Manna gum, *E Viminalis*	61 800
Red gum, *E. rostrata*	37.600
Monterey pine, *P. insignis*	32,609

The other trees planted were in smaller quantities, making a grand total of 429,058. A grasshopper invasion destroyed all but 154,748. From this scourge the sugar gum suffered the most and the Monterey pine the least.

The Forest Administration also distributes trees for experimental planting and to encourage forestry.

This inquiry of citizens and their orders for trees shows the general relative estimate in which the different trees are commonly held. There were distributed in all 372,193 trees. Of these, the leading varieties were:

Sugar gum	216,606
Blue gum	13,963
Red gum	4.886
Manna gum	7,592
Monterey pine	53,892
Cluster pine, *P. pinaster*	8,302
Aleppo pine, *P. halepensis*	11,093
Pepper tree, *Shimis Molle*	7.570
Tamarix Gallica, *Tamarisk*	6 524

By this list, we see that the citizens followed a somewhat different course from the officials. We may also note that a good many of the trees, as the pepper, must have been for ornamental purposes. The sugar gums outnumbered all the rest of the trees put together.

The account of nursery stock for the coming season shows the same popularity of the sugar gum. Of the 965,525 trees in stock, 422,687 are sugar gums. The sugar gum stands drought and wind better than any tree adapted to South Australia. It will not, however, grow immediately on the sea coast where there is a strong and constant breeze. In such situations, it sea burns. The best tree for a sea breeze exposure is the Monterey cypress.

The cypress is, unfortunately, an inferior timber tree. The red gum, *E. rostrata*, seems to stand more frost than any of the popular varieties of eucalyptus.

ABBOT KINNEY.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Who of the California delegation in Congress is the farmer's friend? Read the daily proceedings of Congress and tell us who is the farmer's friend. Isn't it time for the farmers to have an advocate in Congress?

"In time of peace prepare for war." General election this fall. Look to the primaries; look to the convention; look to the interests of the industrial classes before you vote. No community can prosper, no people can be happy, no State can progress when agriculture and industry are overtaxed and when labor is not honored. See to it, fellow farmer, that some of the many honest tillers of the soil get your vote for public station. You can readily find many farmers who are competent to fill any office in the gift of the people. Unity of purpose and unity of action on the part of the farmers will accomplish a world of good in the field of politics and governmental management. See to it.

Study, if you will be the peer of your neighbor. This is a thoughtful age. We live in progressive times, surrounded by progressive people. If you are to keep up with events, you must work, not the muscular organs alone, but the brain as well. Leave some evidence by which others may see that you have been a somebody and that you have done something. You can always afford to stand for what you *know* to be right.

Placer county is to hold another session of the Farmers' Institute. Do other counties want an institute?

Give the children a chance in the Grange. The Grange is the children's second home. Have an open meeting now and then and let the little ones read, sing, recite and render dialogues for their own amusement and instruction, as well as for the good of the Order. Make your Grange a cheerful place. Nothing does more to break the monotony of life than the merry, winsome voices of the children. No home is complete without the little ones. No Grange is fully a success unless it looks carefully to the children in its jurisdiction. Be ye as little children are, and you are not far from the straight and narrow path. Remember the children.

Send your recommendation for County Deputy. But three counties have so far responded to the call. If recommendations are not made at once the Master will proceed to act upon his own convictions. Please attend to this matter immediately, Worthy Masters of subordinate Granges in each county.

Let subordinate Granges take immediate action on the official letter sent to each Grange. It is important for the Executive Committee to know soon how to arrange dates for the speakers who are to meet with the Granges. Don't fail to act, and don't fail to notify the Worthy Secretary of the State Grange of the action taken by your Grange.

Help build up the Grange. Take an application blank home with you and try, try faithfully to get one or more of your neighbors to join the Grange.

Sister L. A. Hawkins of Alabama, Chairman of the National Grange Committee on Woman's Work, is the author of a splendid article on "Woman's Sphere." The article is worthy of careful consideration.

A company of French capitalists and scientists have concluded to establish a perfume factory in California. This will open a new field of enterprise and industry. We assure our sisters of the Grange that there is not only pleasure, but there is to be money in the culture and growth of flowers. Let Sister Flora of the State Grange fully inform herself on this subject and then communicate said information, through the PRESS, to the sisters of the Grange. The field of thought is not circumscribed by a wire fence, nor is the culture of flowers without its rewards.

National Grange Proceedings.

During the past week a copy of the proceedings of 1891 has been mailed to the Master and Secretary of each subordinate Grange in California, also to postmasters and officers of the State Grange. If any have failed to receive them, please notify me. The report for this year is much larger than that for previous sessions, and contains much reading of interest to all Patrons.

Those receiving copies should select choice portions to present at Grange meetings. The secretaries will no doubt be pleased to loan the copy addressed to their care to the lecturer or other members who may be willing to examine and read or give condensed recitations of some of the most interesting portions of the volume under "Good of the Order" in their Granges.

We have a few copies left of both the State and National Grange Proceedings of 1891, as well as of some previous years, which we would be pleased to mail to Patrons desiring them who will send their request, with postage stamp.

A. T. DEWEY, Sec'y S. G. of Cal.

San Joaquin Granges at Lockeford.

Past Master Overhiser writes, Feb. 2, 1892, as follows: "I expect to go to Lockeford Grange Saturday, Feb. 6th. All the Granges in San Joaquin county have been invited and will meet at 10 A. M. I will install officers and we will have a harvest feast. Stockton Grange has received an invitation to attend Elk Grove Grange next Saturday also, and were informed that the State Master would be with them to install their officers."

ELK GROVE.—Worthy Master Davis expects to be with the Elk Grove Grange Saturday, Feb. 6th, which means a good time for those present.

Call for Special Meetings.

Desiring to open a vigorous campaign for the increase of membership and the establishment of new Granges, the Worthy Master, by a resolution of the Executive Committee, has addressed, through the Secretary of the State Grange, the following letter to each Subordinate Grange, looking to the holding of special meetings in all parts of the State:

Please ascertain at the first meeting, or earlier, if you can do so reliably, if your Grange will hold a *special* meeting, some time soon, on such a day as will best accommodate and save expense to the speaker sent by the State Grange. The expenses of the speaker or speakers will be paid by the State Grange (Subordinates may contribute if they so desire), and some one or more State Grange Officers will address the Grange, and other farmers, in public or private meeting, as your Grange may desire. The object in asking Subordinates to hold meetings, at other than regular date, is to economize time and save money for the State Grange. Adjoining Granges will be addressed on consecutive days, thus giving your members an opportunity to attend two or more meetings. Please answer on enclosed form as soon as possible, so the Executive Committee may be prepared to act, and act intelligently.

We hope every Patron will take an interest in bringing about successfully the business named in the above circular. Let every Grange consider well the matter, and aid in every way possible to forward the good cause. The holding of well-advertised public meetings whereby farmers outside of our gates shall become better acquainted with what the Grange is to day, through improvements that have been made from year to year in its managements, and the greatly increased advantages to be derived by membership (educational, social and pecuniary), will prove of great importance in forwarding our work and benefiting, we trust, thousands who are not now members of the stanch old Order of P. of H.

A. T. DEWEY, Secretary.

Lady Masters.

Last year California had three sisters good and true handling "the gavel" in Subordinate Granges. This year there are five already reported, as follows:

Miss Roxie Dennis	Eden Grange
Mrs. S C. Dunlap	Placerville Grange
Mrs. Fannie Lawton	Sebastopol Grange
Mrs. Mary E. Donalson	South Sutter Grange
Miss E. E. Ashley	Vaca Valley Grange

That's a good leap for leap year, isn't it? The brothers will have to be on their good behavior or they may find themselves ultimately in the minority of presiding officers, as they already are in individual membership. In proportion to members, we think California has more lady Masters this year than any other jurisdiction. How is that, Brother State Secretaries?

Executive Committee Resolutions.

The following resolutions were adopted at the recent session of the Executive Committee of the S. G. of Cal.

WHEREAS, Our Worthy Master has devoted to the interests of the Order a large amount of labor, and is being constantly called on to visit Granges, and whereas he has heretofore expended his own means; therefore be it

Resolved, That he use his discretion in making visits to subordinate Granges, and that his expenses be paid out of the Lecture Fund.

WHEREAS, It is important that our Worthy Master make an active canvass of the State in the interest of the Order; organizing, reorganizing and lecturing Granges;

Resolved, That upon the presentation of his itemized bill of expenses, this Executive Committee will admit the same and allow him three dollars per day for the time actually spent in such work. All such bills shall be presented monthly.

IN FAVORABLE CONDITION.—Quarterly reports for the term ending December 31, 1891, have come in quite promptly from nearly all Granges of California, together with the quarterly dues. The reports generally show an increase in membership, and nearly all the Granges in our directory are in a very favorable condition, and we may expect some excellent work done in the near future in nearly every quarter of the State.

DEATH OF FATHER HOOPER.—Bro. T. T. Hooper, for many years Master of Montezuma Grange, died at Benicia on Saturday morning last and was buried on Sunday P. M. from the Congregational Church. Many Patrons will remember the faithful old veteran long and kindly.

SONOMA COUNTY.—Pomona Grange has by resolution approved the Conger and Butterworth bills. The same Grange has by resolution protested against any appropriation by the supervisors of the county for a county exhibit at the Columbian fair.

FARMERS' ALLIANCE.

Alameda County Alliance Meeting.

A notable Alliance meeting was held at Liberty hall, Oakland, on the 16th inst., at which delegates were present from Warm Springs, Irvington, Niles, Pleasanton and Oakland Alliances.

J. L. Gilbert, State Lecturer, one of the most faithful and able members of the Order, State Agent J. M. Moore, Hon. J. R. Barton, Pres. of Placer County Alliance, and J. J. Morrison, Lecturer of the Second Congressional District, were among the able speakers present. Pres. Valpey opened the meeting at 10:15 A. M. Appropriate remarks were made by the President, and the usual committees were appointed, including the following: On Business Plans, Henry Tyson, H. R. Shaw and J. E. Jacobus; on Cooperative Banking and Loan Associations, E. Kelsey, A. T. Dewey and M. L. Gray; on Resolutions, Dewey, Tyson and Shaw. On request of Howard Overacker, Chairman, the standing committees on Cooperation and Constitution and By-Laws were granted further time. E. Kelsey of Committee on Conference with Federated Trades reported progress.

Mr. Barton made a most excellent and inspiring speech, criticising members of the Order in general, and committees in particular, for neglecting to properly perform their duties and live up to the great privileges of the Order.

Mr. Gilbert's bedrock speeches, remarks and advice also won him the true appreciation of all present. Mr. Moore, as usual, gave an excellent address, full of information and good advice. Mr. Morrison, in a modest way, also made himself very useful during the session.

The happiest feature of the occasion was the noonday lunch. The sisters from abroad brought full baskets, which were well matched with contributions from sisters and friends of Oakland Alliance, making a bountiful spread.

After lunch, toasts and responses were given in a lively way for nearly an hour, the uninitiated invited guests who could not attend the closed meetings being more especially called upon. Among those who were very able and entertaining in remarks were Judge E. M. Gibson, Mrs. C. P. Stetson, Mrs. Loomis and Mr. Finson. This pleasant feature of the day will no doubt be long and pleasantly remembered. The followfng are among the resolutions adopted:

Resolved, That we adopt some system of cooperative buying that will not interfere with our present system but embracing the Rochdale system, not necessarily in its entirety, but such part of it as we think would be of benefit to us, and that a committee of three be appointed by the chair to report at our next meeting.

Resolved, That a committee of three be appointed to investigate cooperative banking and loan associations, and report to this body at its next county meeting, looking to the establishment of such a State or county institution.

Resolved, That we heartily endorse the National platform adopted at Ocala in 1890, and reaffirmed at Indianapolis in 1891; also the demands of the State F. A. & I. U. of California adopted October, 1891; also the recent proclamation of Pres. Marion Cannon requesting Congress not to grant bonds to any private corporation or association for building a Nicaragua canal.

The bill of Commerce and Finance by Mr. E. Kelsey, which has been introduced in Congress by Hon. Jerry Simpson (in a measure a substitute for the sub-treasury plan), was read and endorsed, and recommended to the favorable consideration of the State and National Alliances. We hope to find room for this document in our columns later.

Quite a number of brief and excellent speeches were made by different members. Pres. Valpey handled the gavel admirably.

In the evening a union meeting of members of different progressive organizations and other citizens interested in reform movements of the day, was held. Nearly all present seemed determined in favor of the People's Party movement.

The Alliance and the Canal Project.

Citizen's Alliance of Sacramento county has adopted the following resolutions:

Resolved, That we do protest against the proposed issuance o bonds of the Nicaragua Canal scheme. That to issue said bonds would be a repetition of Pacific Railroad experience—Credit Mobilier Scandal—and would mean a watered stock corporation of five times the amount issued.

Resolved, Further, that should the Congress of the United States believe the canal a necessity, then the Government should build one and control the same, and that it shall be free to vessels floating the American flag.

The Highland Park Alliance has adopted the following resolutions:

Resolved, That we enter our protest against the proposed issuance of bonds of the Nicaragua Canal scheme; that to issue said bonds would be a repetition of Pacific Railroad experience and Credit Mobilier scandal, and would mean a watered stock corporation of five times the amount issued.

Resolved, Further, that should the Congress of the United States believe the canal a necessity, then the Government should build and control the same.

Farmers' Alliance Mill.

Watsonville Rustler.

An open meeting of the Farmers' Alliance was held in the Opera House last Saturday afternoon, the object of the meeting being to consider the proposition of establishing a flour mill at Gilroy, said mill to be built and managed by members of the Farmers' Alliance in the counties of Santa Clara, Santa Cruz and San Benito. Mr. Ellis, of Hollister, a prominent member of the organization, addressed the meeting upon the subject under discussion, and set forth the advantages that farmers would derive from taking stock. The idea is to form a stock company to build and maintain the proposed flour mill, said stock to be issued only to members of the Farmers' Alliance, the number of shares that may be issued to each individual to be limited, thus precluding the possibility of a "freeze out game." The farmers around Gilroy and Hollister are taking an active interest in the matter, and the object of Mr. Ellis' visit to this city was to awaken a similar interest among the farmers of the Pajaro Valley.

Call for Special Meetings.

The State Secretary has returns already from a few subordinate Granges in answer to the Master's query as to the disposition to hold a special public or closed meeting at a date convenient for some State officer to visit them while on a circuit of Grange visitations. Every answer so far is favorable. Soon as regular meetings are held, let us hear from the balance of Granges.

THE Executive Committee and State President of the F. A. & I. U. of California have appointed J. L. Gilbert of Reedley, Fresno county, and Jesse Poundstone of Grimes, Colusa county, delegates to the conference to be held at St. Louis, February 22d, 1892.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

SEEDING BLUE STEM WHEAT.—Pleasanton *Times:* A carload of 40,000 pounds of white Australian, blue stem, seed wheat, arrived lately for the Rancho del Valle, formerly known as the Black and Rose Tracts. They are planting about 500 acres out to this wheat.

Butte.

BEE TREES.—Oroville *Register:* Owing to the abundance of suitable food for bees the latter are not here obliged to lay up the store of honey that is requisite during the long winter months of the Eastern States. In the mountainous parts of the county, especially from 3000 to 6000 feet in altitude, there are many bee trees. In the vicinity of Mooretown, Magalia, Lovelock, Powelton, Lumpkin and Merrimac mills many bee trees have been found. In those high altitudes the bees seek the pine and fir, but lower down they use the oak in which to lay up their saccharine stores. D. K. Perkins tells us that an altitude of 6400 feet in the vicinity of the Golden Summit mine, a number of bee trees have been found during the past year.

A LARGE ORCHARD.—Biggs *Argus:* On the fine orchard and nursery of Alexander & Hammon on Rio Bonito, they have 50 men at work, some engaged in winter-grafting scions, cut from budded trees, into seedling roots, while others are planting pits and doing all kinds of work pertaining to the business. They will have a half million grafted trees before the work is finished. In apples alone they will have over 50 varieties. Besides the 100 acres which composed the nursery from which thousands upon thousands of trees have been shipped this year they are preparing another 100 acres for this year's planting. On the 200 acres of nursery land they expect to raise and prepare for market next year over 1,000,000 trees. Besides planting their immense nursery, this firm will extend their 300-acre orchard westward to the county road, which will add thereto another 100 acres.

TREE-PLANTING.—Oroville *Mercury:* In an interview with H. C. Hills of the Thermalito Colony Company, he mentioned the following who are preparing land which will be set to trees: Colonel Frank McLaughlin's beautiful 140-acre tract is being plowed, and before the season closes will be entirely set to orange trees, making it one of the largest groves in the State. M. Goodrich of New York is planting 15 acres to oranges. W. J. Martin of Oakland, 20 acres to oranges. F. O. Stanton, clerk of the Palace hotel, San Francisco, 14 acres to oranges. Dr. T. W. Serviss, five acres to olives. Neal Anderson, five acres to oranges. Major Fisher is preparing the "Twelve Trees" place for oranges. J. M. Sloane will put five acres in Mediterranean Sweets. Geo. Gable and W. W. Will are planting 40 acres to deciduous trees in North Thermalito. H. J. Langdon is preparing 100 acres of land for Col. E. S. Weeden of Chicago, which will be planted to oranges and olives. Not only in Thermalito, but in Palermo and other surrounding colonies, are extensive preparations being made to put out hundreds of acres of trees. The shipments East have established a high market price for Oroville oranges, with great resulting good to the whole community.

Colusa.

CROP PROSPECTS.—Colusa *Sun:* Crops so far are looking well. The land along the river has been mostly seeded, but there is much grain being put in every day. One week of fair weather will see most of the wheat in the ground. The season has been an exceedingly favorable one, although the summer-fallow wheat is not nearly so forward as we have seen it at this date. It is far enough advanced however for good results.

Contra Costa.

FRUIT SHIPMENTS.—Martinez *Democrat:* The amount of grapes shipped from Martinez during the past season by boat and rail is as follows: Per rail—Table grapes, 707,400 pounds; wine grapes, 1,146,010 pounds; total, 1,853,410 pounds, or 976.7 tons. Per boat—Wine grapes, 1,872,000 pounds; table grapes, 816,125 pounds; total, 2,688,125 pounds, or 1344½ tons. Besides the above, there were shipped during the season, per the California Transportation Company's boats from Martinez 2900 boxes of peaches, averaging 40 pounds to the box; 5965 boxes of pears, averaging 50 pounds to the box; 849 boxes of apples, averaging 50 pounds to the box, and 672 boxes of dried fruit, averaging 80 pounds to the box.

Glenn.

AN EARLY FRUIT BELT.—Willows *Journal:* Glenn county is fortunate in having an early fruit belt. The land in the vicinity of Fruto, a few miles west of Willows, will produce as early fruit as Vacaville or any other spot in the State. The soil being a light sandy loam, and being protected from frosts and cold by the mountains to the west and hills to the north, is considered by experts to be equal to the best for early fruits. This soil needs little or no irrigation, and proper cultivation will keep it in first-class condition. In a few years the fame of Fruto will be known far and wide, and the fertile lands between Willows and Fruto will become one vast orchard and vineyard.

Kern.

FARM NOTES.—Bakersfield *Californian:* About six years ago, perhaps 5000 acres would cover the whole number of acres planted in the Tehachapi valley with wheat and barley. It is estimated that at least 30,000 acres have this season been seeded over the area planted last year. The mountain valleys do not yield grain alone for their harvest, but fruits; especially apples are found to be a product of exceeding excellence. The apples are not only large and handsome, but keep well and are of delicious flavor equal to any, no matter in what part of the world they are raised. * * * In the Rosedale Colony this season nearly 4000 acres of virgin land have been plowed and seeded to wheat for the first time. Stoner & Duncan have 640 acres, Spangler Bros. 900 acres, the Kern County Land Co. 900 acres, Mr. Underwood 200 acres, Mr. Pierson 100 acres, Mr. Smith 100 acres, and in sundry small lots 600 to 800 acres. The grain is all up and looking finely, and with a seasonable rain a splendid crop will result.

CUMMINGS' VALLEY FARM NOTES.—Cor. Bakersfield *Echo:* Cummings' Valley contains about 16 sections of land and is connected with Tehachapi valley by a deep canyon of two miles, where it widens out into another valley of about 20 sections. A crop here is a certainty, for the mountains always absorb the moisture, while the valleys are dry. It began raining here on Dec. 4th and has kept up almost incessantly ever since, until now we have had about 16 inches of rain. The certain yield is from 12 to 20 centals per acre, and we have the enormous advantage over other sections that if, by any possibility, the crops should fail for grain, hay always commands from $12 to $18 per ton. Our hay market is always sure, the great mining camps of Daggett, Calico and Southern California consuming more than we can produce at from $12 to $18 per ton. All this land, only about eight years ago, was only considered fit for a cattle range.

REMARKABLE GROWTH.—Bakersfield *Californian:* R. Frisselle brought from the Rosedale vineyard one branch of the past season's growth, from a vine not yet two years old. The branch is about eight feet long, but the remarkable thing about it is its size. Six inches nearest the butt it is over one and one-quarter inches in diameter; then come two feet, averaging one inch in diameter; next 15 inches, three-quarters of an inch in diameter; then two feet, five-eights of an inch in diameter, and after this a foot, one-half inch in diameter, and next branches tapering down to something small enough for cutting. When one thinks of a growth of nearly one and one-half inches in diameter within one season it is a most remarkable effort of nature.

Los Angeles.

THE SARDINE AND THE OLIVE.—Pomona *Progress*: The putting up of sardines is likely to become an immense industry in this State, now that the interest in planting olive trees promises to result in the production of olive oil in sufficient quantity for the purpose. Our waters are teeming with those delicate little fishes, and there is tin for the cans in the Temescal mines, and it goes without saying that capital is ready, so that nothing is lacking but the olive oil in which to preserve sardines; that will be forthcoming in time, now that olive trees can be produced cheaply by the method discovered by K. McLennan, superintendent of the Pomona Experimental Station while connected with the Station at Berkeley. He there succeeded in rooting herbaceous cuttings of the Navadillo and Manzanillo olives under glass, which were planted out and in four years from the cutting the trees bore fruit. John S. Calkins is propagating some 40 varieties of olive trees by this method here in his glass houses heated by hot water pipes, on Libbie St., just south of the Palomares hotel. He has now 400,000 cuttings planted in his houses, and will continue putting in till about the 1st of March, when the number will reach fully half a million. During this spring the rooted olives will be planted in his nurseries at Casa Blanca, near Riverside, and here in Pomona. As soon as the houses are empty, the filling in of cuttings will begin again, which will be rooted and ready to go out in the nurseries during the autumn months. [The method of propagation alluded to is that generally known as the "small cutting" plan, which is now common among olive propagators.—ED. PRESS.]

Monterey.

NO GLANDERS FOUND.—Salinas City *Democrat:* Dr. D. F. FOX, the veterinarian, who was sent south by the Board of Supervisors to investigate several reported cases of glanders among horses in Slacks canyon, says that after a careful examination of the horses in the region said to be infested, he was unable to find any case of the dread disease. He, however, found one horse with symptoms of glanders and had the animal placed in quarantine to await further developments. An examination of the Wayland horses, among which Dr. Buzard recently found the disease and had some of the animals killed, showed the disease to have been eradicated entirely, and a clean bill of health was given.

A GROWING GRAIN SECTION.—Salinas City *Index:* S. M. Shearer bought the first barley at King City of James Lynn in 1886, amounting to 30,000 sacks; also bought of Thaddeus Berry 1000 sacks of barley, and of J. C. Holmes 1000 sacks of wheat at San Lucas, being the first grain of any consequence shipped from those points. Now immense quantities of grain are annually raised in those sections which, for their cereal products, are becoming more important every year.

Napa.

DISPLACING THE PLOW.—Napa *Register:* Before the fall rains commenced this season, several farmers in this vicinity used disc or cutaway harrows or cultivators of different patterns to prepare ground for barley, wheat or oats. Some grain or hay land was sown before cultivating. These harrows seem to be growing in popularity with farmers, and the result of the harvest next fall on fields thus prepared will be closely watched and freely commented upon.

OLIVES TAKING THE PLACE OF VINES.—Napa *Register:* Eight years ago, F. Borreo planted on his hill ranch near Napa Soda Springs, 1500 olive trees of the Picholine variety, that have made excellent growth and have fruited well. He is this season planting in his Bay View vineyard, 3000 Mission olive trees, each of which takes the place of every third vine. This brings the trees 21 feet apart. Olive trees planted in the red soil on Mr. Borreo's vineyard commence bearing fruit at the age of five years. His eight-year-old trees bore about a gallon of berries per tree. The proprietor of this olive orchard is very careful to fertilize them at stated periods. "It is considerable work to do this," said Mr. Borreo, "but it pays. The trees make a more vigorous growth and bear more and larger fruit." That Napa-grown olives will make an excellent quality of oil has been proven by repeated experiments. That olive culture will at not a very distant day become one of our prominent industries is evident to any close observer. In many of the vineyards near St. Helena, especially among those on the hills on either side of the valley, many olive trees are being planted this winter, the owners having in view the same idea entertained by Mr. Borreo, which is that if the vineyards are destroyed by phylloxera, or any other cause, the olive orchards will remain. There is at least one fine olive orchard in the hills near Calistoga.

VETERINARY SURGEON APPOINTED.—*Calistogian:* The Napa county Board of Supervisors took the following action in reference to the glanders. It having come to the knowledge of this Board that a case of glanders exists among the live stock of this county; now in pursuance of the provisions of Ordinance No. 29 of the county of Napa, it is hereby ordered that Newton Cossitt, a competent veterinary surgeon, be and he is hereby appointed to examine into such case and any other cases of glanders or contagious disease among live stock that he may have reason to believe exists in this county, and if he shall find such disease to exist, said veterinary surgeon shall require the owner of the diseased animal to deprive the same of life as required by law and the form of said Ordinance.

Sacramento.

HOP NOTES.—Sacramento *News:* No contracts are reported during the week, growers declining to article on the basis of 12½, which is all dealers will offer for new crop 1892. Already the contest for the first bale of 1892 hops has begun and different growers are inclined to wager small amounts as to their chances. Pruning will commence in two weeks, and some plowing will be done earlier. The increase of the last acreage will be much larger than supposed a few weeks ago, a number of old hopmen having lately announced their intention of re-embarking in the industry. P. M. Rooney may be mentioned among this number. T. B. Lovdal and C. L. Munger will add to their yards. W. H. Leeman will increase his plant by 30 acres of new hops. W. F. Menke will build a new kiln and cooling rooms, as will also J. J. Merkley of Yolo.

San Bernardino.

PLOWING AND SEEDING.—Chino *Champion:* Plowing and planting are going steadily on over the Chino ranch. The steam plow is now at work east of Euclid avenue on land that had never been plowed before, and about a dozen gangs with teams are at work at different places.

CITRUS TREES FROM FLORIDA.—Ontario *Observer:* J. T. Lindley has received from Florida nurseries 20,000 orange and lemon trees. The trees arrived in fine condition, and are as smooth, fine and vigorous as any ever imported. The stock is the Florida sour variety, the buds being from the groves of Ontario and Riverside. Among the varieties of orange trees rece[illegible] are the Malta Blood, Ruby, St. Michael, Valencia Late, W[illegible] ington Navel, Mediterranean Sweet. Villa Franca and o[illegible] varieties of lemon are also carried.

FRUIT TREE STATISTICS.—Cor. *Times-Index:* There is now planted in orchard form in the Mission, Old San Bernardino, 154,452 orange trees, budded and seedling. There are now in nurseries ready for removal 81,600 orange trees in budded and three-year-old seedlings. Number of peach trees 32,599, and 97 acres of apricots. The largest apricot orchards are those of Wm. Curtis and H. H. Cole, and they pay well every year.

San Joaquin.

WHEAT FIGURES.—Stockton *Independent:* A prominent grain dealer says that at the close of January 44,000 tons of wheat were on storage in this city. The local consumption in January was not as large as usual because Sperry's and the Crown Mills were shut down most of the month to make the annual overhauling of machinery. The output of grain in December was 18,000 tons, but in January the reduction in stores was 9300 tons. Three large flour mills will be in operation from this time forward, and with the fourth mill, near the railroad, the daily consumption of wheat will be about 500 tons. Monthly, the local mills will require about 13,000 tons of wheat, and if there were no outside stores to draw from there would be a shortage here, but the mill men say they have piles of grain in country warehouses which they can call in any day, and besides they are buying grain every day, so there can be no great shortage before the new crop comes in.

San Luis Obispo.

GRAIN CROPS AT SIMMLER.—Cor. San Miguel *Courier:* The early sown grain is growing nicely. The farmers are most through seeding. There is a greater acreage sown than ever before, and the grain is put in in better condition. Early-sown grain in Sunflower looks well. Many of our farmers are summer-fallowing for fall sowing.

Santa Clara.

GRAIN NEVER SO PROMISING.—Gilroy *Gazette:* Expert farmers of this section say that the croaking that is being done by some about the so-called dry spell is entirely uncalled for. Grain they say never looked better than now, and if rain gets here again between the first and middle of next month there will be no trouble about crops.

TREE PLANTING AT CAMPBELL.—Cor. San Jose *Mercury:* The magnificent rain we have been having has been worth a great deal to grain fields and pastures. Orchards were not needing rain, except that the ground was getting rather hard for plowing and cultivating. Many trees have already been planted out and ground prepared for many more.

Santa Cruz.

INCREASED ACREAGE TO BERRIES.—Watsonville *Pajaronian:* The rain interrupted the work of planting vines in the new berry fields which are being set out in this section. There will be a considerably increased acreage in berries this year.

Shasta.

INCREASED YIELD OF FRUIT.—Anaheim *Enterprise:* This year will yield a considerable crop of fruit from the orchards planted in 1888. It will include such plants as the Alexander in Happy Valley, the two extensive Frisbie orchards, and Weaver & Campbell's 50 acres on the bottom near town. Especially will the increased production be noticed in peaches, while the prunes and Bartlett pears will come in for a good share though not a heavy yield.

Stanislaus.

GRAIN SEEDING ON THE ADOBE. — Oakdale Cor. Modesto *Herald:* A large area has been seeded on the adobe lands in the vicinity of Dry Creek during the late beautiful weather.

Sutter.

COMMENDABLE COURSE BY THE FRUIT COMMISSIONERS.—Marysville *Appeal:* The Sutter county Board of Horticultural Commissioners are using every endeavor to destroy the fruit pests in Sutter, and at present they are devoting their attention to the nurserymen. In order to prevent the dissemination of scale from infested nurseries, nine local inspectors have been appointed, and the trees in the nurseries in the vicinity of Yuba City are carefully inspected one by one before they are allowed to be shipped. Mr. Bogue placed an order last fall with a nursery in Alabama for an assortment of trees, including peaches. As the Fruit Growers' Convention held in Marysville last November condemned the practice of importing Eastern peach trees, on account of the danger of introducing the "yellows" and the Eastern peach root borer, Mr. Bogue promptly canceled his order as far as peach trees and nursery stock on peach root was concerned. However, as it was not supposed to be at all dangerous to import plum trees on their own roots, from districts not affected by the curculio, Mr. Bogue received a consignment of Simon plum trees. These were opened in the presence of the Horticultural Commissioners, and on being examined several of them were found to be infused with a root borer. Specimens were immediately submitted to Alexander Craw, State Quarantine Officer, who pronounced them the dreaded *Eastern peach root borer.* The consignment was at once quarantined and Mr. Bogue has offered to destroy the entire lot and to import no more trees from the East.

Tulare.

TREE-PLANTING AROUND VISALIA.—Visalia *Times:* We give below, as nearly as we have been able to ascertain it, the acreage to be planted in trees in the immediate vicinity of Visalia this season: Encina Fruit Co., 200 acres; Visalia F. and L. Co., 220; Evansdale Fruit Co., 35; Flemming Fruit Co., 30; Mineral King Fruit Co., 200; Cain Fruit and Nursery Co., 110; Land and Raisin Co., 25; Kelsey place, 40; H. C. Ray, 20; W. C. Pendergrass, 5; J. W. Fewell, 8; Robert Ogden, 15; E. Valgard, 40; J. A. Patterson, 12; C. W. Updyke, 10; Horace Thomas, 15; S. Z. Curtis, 30; Wallace & Morton, 200; Bishop Ranch, 200; Dan Switzer, 10; Thos. Jacobs & Bro., 40; C. Bergstrom, 5; Charley Lindsey, 15; C. J. Giddings, 20; Geo. Birkenhauer, 4; W. H. Hammond, 10; T. Mills, 15.

PLOWING AND SEEDING AT EXETER.—Cor. *Times:* Farmers are still very busy putting in their crops. Some are nearly done seeding, while others will be kept busy until the 1st of March to get their crops in. The ground and weather have both been very favorable for pushing the work, and farmers generally have availed themselves of these advantages. The result will be a very large acreage sown to the cereals.

Ventura.

A LARGE HORSE RANCH.—Ventura *Free Press:* The ranch of J. D. Patterson, near Hueneme, contains in round numbers 5680 acres in the ranch, and it is all divided and partitioned off in order to be most convenient for handling the horses and raising grain. At the present time there are 450 head of horses on the place, some of which are very high bred. They do not raise anything but solid horses, such as draft horses and the like, and do not incline toward fancy stock. The ranch sells from 250 to 500 head of hogs each year, and last year raised 20,000 centals of barley for sale. To take care of this big place requires as much precision and study as to run a machine shop. There are now 15 men employed besides J. D. Daly, the manager. They have their own blacksmith shop and do much of their own work.

THE HOME CIRCLE.

Two Towns.

Brother! you with growl and frown,
Why don't you move from Grumbletown,
Where everything is tumble-down
And life is always dreary?
Move over into Gladville, where
Your face will don a happy air
And lay aside the look of care
For smiles all bright and cheery.

In Grumbletown there's not a joy,
But has a shadow of alloy
That will its happiness destroy
And make you to regret it.
In Gladville they have not a care
But what it looks inviting there,
And has about it something fair
That makes them pleased to get it.

'Tis strange how different these towns
Of ours are! Good cheer abounds
In one, and gruesome growls and frowns
Are always in the other.
If your skies of ashen gray
Would change for sunny smiles of May,
From Grumbletown, oh, haste away;
Move into Gladville, brother.

—*Samuel Walter Foss.*

A Leap Year Lyric.

I.

If, hiding now my face from thee,
I should reveal my heart,
And thou therein couldst only see
How dear to me thou art,
Thou wouldst not wantonly disdain
A sanctuary where
Thine image must enthroned remain
The sovereign idol there!
Then howsoever high thy state,
Mine howsoever low,
I would not murmur at my fate,
Nor weary of its woe,
For I would know thy heart had seen
No heart so leal as mine,
And wert thou worshiped of a queen,
Less royalty were thine!

II.

I would not quench this fashion fraught
With tenderness so sweet,
Though I may only lay in thought
Its treasures at thy feet;
For if, concealing from thy sight
The altar and its flame,
I pass again into the night,
As lonely as I came—
Unseen thy sorrows still to weep,
Unknown thy joy to share,
One hope would yet survive to keep
My spirit from despair;
Mayhap a fairer day will dawn,
And I may live to see
Thyheart from lighter loves withdrawn—
Then thou wilt come to me!

—*Theo. H. Hill.*

The New Botany.

[Written for the RURAL PRESS by MARGARET B. HARVEY.]

"To minister delight to man,
To beautify the earth."

As little children we learned these lines by Mary Howitt, and thought we knew why flowers were created. But now the wise men of science are telling us that we were all wrong—that Mary Howitt did not know what she was talking about, that our belief in the beautiful ministry of flowers must perish like the other innocent delusions of childhood.

I like to think that the flower is the crown of the plant and that the lovely colors of the blossoms are their own excuse for being. But now I am told that colors in flowers exist solely for the purpose of attracting insects, and that flowers only appear when the plant is in a degenerate or impoverished state.

The fragrance of a flower is not "prayer-breathing incense," nor anything like it. It is only a lure for moths, butterflies or bees to draw them to the honey. The colored streaks so often seen on petals, as in the pelargonium and pansy, are "honey guides," or tracks to the center of the flower, which lines, an insect's feet will instinctively follow. Petals themselves are nothing more than resting places for insects.

White flowers generally attract insects that fly at night, as white corollas are more conspicuous in the dark than others. Such flowers as have tubular blossoms draw the insects with long feelers. It is to attract nocturnal insects that some flowers are more fragrant at night than at any other time, and flowers having inconspicuous corollas often make up for the deficiency by heavy perfume.

According to this, it would seem that a flower was a mere convenience for insects. Some scientists to-day would have us adopt this view. They say that if God did directly create flowers, He did not care whether man would ever see them or not—man was left out of the question altogether. And He did not create them for His own pleasure—such things as flowers are beneath His notice. And He did not care whether they were beautiful or not—His first thought was to gratify the insect. Some flowers are not beautiful; they have no need to be, for they can be fertilized by the wind. Among these are the blossoms of grasses and forest trees.

I like to think that I am as good as an insect, seeing that I am of more value than many sparrows, and I love to remember that when our Lord was on earth He noticed the lilies of the field. However, my mind isn't strictly scientific. I would rather believe that the insect was the servant of the flower than that the flower was the convenience of the insect; for, in these days, we must adopt one conclusion or the other.

It is now pretty well established that there is a closer relation between flowers and insects than was ever suspected until recent years. One cannot exist without the other. We have long had a high appreciation of the bee, but it is only lately that we began to believe that it had anything more to do than to gather honey. Now the fact has become well known that in New Zealand and elsewhere clover never perfects itself because there are no bees. A great law in nature is that of *cross-fertilization*, as necessary in the vegetable kingdom as in the animal. A bee on its travels carries the pollen from one flower to the seed-vessel of another, serving the plants even more than robbing them.

And we must revise our judgment of the butterfly and the moth. From time immemorial these have served as the emblems of foolishness and uselessness, as contrasted with the industry of the bee. But they fill quite as important a place in the economy of nature as the bee does. The only great difference is, certain species of flowers attract one kind of insect, while other species attract others, and humming birds, as well as other birds, sometimes aid the insects.

When the flower is fertilized it begins to wither away. It has no further need to attract insects. The plant may recover from its impoverished state, which showed itself in an excess of colored leaves. A regular green leaf is the only perfect one—*petals*, or flower leaves; *sepals*, or calyx leaves; *stamens*, or outer central organs, and *pistils*, or inner central organs, are all imperfect or undeveloped leaves. Had the plant been in a perfectly healthy condition, these would have all been green and properly arranged in branches. Flower-bearing then is a species of sickness in a plant. Its life and vigor can be prolonged if it can be kept from bearing.

This is the science of to-day, strangely as it may sound. It seems like a step backward. It reminds us of the old dogma, now well-nigh outgrown, that the conditions of birth in the human family are the result of a curse.

Before the plant can recover it must ripen its fruit. But ripening means withering or rotting. The brilliant colors of the peach are but the beginning of decay, caused by the plant giving it less and less of nourishment. The bright hues of autumnal leaves are traced to a similar cause. Frost has nothing to do with the phenomenon, any more than it has with the pink of June roses, or the scarlet of March's maples. To change color in autumn is the natural way for the leaves to ripen—or, more correctly, to degenerate. The reason is the leaf is losing its nourishment.

A plant is in a perfect state only after it has ceased bearing, or before it has commenced. That is, when it is producing the largest, handsomest leaves, or all green leaves. We begin to see now why so many plants bloom before the leaves appear, or why the leaves grow larger after the flowers and fruit have gone. It is because producing leaves is the real business of the plant—perpetuating the species is a troublesome interruption. Plants don't exist for flowers and fruit at all, but for such commonplace uses as to furnish food to animals, to shelter them and to influence climate and rainfall. Man may delude himself into the belief that plants are beautiful or ornamental, but these ideas had no place in the original purpose.

If there *was* a purpose, scientists admit that there may be a great First Cause, but it is many degrees farther away than we had previously supposed. There is no design in the fact that a wild rose, in a state of nature, always has five petals, while a lily has six. These numbers were accidental, while the petals themselves grew out of the necessities of some insect. Flowers, as we know them, are later luxuries in the vegetable kingdom. Such brilliantly colored blooms as lilies and orchids are recent developments after a long series of monotonous ferns and lycopodiums. Are we to conclude that the vegetation of to-day, with its gorgeous blossoms is in a degenerate state?

Until recent years, botanists supposed that plants lived on elements drawn from the air, the water and the earth. But of late the surprising discovery has been made that there were such things as *carnivorous plants*. If insects fertilized plants and insects fed upon plants, it ought not to be so very strange that plants sometimes fed upon insects. The first plant known to be carnivorous was the *Dionæa muscipula*, or Venus' fly-trap, of North Carolina. This has leaves armed with singular-looking hairs. The leaves are remarkably irritable, closing suddenly at the slightest touch. The hairs imprison the unwary insect that may have stepped upon a leaf. It has been found that the leaf secretes a peptic fluid, which actually digests flies and gnats.

Quite lately the list of carnivorous plants has been extended to include the sundews and butterworts. Now the question arises, May it not be extended indefinitely? If the world is teeming with animalculæ, may not *all* plants be carnivorous, even those never before suspected to be such? The question opens a field for research well nigh boundless.

Whatever we may think of the new science of botany, we may at least be sure that it is something quite different from the botany of the old scientists. Not that they were wrong, always—but that the science includes more. The new botany is but 15 years old, or less; its votaries are so few that they can be counted on one's fingers. Now, what a golden opportunity for our growing girls—why should they not distinguish themselves in this line as well as any other? If the leading scientists of the future are to be women, let the girls begin now and extend the new lines in botany. Perhaps it will be theirs to prove that the botanists of to-day are not quite right after all—that flowers really do exist,

"To minister delight to man,
To beautify the earth."

—Every man in the world is telling what he would do if he were a woman, and every woman is telling what she would not do if she were a man.

How Cornelius Flynn Pleased the Old Folks.

"Yes, Mrs. Haley, I was wunst jilted, as ye call it," said the handsome Irish Canadian, as he settled himself in a comfortable position in which to tell a story.

We, the children of the house, gathered about to listen, for there was an attraction about Corneil's stories that made us forsake our games.

We young ones were all born in Canada, but our parents were Protestant Irish, and we had the sense of humor which belongs to that wit-loving race.

Corneil was in a happy frame of mind that night, owing to the near approach of his second marriage.

Mother had heard from a not overly discreet neighbor that in her youth she had refused an offer from Corneil Flynn. Therefore when Corneil in his elation over his approaching marriage boastfully asserted that he was still able to cut out any of the young fellows, mother must lay his pride by an allusion to his former lack of success

"Ha, ha, ha, ha, ha!" roared Corneil. "So my old sweetheart can't keep a secret. Now, Mrs. Haley, I know ye was amazed that any girl could refuse as likely a youth as I was twenty-five years ago, but Mrs. Jennings, she was Nannie Cooley, surely did. I never heard a body say no to anything as spiteful as she did to the offer of me hand.

"You see," continued Corneil, "I had nine brothers and sisters, all married before I was, and not wan of them married to suit the parents.

"Now, says I, but it must be hard to raise so many children up to disappoint wan. Nine disappointments for me poor old mother; I wonder how she bore them all, sez I.

"'Sure mother,' sez I, 'your tenth child will marry to plase you. You'll have a daughter-in-law to your likin' when Corneil marries, if any girl ye like will have me.'

"'As if any one could refuse ye,' said mother, looking at me handsome form. 'Are ye thinking of marrying, Corneil?' questioned mother with a look as if she was ready to advise me.

"'No, mother; I must first have a nest for me bird.'

"Well, after that I built a log house on the fifty acres I was clearing, and went to housekeeping by myself. Wan evening I returned to me cabin very tired and hungry and not a bite cooked to eat. I was that tired I felt that I had rather go to bed without supper than to cook for meself. My breakfast dishes were sitting there all grasy and dirty, for a man won't wash dishes until he has to.

"I had had only a cold bite for me dinner, so for the sake of my health I finally made a cup of tea, but I swore a big oath that I would never cook another meal until I knew where I was to get me a wife.

"After I drank me tea I dressed meself in me Sunday best and rode over to mother's. It was twelve o'clock when I knocked at the door, and me mother was greatly alarmed.

"'Cornelius, me boy, what brings ye home at this hour of the night, waking honest people from their drames.'

"'It's this, mother, I swore I'd never cook another meal until I knew where I was to get me a wife.'

"'An' where are ye goin' for one,' says mother, anxious like.

"'Well, mother,' says I, 'ye know I have promised to plase you in this matter, and so I am here for advice.'

"'Sure, Corneil, there is Nannie Cooley, as likely a girl as ye'll find, and nate as a pin. I am sure you can git her.'

"'Then, mother, I'll straightway ask her,' said I, but me heart was very heavy, for I was thinking of Nellie McNaughton, a little Scotch lassie over London way. There had never been anything said between Nellie and I, but we understood each other, and as mother was fond of her I had thought she would have chosen her, but the course of true love never ran smoothly.

"I was pledged to plase mother, so I rode over to Cooley's—was there in time for breakfast. Mr. Cooley met me with a smile, as if he knew something was up. He had my horse cared for, and we talked some about logging, and then I mentioned the hardship of logging and housekeeping at the same time. 'You should marry,' said Mr. Cooley with a rare smile and a significant wink at the three girls.

"That's what I came to see about, and if Miss Nannie will have me, with your consent, this day month we will be married, What do you say, Miss Nannie?

"Her sisters giggled, and Nannie told me no as cross as a bear. Then I asked her sister May, an' if you'll believe me, with the same result. Me heart was in me boots when I asked Eliza Ann, the third girl, if she would have me. She hung her head and blushed and I could hardly hear her say no, she spoke so faltering like. I never knew how precious Nellie was to me till I saw Eliza Ann hesitating there and looking as if she meant to accept me.

"All right girls, sez I, ye might go farther and fare worse, but if none of ye'll have me I must go elsewhere.

"'Cornelius, me boy,' says Mr. Cooley as he helped me saddle my horse, 'I think ye went a bit too fast with the girls. Come again and perhaps their answer will be different,' but I shook my head and I tried to look downhearted.

"Then I went to mother and told her that neither Miss Nannie nor the sisters would look at me.

"'The proud upstarts!' said mother, very angry like, 'I wonder I never thought of little Nellie McNaughton. She's worth a dozen like the Cooley girls. 'Twas her that made all the nice hot poultices for me rheumatism, and I belave she likes ye, Corneil, as what sensible girl would not? She'll not refuse ye like thim consated huzzies of old Cooley's.'

"I told mother I'd take dinner with her and go and see Nellie in the evening. My heart was bating so at the mention of Nellie I was afraid mother would hear it.

"Nellie met me at the gate, and if I had not been afraid of being too sudden, I would have asked her there to have me. So I waited till everybody had gone to bed, and then I took her in me arms and told her how I loved her and how me parents were waiting to welcome her.

"Sure I plazed meself and me mother too that time, an',

as ye know, Nellie and I spent twelve happy years together, and then God took her home.

"My mother was never very friendly with the Cooleys after that, and never missed an opportunity of alluding to my fortunate marriage when in their presence."

Here Cornelius withdrew without even mentioning the second Mrs. Flynn.

"His thoughts are with the lost Nellie," said mother'—Aunt Betsey in Prairie Farmer.

The University Extension Lectures.

[Written for the Rural Press by M. M. S. P.]

To the readers of the Rural Press in and about San Francisco, it will be interesting to know that these lectures, just now on different ones of Shakespeare's plays, are open to all friends of the University.

There is a course of lectures at Berkeley which is open to the public; and the appreciation of this opportunity was very evident from the fact that at the last lecture given by Prof. Moses on "The Characteristics of Spanish Civilization," there was scarcely standing room in the large hall.

The teachers of the San Francisco Girls' High School had taken their pupils over to the lecture, and much enthusiasm was shown by these young students, many of whom will one day enter those classic walls for a four years' course.

All effort to cement the relationship between our common schools and the University is toward higher education and is highly praiseworthy.

The next lecture at Berkeley is entitled "A Glimpse of Japan," and will be given at the Assembly Hall on Feb. 10th by ex-President Horace Davis.

The lecture will begin at 2:15 P. M. and last one hour. Those going over from San Francisco should take the 1 P. M. boat. The entire cost of the trip from the foot of Market St. is the two bit ferry ticket.

The University Extension lectures are given each Friday afternoon, at 4 P. M., in the lecture room of the Academy of Science building on Market St.

On Friday, the 22d inst., the subject was "Othello." The next two lectures will be on the subject of "King Lear," and the play succeeding these will be that of "Coriolanus."

It is not to be expected that these lectures will furnish an adequate equivalent for a university education.

They are merely intended to *extend* the influence and the beneficial effect of University work as done at Berkely by the teachers and a few advanced pupils who occasionaly read papers bearing on the plays presented.

Of course such instruction is merely a fragment of the work done at the University, but so imbued do many become with the mental atmosphere that permeates such assemblages, that sleeping ambition is roused in many a mind, and a resolve made to take the full University course if possible; at any rate, to get more knowledge.

When we consider that at a University is gathered much of the best educational talent of the State, it seems but proper that this talent should be of the highest service to the people, at the disposal not only of those who can go to the University, but in as far as is practicable, to those who cannot go to the University.

Viewed in this light it becomes the duty of the University to send some portion of its benefits to the many whose ties and duties prevent their accepting the whole.

Spice of Life.

—A conscience that is not troublesome is worthless.

—Keep your toes out of the way and nobody will step on them.

—Necessity knows no law, and is generally too poor to hire a lawyer.

—There is something as good as bravery in getting scared in time.

—The anarchist is a man who cannot stand other men's prosperity.

—There are almost as many prodigal fathers as there are prodigal sons.

—A fanatic is a man who takes a burning interest in something we don't like.

—Some bad habits must be much disgusted with the fellows they have caught.

—Wet feet and warm whiskies are good things from the undertaker's point of view.

—Man may want but little here below, but he makes an awful fuss because he doesn't get it.

—Some people are all the time afraid they are going to die. Their friends are all the time afraid they won't.

—There are times in a man's life when the way to earn his friendship and gratitude is to ask him no questions.

—When you borrow money you borrow trouble, but at the same time you sometimes increase the trouble of the fellow who lends it to you.

—"You'll let me go to your wedding, will you not?" said one girl to another companion. "Upon my word I can't promise. My folks are in such a rage about my wedding that I am not sure they will let me go to it myself."

—"Mr. Jones, don't you think women are more sensible than men?" asked Mrs. Smith. And Jones, after scratching his favorite bump for a moment or two, said: "Why certainly they are. They marry men, and men only marry women."

—"Did you ever meet a real pirate?" asked a young lady. "Yes," replied the old naval officer; "once, on the coast of Kent." "How delightful! And did he sail on a long, low, rakish-looking craft painted black?" "No; he kept a seaside hotel."

—A class in natural history was called up for recitation. The teacher talked to them about the relations of friendship between man and animals, and then asked a girl: "Do animals really possess the sentiment of affection?" "Yes, almost always," answered the little girl. "And now," said the teacher, turning to a little boy, "tell me what animal has the greatest natural fondness for man." "Woman," said the boy.

Young Folks' Column.

Resisting Temptation.

[Written for the Rural Press by Caroline E. Sanders.]

"Nearly every boy in school has some kind of a watch but me," said Wilhelm Costar to himself as he was going to school one morning.

His bright, good-humored looking face wore a frown that did not seem to belong there, though it was not the first time it had been clouded with that same thought.

Wilhelm's father was in moderate circumstances and could afford to dress his son neatly and give him many advantages, but no such luxury as a watch might be, yet the boy foolishly allowed himself to often dwell upon the thought of the pleasure and profit it would be to possess one. How he would know just when to go to bed and when to get up—not reflecting that his mother was a very good timepiece in those matters—and then it would be so much more agreeable to pull out his own watch and look at the time, instead of always having to ask one of the other boys.

He was pursuing this train of thought and so engrossed by it that he almost stepped on a pocket-book which was lying in his path. His heart beat quickly when he picked it up as the thought flashed through his mind: "Good Luck sent this to buy me a watch." But it was quickly followed by another which brought him to his senses: "Who is Good Luck?" He did not need to be told it was the One who was able to read his every thought and who knew that at the bottom of his heart was the feeling: "I am appropriating what does not belong to me." "I will advertise and then if no one claims it I shall have a right to keep it," was the next reflection. He did not dare open it and he glanced uneasily around, fearing some one had seen him pick it up and would think it strange he made no attempt to find the owner. It was near school time so he hurried on, but when there his mind was too much occupied with the pocket-book and its probable contents to be able to do justice to his lessons, and for the first time he was reprimanded by his teacher.

Hastening home after school closed, he went to his room, locked the door and examined his treasure. It contained several papers, of whose value he knew nothing about, and $25 in money. "Just enough to buy me a pretty little watch," he said to himself as he put it back in his pocket.

"Why, what is the matter with you, my son; you have not eaten anything?" said mother, as Wilhelm left the table.

"Somehow, I do not feel hungry," was the reply; and then the thought came, what if it should belong to some poor man who is hungry but has no money to buy food. But the consoling reflection followed; poor men do not carry such handsome pocket books as this real Russia leather.

His recitations this afternoon were but little better than they had been in the morning. His teacher appeared surprised, and he felt she must suspect something was wrong. At recess, they were having some rather rough plays, as boys will sometimes, when the thought came to him, "Oh, what if I should get hurt and they would find the pocket book on me. What would they think!" and he actually blushed at the thought, and sat down saying that his head ached, which it really did by this time.

The next day was Saturday, and he was kept busy all the morning running errands and doing chores, but through it all the controversy was going on in his mind. One moment he was the happy possessor of a watch, the next he was miserable in the thought that he was not only doing wrong in this matter, but that he must commit another sin, for he should have to give some kind of an account to his parents as to how he obtained this money. In the afternoon he had a game of ball with some of the boys by which his mind was diverted, but only to return with new vigor to the same subject at bed time. He slept badly, dreaming at one time that he owned a beautiful gold watch and when he drew it from his pocket it turned into a snake coiled up in a ring.

"You are looking pale; perhaps you had better not go to Sunday school," said his mother the next morning at the breakfast table.

"I am quite well and would rather go," was his reply.

The lesson for the day was upon the Golden Rule, and to make it more practical, the teacher tried to point out how we should not look to the result of our actions, but leaving that to the All-wise One, do such things as we know to be strictly right according to Scripture teaching; above all, make it a life motto to "do as we would be done by."

Wilhelm walked home in silence with a quiet, happy heart. Going to his room, he wrote out an advertisement; then asking permission for a walk, left it to be inserted in the morning paper.

"I knew I felt real sneaking, but I did not think what an awful sin it would be," was his final reflection on the subject.

He made a clean breast to his mother, telling her just how he had been tempted to do wrong, and any boy who has a good mother can judge how happy she felt to think he had not been overcome by evil, and how pleased she was to be able to tell him the next day when he returned from school that the gentleman who was the owner of the pocket book had called for it.

"What did he say, mother?" asked Wilhelm.

"He asked why it had not been advertised in Saturday's paper, saying if it had been one day later, not having possession of those papers would have resulted in a serious loss to him. I then told him how you had been tempted, and how you had resisted the Tempter. He appeared much interested, and an hour later came back bringing this little box for you."

Imagine, if you can, Wilhelm's joy when he opened it to behold a pretty little watch. Inside the lid was engraved these words: "Do unto others as you would they should do unto you."

Domestic Economy.

Cottage Pudding.—One-half cup butter, one cup sugar, one egg, one cup milk, two cups flour, one-half teaspoon soda, one teaspoon cream tartar, one teaspoon lemon. Mix in the order given and bake in small tin cups or bake in a cakepan and cut in squares. Serve with liquid sauce.

Broiled Tripe.—Select the honey-comb tripe, and cook it in boiling salted water half an hour. Drain quite dry. Spread the honey-comb side with soft butter, and cover with a thin coating of cracker dust. Broil over a moderate fire until of a delicate brown color. Spread with butter, salt, lemon juice and pepper.

Soft Gingerbread.—Two eggs, well beaten, one coffee cupful of molasses, one teacupful of butter and lard mixed, two teaspoonfuls of ginger, one teaspoonful of cream of tartar, one teaspoonful of soda dissolved in one-half teacupful of milk or water, one-half teaspoonful of salt, flour enough to make the dough as stiff as a cupcake. Bake in a slow oven for half an hour.

Coffee Rolls.—One pint hot milk, one-half cup butter and lard mixed, one teaspoon salt, one-half cup yeast, one egg, flour to mix. Mix with a knife as soft as can be handled, and cut it thoroughly. In the morning, knead well, make into large balls, then roll each ball between the hands into rolls six inches long. Place them so they will not touch in the pan after rising. When light, bake in a hot oven.

Coffee Rolls.—One pint hot milk, one-half cup butter and lard mixed, one teaspoon salt, one-half cup yeast, one egg, flour to mix. Mix with a knife as soft as can be handled, and cut it thoroughly. In the morning knead well, make into large balls, then roll each ball between the hands into rolls six inches long. Place them so they will not touch in the pan after rising. When light bake in a hot oven.

Dropped Eggs.—Break the number of eggs desired for the meal into a pan of boiling water slightly salted, with muffin rings laid on the bottom of the pan, as they keep the shape of the egg well. Care should be taken not to break the yolks. When the whites harden, take the egg up carefully and lay each on a piece of toasted bread that has been moistened in hot water and buttered. Sprinkle with pepper.

Apple Dumplings.—Take light bread dough, and shorten with a little butter. Roll and cut into balls the size of dumplings. Drop these into boiling water, with a little salt added. Boil one or one and one-half hours. Have ready a dish of apple sauce, break open the dumplings and spread with the sauce. Put the dumplings together again, and serve with sweetened milk. In this case you know that the apples are done.

Fried Muffins.—One cup milk, scalded, one-half scant teaspoon salt, one tablespoon sugar, one tablespoon butter, one egg, one-quarter cup yeast, flour to make a stiff drop batter. Scald the milk, and melt in it the salt, sugar and butter. When cool add the beaten egg and yeast; then add flour gradually, beating it in until you can beat no longer. Rise over night. In the morning take up a spoonful without stirring and drop it into deep fat.

Beef Stewed with Onions.—Cut some tender beef in small pieces and season it with pepper and salt, slice some onions and add to it, with water enough in the stewpan to make a gravy; let it stew slowly until the beef is thoroughly done, then add some pieces of butter rolled in flour to make a rich gravy. Cold beef may be done in the same way, only the onions must be stewed first and the meat added. If the water should stew away too much put in a little more.

Chocolate Caramels.—Two cupfuls of brown sugar, one cup of molasses, one cup of cream or milk, one-half cup of butter, one-half pound of grated chocolate, two tablespoonfuls of flour. Boil the molasses, butter, sugar and flour 15 minutes; stir the chocolate into the cream and pour in the boiling syrup and boil till done; drop in a little cold water; if it piles up and hardens, then it is done. Before pouring it out on buttered pans or plates add a teaspoonful of vanilla, and as it cools crease it in small squares.

Raised Griddle Cakes.—One cup of white cornmeal, two cups of flour, two cups of milk, one pint of boiling water, two tablespoonfuls of yeast, one tablespoonful of brown sugar, two eggs, one teaspoonful of salt and one-quarter teaspoonful of baking powder. Scald the meal at night with boiling water, beat well; while warm stir in the flour, sugar, milk and yeast. Let rise all night. In the morning add eggs, baking powder and salt, and if too thin add cornmeal to make the batter the right consistency. Leave a cupful for the next morning's rising.

Spanish Fritters.—Cut the soft part of bakers' bread into slices a quarter of an inch thick and of any form you choose. Take a pint of milk or cream, three well-beaten eggs, half a teaspoonful of nutmeg and cinnamon mixed, three drops of the essence of lemon, and sugar to the taste; stir all well together and pour over the pieces of bread. When they have absorbed as much of the milk as they will, take them out before they get too soft and fry them of a nice light brown on both sides. They may be served with or without sweet sauce.

Italian Chicken and Macaroni.—Cut up a chicken and boil it till tender. While the chicken is cooking dip out a pint of the chicken broth into another stewpan, and put it with one small onion sliced, one tablespoon butter and a quarter of a pound of macaroni broken into inch pieces. Cook until the water has nearly boiled away, then add one cup of milk or cream and cook slowly till the macaroni has absorbed the milk. Sprinkle grated cheese over it. Boil the chicken liquor till reduced to one pint, remove the fat, thicken it slightly with flour wet in cold water. Cook ten minutes. Add salt and pepper. Pour the macaroni over the chicken and the sauce over the whole.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 6, 1892.

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[NEW THIS ISSUE.]

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Cream Separator—G. G. Wickson & Co.
Nursery Stock—W. R. Strong Company, Sacramento.
Louden Machinery Co., Fairfield, Iowa.
Nursery Stock—Hulbert Bros., Santa Rosa.
Nursery Stock—R. W. Bell. Santa Rosa.
Wagon Sacks—California Wagon Jack Co., Oakland.
Wire Netting—Pacific Incubator Co., Oakland.
Live Stock—H. Mecham, Petaluma.
Live Stock—M. D. Hopkins, Petaluma.
Creameries, Etc.—Crystal Creamery Co., Lansing, Mich.
Nursery Stock—J. S. Collins, Moorestown, N. J.
Apple Root Grafts—H. C. Graves & Sons, Lee's Summit, Mo.
Spraying Solution—W. S. Powell & Co., Baltitore, Md.
Nursery Stock—Peter Henderson & Co., New York.
Agent Wanted—International Stock Food Co.
Cattle—Henry Pierce.

☞ *See Advertising Columns.*

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We have engaged with the publisher for an edition of several thousand, and will furnish it, mounted upon rollers, postage prepaid, for ONE DOLLAR in addition to the regular price of the Rural Press. That is: the Rural Press for 15 months and the map for $4.00; the Rural Press and the map for one year, $3.40; the Rural Press and the map for six months, $2.50.

Any subscriber to the Rural Press whose name stands upon our books credited with an advance payment may secure the map by sending $1 to this office. But the map will not be sold to any delinquent subscriber, unless he shall pay up his delinquency and extend his subscription to a future date by payment in advance.

No premium offer equal to this has ever been made in California and no better offer can possibly be made.

The Week.

There have been several good rains during the week and we are glad to note that the dispensation has covered the State from end to end—the precipitation at some southern points being very generous. Cool weather still makes vegetation backward, but the sun is now getting so high that a time of lush feed and outburst of bloom must come. So far as we have observed, the deciduous trees have had a good sound sleep this winter, and it is to be hoped they will not not be awakened too soon.

Reports are still being received of the large area of land in cultivation and of the general forwardness of farm work. Some farmers have told us they have not been ahead of their work in years as they now are. This should give time for the many little improvements which farms continually need and are so long deferred for lack of time. Look to the improvements, too, in and around the home. It is just the time to order a dozen good roses or other plants, shrubs or ornamental trees from the many who advertise them in the RURAL and plant them in the house garden. The chances are that if the work is now begun it will be continued later, and many a home which now can show only a few indifferent blooming plants or shrubs, or perhaps none of them, will ere long be surrounded by a plantation of the best, which will give new delights to loved ones and friends for years to come. Try it.

Work of the California Fruit Union

The annual report of the Trustees of the California Fruit Union, submitted at a meeting of stockholders recently held, shows that the organization has pursued an even course during the past year and has handled a larger amount of fruit than in any preceding year. The total shipments for a series of years have been as follows:

	Carloads.
1888	851
1889	991
1890	1373
1891	1887

The report notes that though the gain in carloads in 1891 was small, the gross tonnage was much larger, and the number of individual shippers increased from 322 in 1890 to 453 in 1891. About 30 shipping points, all north of the Tehachapi mountains, furnished the fruit. The Southern California producers ship through their own organization.

Perhaps the chief novelty of the trade of 1891 was the free use of refrigerator cars. Out of the total cars given above, 1166 were refrigerators and ventilated freight cars, which being of larger capacity enabled the Union to ship more tons this year without much increase in number of cars employed. Only six special fruit trains were sent last year, and only 167 cars were sent by passenger trains. Shippers have found that refrigerator cars serve them better than the irregular transportation by special and passenger trains. The Trustees announce that there has been better service by the railways than formerly, but there is still chance for improvement by making a schedule time for all through fruit cars. Of the financial operations of the Fruit Union, the report has the following paragraph:

The change of the rate of commission from 10 to 7 per cent reduced the rebate, which was returned to the Union for 3 to 1 per cent, and, with the low prices that the fruit generally sold for, made but little money received by the Union. But still we are glad to be able to say that we have paid all expenses and have on hand $3822.92, which the Board of Trustees at a meeting just held apportioned as follows: A dividend at 6 per cent on all fully paid stock. A small sum was placed to the credit of the Reserve Fund and a rate of ½ of 1 per cent declared to members of the Union on their gross sales of shipments. The amount paid as dividends and rebates reduces the net commission to about 6¾ per cent annually paid by the shipper, and only about ¾ of 1 per cent to meet the entire expense of conducting the Union.

Financially, the Union has exceeded the expectations of many of its supporters in being able to make a stock dividend as well as a rebate to shippers out of the small rebate of 1 per cent received from our Eastern agents.

A very significant paragraph of the report shows that out of $1 283,431 gross receipts for a part of the fruit shipped, the freight, cartage, commissions, etc., consumed $652,879.76, leaving $630,551.85 as net money to the shippers. In other words more than half the sales value of the fruit goes for transportation and commissions, and out of the less than half which the shipper receives he has still to deduct local freights, boxes, packing, etc., before he gets the net value in the orchard. The grower has still all the cost of producing the fruit to deduct from the small residuum which remains before he can count what really belongs in his own pocket.

We have always contended that railways and commission merchants are not justly entitled to more than half the gross receipts from sales of California fruits. The whole fruit interest seems to be waking up to this subject. The traffic will not bear such an exaction. We have hopes that the movement of merchants and manufacturers for reducing overland freight rates and the better organization which is enabling farmers to act unitedly in their own interests, will soon bring relief in some way from the excessive overland charges which have so long prevailed. All should labor wisely and persistently toward that end.

OUR AGRICULTURAL REVIEW.—We print on other pages of this issue our customary statistical tables and comments relating to the agricultural productions and exports for the year 1891. We trust that it will be found valuable to our readers. The special branches of fruit products and wool, do not appear in this issue but will soon be given. The data in these reviews should be preserved for reference, as they enter into the discussion of many problems connected with our industrial progress.

Mr. Jordan Misrepresented.

It will profoundly gratify the farmers of California to learn that the utterances in criticism of them attributed to President David S. Jordan of the Stanford Jr. University, were a distortion of what he said, so thorough as to be scarcely less than a fabrication. The editor of the RURAL has received a personal letter from Mr. Jordan, from which he takes the liberty of making the following excerpt:

Permit me to say that the words credited to me which have met with the denunciation of the Napa County farmers have never been used by me, and that the speeches which have been referred to have never been made. I have had no occasion, under any circumstances whatever, to criticise the farmers or farming community of California, nor have I written or spoken on any subject connected with the farming interests of this State since I came to California. If I had occasion to make an address on the "Waste of Time" in this State, I certainly should not choose the farmer as the best illustration of it.

The letter from which this is an extract was not, as stated above, intended for publication. But we deem it fair that President Jordan's own statement should be given to put a stop to the quotation of words that were never used from speeches that were never made. It is only fair to the RURAL and to the farmers of Napa county to say that the publication in the San Francisco *Call*, upon which criticism of Mr. Jordan was based, was assumed to be accurate and was accepted without question.

In connection with this note from Mr. Jordan we very gladly publish the following letter, written from Palo Alto on Wednesday, the 3rd inst., by Mr. Frank S. Chapin, the well-known correspondent of the RURAL, who was commissioned to visit President Jordan and to ascertain the facts at first hand. Mr. Chapin writes:

On July 17, 1891, Dr. David Starr Jordan delivered a valedictory address to the university at Bloomington, Indiana. During his presidency there he had enjoyed the largest measure of public appreciation and gained reputation of a high order as a scholar and an executive officer. His theme was designed to teach the importance of a wise use of time, founded upon an old Greek maxim: "The gods for labor give us all good things." In the elaboration of the thought he used many illustrations, and among them told some things that he had observed among the farmers in southern Indiana. These illustrated both prosperous farming and the reverse, and were along lines easily remedied. Having read the original address carefully, the writer is ready to stake his individual reputation on the proposition that it was an able and sympathetic address, either from the standpoint of the scholar or the economist. He is also very confident that it was an accurate and fair diagnosis of one of the diseases affecting the body politic in the country described.

This address was published in full and highly commended by the Indianapolis *Journal* of June 18, 1891, and extracts from it were published in the September number of *The Forum*.

Now, these extracts do not convey as clear an impression of the speaker's thought as the original, and it was upon this publication that the criticism of the *Call* was based. Yet it appears that the writer in the *Call* was inspired by such peculiar genius and so ardent a desire to make a sensational point that he would be perfectly capable of a similar criticism upon the Sermon on the Mount if he saw a chance for any plausible perversion by which he could fan any latent prejudices into a flame that would bring temporary popularity. To make matters still worse the Napa County Alliance apparently endorsed the views of its most extreme member on the mistaken idea arising from the most biased interpretation of the *Call's* prejudiced criticism of the *Forum's* partial report. We have not the least idea that there is a member of the Napa County or any other Alliance that would have voted in favor of those resolutions if he had heard the speech.

The whole affair is a sad comment on the evils of cheap, sensational journalism. It is hard to imagine a worse evil likely to befal the farmers of California than that this blunder, and we might almost add crime, should be fanned into such a flame of prejudice that instead of accepting the great gift of Senator Stanford and cooperating with his chosen administrative officers in the agricultural department contemplated by the university, we should hold aloof and allow bare walls to echo back to empty desks the voices of those scientists who are prepared to lead us in the way to form the grandest Alliance ever organized for the farmer's good, the one so ably described by Dr. Jordan, "The Alliance with the forces of nature."

THE RAIN MAKERS AT TULARE.—It seems that the rain makers at Pixley, in Tulare county, claim that they have 30 days in which to produce their 3½ inches of rain for $3500. They complain that they did not suppose that a semitropical country would show a less temperature than 40° and that the frequency of such low temperature is the reason their rain-persuader won't work; that as soon as they get the clouds coaxed together the temperature drops and they scud away. We understand that they still hope to carry out their contract if they have enough exemption from the 40° mark. Let them fight it out on that line if it takes all summer, and they will strike the 120° area. We wonder how that will suit the process.

A NORTHERN CITRUS FAIR ASSOCIATION.—In order to better the arrangements for future citrus fairs in the upper half of the State, an association, with the title given above, will be formed. County Boards of Supervisors are invited to name five persons in each county, who shall meet and appoint one delegate to attend a meeting to be held at the Golden Eagle Hotel, in Sacramento, at 10 A. M. of Feb. 25th. Seven counties have already taken such action and others are requested to do so. It will certainly be a great advantage to have a representative body which can advance this movement, and we trust all entitled to representation will avail themselves of it.

The State Press.

Woodland *Democrat:* "Senator Stanford put a quietus on his Land Loan bill when he admitted that under its provisions he could borrow money from the Government at two per cent on all the millions of acres of land that his company owns."

Santa Maria *Times:* "People are beginning to realize the fact that some of our best fruit land lies in the sandhill district, but in order to make that land appreciated at anything like the market price of other lands, at least comfortable means of access must be provided. Build a good road through that section and it will double the value of the property along the route."

Napa *Register:* "The restriction of the number of undesirable immigrants to this country is engaging the attention of many of our eastern friends, who a few years ago thought we of the Pacific Slope fanatics for wishing to keep the Chinaman from our borders. But such a horde of unprofitable and often dangerous immigrants have of late been coming to her eastern shores from all parts of Europe that our friends on the Atlantic slope are trying to check the inflowing tide. Several bills to accomplish this have already been introduced into Congress."

Kern County *Echo:* "Canals are great things, but one of their indispensable features is water. A dry canal has never been known to have a very beneficial effect on commerce of any kind, and until every acre of this valley is irrigated and there is still water left—a condition of things that is in the very dim future—it is a sheer waste of raw material to talk about an artificial waterway up and down this valley. Considering what the fields will produce under irrigation, water is worth far more for agricultural and horticultural purposes than for transportation."

The Los Angeles *Express* grew positively eloquent over the late rain as follows: "It purifies the air and by chemical action surcharges the atmosphere with life-giving ozone. It invigorates the system, inciting the human family to more active and energetic action. It sweeps down, as with an invisible broom, all the malarial and pestilential germs of disease; and the heart action is always more active and emphatic after than before a rain all medical authorities assert. More than that, it gives an impetus and incentive to business by encouraging all other vocations. With the poet Whittier the people of Los Angeles cry out: 'God bless the rain.'"

The Colusa *Sun* outlines its platform as follows: "We must have small farms. To get them we must have the Constitution amended in this: 1. Corporations must not own land. 2. No person must get land by will. 3. Estates must be settled up within a year and lines run, and land set apart to each legal heir, share and share alike. 4. All farming land must be graded, and every acre must be assessed like every other acre of like quality, and nothing growing on the land and no improvements must be assessed. Such is our platform, gentlemen! Fire away at it. We shall maintain that this will bring small farms, happy homes, an improved country, and a California of which all her children may feel proud."

Salinas *Index:* "All over the State during the past year, grand juries have not been confining their inquiries to mere infractions of the law by the so-called criminal class, but have been investigating the acts of respectable criminals in public places. The efficiency of the public service is promoted by a healthy public sentiment that demands strict accountability in, and faithful discharge of, official trusts. It is not intended to be intimated that there are matters in this county requiring investigation, but to assert as an obvious truth that it is one of the legitimate functions of a grand jury to promote administrative integrity by an assured certainty of investigation every time a grand jury meets. Honesty walks in the light of day and courts investigation."

Inyo *Independent:* "The worst and most dangerous item of political corruption is the prostitution of judges. This has now fallen to a depth of degradation in our own land as bad as was ever before known in any country. The Supreme Courts of States are presided over by judges who are the willing tools of corporations. Those judges were nominated and elected to office by the influence of corporations. In all cases where the profit of corporations is to be increased by trespassing upon public rights it is now seen to be useless for the people to bring suits in defense of their rights. When suit is brought in a court of subordinate jurisdiction, and the people get judgment against a corporation, the defendant at once appeals to the Supreme Court of the State, and there the judgment is sure to be reversed."

San Jose *Mercury:* "There is scarcely a city in the East that has not at least one Women's Improvement Club, and many of them have several devoted to different lines of work. On this coast, associations of this kind have been organized in the leading southern cities and towns, and only recently one was formed in Tulare. All of these associations have found plenty to do, and in most cases have fully justified the expectations of their promoters. The experience of other cities has been that there are many evils which men overlook that women take note of, and many improvements that men never think of that women are prompt to suggest, and the consequence is that the new form of woman's work has been received with an almost universal consensus of approval."

The Miners' Convention.

Sacramento *News:* "This paper believes that hydraulic mining ought not to be resumed if it is to be oppressive to the farmers of the valleys."

Ukiah *Republican:* "In former articles we stated that we did not believe the miners were sincere in their protestations and we still have that opinion. But if they be sincere and if there is to be any lightening whatever of the bonds which now lie upon a single form of work, because of its pernicious results, the relaxation should be undertaken with the greatest caution. The valley people have had a hard and expensive fight and they should be careful not to allow any popular impulse to undo the work they have accomplished."

Shasta County *Democrat:* "We believe now that, by common consent, in many localities, auriferous gravel mining would be permitted to be resumed in anticipation of congressional legislation suggested in the memorial."

Sutter County *Farmer:* "The farmers accept the promises, but under the circumstances are justified in protecting their interests by keeping a watch over the monitors to report any case where the little giant may be in operation. Strict vigilance is necessary at all times, and when the miner fully demonstrates by his actions that he has stopped work to await the further investigation of the question, the Anti-Debris Association will gladly recall the watchmen and cease to consider the monitor in a suspicious light. Until that time the valleys and rivers must be protected as before."

Watsonville *Pajaronian:* "Congressman Holman has laid down the program of economy that is to prevail at this session of Congress, and there does not seem to be any chance for the miners and Sacramento farmers to break through it with their program of Government aid. If the restraining dams are to be erected they will have to be made by the parties most interested—the miners and farmers along the Sacramento river. California is never in it when it comes to obtaining Government aid. The Government aid only reaches across the Missouri river in very small pieces, and in this year of reform according to the ideas of the Indiana reformer, there is no chance at all for the aid of the mining interests of this State."

San Jose *Mercury:* "In all seriousness, we believe that the injunctions of the Yuba county court against the Plumas county mines ought to be dissolved. If debris from those mines ever finds its way to the Sacramento valley, it must of necessity come down the branches of the Feather river and through the main river to the valley. There is no evidence that any debris from Plumas county has ever reached Oroville in its course to the valley. We think that the people of Oroville and, in fact, all Butte county, are willing to take chances on Plumas county debris, and we are more endangered than anybody else. The dam built by Col. Frank McLaughlin at the head of the Golden Feather mine will restrain all the debris that can get here from the Plumas mines within the next century."

Santa Rosa *Republican:* "To construct adequate impounding dams to retain the debris from the hydraulic mines is beyond the means of private enterprise to engage in the work; public assistance is required. This is unlikely to be granted by Congress, and the Constitution of California forbids appropriations of the kind. Where there is a will there is a way, and this formidable obstacle can be overcome. It depends upon the determination of the people. The Sacramento division of the State is directly and chiefly concerned—farmers and miners both; but in broad sense, the reopening of the hydraulic mines and the output of the vast amount of gold every year, to swell the aggregate store of the precious metal and improve the financial condition of the nation, are considerations to enlist the aid and favor of capital and labor and the support of the whole people."

Sutter *Independent:* "No set of resolutions adopted by men can change the law of gravitation or pretermit the known laws governing the force and carrying capacity of water. When the Government engineers stated in their report that the coarser material could be partially impounded, but that the finer material would pass over the crests of the dams to find lodgment in the streams below, they only stated what is patent to any unprejudiced mind capable of reasoning from cause to effect. Will the Government heed the request of the miners? We doubt it. The Government is committed to the protection of the navigable streams. It is the expressed policy of the Government to prevent the obstruction of navigable streams in any manner. There is a law on the Federal statute books against placing debris of any kind in the streams, or even on the banks or in the canyons where the same may be carried by freshets into the streams. In view of all the facts, laws and decisions relative to this matter, and in view of the further fact that the engineers' report explicitly says that in case restraining works are built they should be paid for by the miners themselves, we do not think the Government will stultify itself by undertaking the job."

The World's Fair Fund.

Los Angeles Herald, Jan. 30th.

The State Commission of California for the world's fair, having secured a decision of the Supreme Court affirming the constitutionality of the law appropriating $300,000 to be spent in erecting buildings for the exhibits of this State, proceeds at once to the creation of offices with high salary attachments. When the bill was under discussion in the State Senate, it was attacked on the very ground that the Commissioners would waste the money in creating sinecure offices with high salaries. It was only after the author of the bill explicitly declared that no offices could be created by the Commissioners, and that no salaries could be legally paid out of the money appropriated, that opposition was withdrawn and the bill passed. How have the Commissioners observed this condition of the Act?

They have already violated its spirit and letter by appointing a Chief Secretary and seven assistants with salaries of $1800 a year each. They have further created an entire new set of Commissioners, not contemplated by the Act, and fixed a salary of $1000 a year to each of these newly appointed Commissioners.

This is but the beginning. We are now confronted with a manifest policy developed by the Board to fritter away the money, appropriated for exhibition buildings and the expense of conveying exhibits to Chicago, in salaries to people who have a "pull" and want a fat job. They have not only appointed salaried Secretaries and duplicate salaried Commissioners, but they have also created the office of Freight Inspector or something of that kind, with a salary of $3600 a year.

But this is not all. The bill provides that all legitimate expenses approved by the Commission shall be certified to the State Board of Examiners, and if allowed, warrants for the same shall be drawn against the exhibit fund. Instead of pursuing this plain, honest business course, they have drawn out one-half of the entire fund from the Treasury in bulk, and with this money in hand, can exercise their own discretion in its expenditure, without any check whatever from the State Board of Examiners.

A Political Suggestion.

ONTARIO, CAL., Jan. 25, 1892.

TO THE EDITOR:—In addition to cooperation among producers for the sale of their produce, which the RURAL is fitly urging, the growers must make one more step forward—one which I believe a very important one. I will call it independent political action. It is about impossible to bring about reforms that will heal the present demoralized, corrupt and expensive methods through the old parties. For instance, San Bernardino county contains a population of about 25,000. It is pretty thoroughly Republican, and we who have so long trained with that grand old party in its early days, hate to go back on our former associates in politics. I inclose you a clipping from the Ontario *Record* of Jan. 20th, as copied from the Riverside *Press*, that you readers may see how officers elected by the good Republican voters of this big county manage to make good fat bills for the tax payers to pay. Where the bills are the heaviest is where the rum mills are the thickest. Now, the farmers as a rule are opposed to the liquor traffic, especially so with the intelligent tillers of the soil in Southern California. The resolutions that they have formulated at the different Grange meetings all indicate which way the wind blows. The whisky mill is a positive injury to all. Everybody knows that, and the farmer in particular, as the whisky-soaked towns get all the profits and the rancher pays the bills, or largely so. Now, why cannot the Granger and the Prohibitionist unite on a candidate in the great campaign of 1892. It is a positive fact that their feelings on all-important questions are very similar; their interests are identical. Both agree as to Government control of the railway systems, telegraph, telephone and mail. Why not agree also on the overthrow of the saloon? It will be a concession that will benefit all and will eventuate to bring into power, and that, too, within two years, the grandest combination of rulers with the grandest combination of principles any nation ever tackled. It can be done, and let us do it.

I. C. WOOD.

Following is the extract from the Riverside *Press* to which Mr. Wood refers:

The justices of the peace and constables' fees in this county for the year ending December 31, 1891, amounted to the large sum of $22,109.23. Colton is the banner township, it drawing $5793.55; San Bernardino is a good second and Ontario third. The experts for the Grand Jury report say:

"Nearly every constable's bill examined shows some evidence of apparent mileage overcharges, which it is impossible to locate with the data at our command. For instance, on the bill of E. A. Roberts, July 7th, in a misdemeanor case, his charges amount to $45.06, of which $22.39 was for mileage, and he must have traveled that day 204 miles. On the bill of I. W. Roach, June 15th, serving subpœnas on Mr. and Mrs. Duncanson, he charges mileage for both, when the law clearly states he should charge but one. Same constable, September 29th, arrest of two parties for petit larceny, apparently one and the same offense. If so, there should be but one mileage, yet he charged 60 miles at 15 cents—$9 for each. J. D. Ferris sends in bill as follows: July 23d, subpœnas 9 names and mileage, $10.23; July 31st, subpœnas 13 names and mileage, $12.77.

"There seems to be a startling lack of discretion on the part of constables in the arrest of so-called vagrants. On the bill of Justice Sprecker of Colton for December, 1890, he charges for the trial of 35 cases, fees $181. Twelve of these were discharged, but the fees of both constable and justice were paid by the county just the same."

To give an idea of what it costs to run the machine at Colton, we give below the bills of the justices of the peace and constables for October and November: October—Justice of Peace Milliken, $329; Constable Williamson, $195.73; Constable Bingham, $178.20; total, $702.93. November—Justice of Peace Milliken, $289; Constable Williamson, $157.18; Constable Bingham, $144 81; total, $589.99. Judge Milliken was sick two or three weeks, which accounts for his small December bill, which was only $207.

The Beer Decision.

From the Sacramento Bee.

Judge Budd of Stockton may be "a second Daniel come to judgment," but we doubt it exceedingly. A saloon keeper of Lodi was fined for selling beer to a minor. An appeal was taken, and Judge Budd overruled the judgment. This wonderful Solomon of the sunset boundary holds that "the evidence, so far as the transcript or appeal contained, did not show who drank the ten cents' worth of beer, and it did not appear that the minor did not drink any of the five cents' worth. Although there was testimony that beer is intoxicating, there was none that the amount of beer sold would be intoxicating.

* * * * * * *

Judge Budd should study up the definition of plain English words, or else admit that language is put into the statutes to mean what it does not say. The wording of the law is plain:

Every person who sells or gives, or causes to be delivered, to any minor child, male or female, under the age of eighteen years, any intoxicating drink *in any quantity whatsoever*, etc.

Beer is "an intoxicating drink." It is a misdemeanor to sell or give it to a minor "in any quantity whatsoever," it making not a particle of difference what the intent of the giver or seller was. Judge Budd can wrap his decision all around with technical verbiage until one can scarcely see its form for red tape, and yet he can make nothing more out of the law than this.

There is a law on the statute books to the effect that "intoxicating drinks" must not be sold within a certain distance of the State University. Under the wonderful decision of Judge Budd, a person residing within the prohibited limit who sold a drink of whisky to a University scholar would not be guilty, for a slight beverage like that would not intoxicate the average college boy, who can stand half a dozen stiff cocktails without showing any signs of intoxication.

More than this, Judge Budd is decidedly wrong in his idea as to "the manifest intent and purpose of the legislature in passing the law." That body desired to prevent, as far as possible, the degrading practice of parents sending their children into the back rooms of corner groggeries for liquor for home consumption. The language itself would almost show that; the debates in Senate and Assembly prove it.

Judge Budd's decision, if sustained by the Supreme court, will permit the indiscriminate resumption of a practice which this law was especially framed to break up.

Our Annual Review

Of California Agricultural Products for 1891.

Many Indications of Growth and Progress.

[Written for the RURAL PRESS by J. R. FARISH.]

The year 1891 showed continued prosperity with farmers, although, as has been and as there always will be, there are many isolated complaints. There can be no doubt but the year went out with a large increase in the number of farmers and orchardists who were either able to cancel their indebtedness or else made such liberal payments thereon as to leave them fairly comfortably circumstanced, with no fears entertained of 1892 going out with their not having been able to pay everything in full. The land booms of a few years ago were entirely absent in 1891, which is accepted as evidence that the general prosperity noted is founded on legitimate business principles and not speculative, and in being such is more lasting.

The year 1891 witnessed large areas of fertile lands brought under irrigation, with work well advanced toward bringing many more sections in various parts of the State under irrigation. During the year there has also been a decided and most marked attention given to improving inland transportation facilities by waterways and through large additions in the mileage to the railroad system of the State. These additions have been made both in the main lines and feeders. Not only have large additions been made to the railroad mileage of the State, but several hundred miles of lines have been graded and are now about ready for track-laying. Besides this, railroad surveying has been actively pushed in all parts of California. Several of these surveys it is claimed, have been done in the interest of large Eastern and central roads seeking tide water connections in this State. It now looks as if two, and possibly four, competing overland roads will build into this State, and to tide water, within the next three or four years. With improved overland facilities, brought about through competing lines, combined with our advantage in shipping nonperishable farm products by deep water vessels to foreign ports in the Pacific, and also Atlantic ocean, as well as to Atlantic domestic ports, California producers can reasonably look forward to the incoming century ushering in greater advantages and far more prosperous times than have been enjoyed at any time during the century drawing to a close. Our dry and wet seasons also afford producers many advantages over those in a similar calling east of the Rocky mountains. None the least of these advantages is that of their being able to use farm steam implements, which it is almost, if not entirely, impossible to use in the Central, Southern and Northern States. With farmers able to employ many different kinds of steam implements to advantage, they can seed and harvest their crops at much less expense than where implements are used requiring more farm hands to handle.

There has been a decided increase in population in the farming districts, with larger areas of land brought under cultivation. With the increase in population, there has been a corresponding increase in small farms, with general attention going largely toward fruit tree and vine-planting. Even the low prices which ruled during 1891 for fruit has not, seemingly, had any depressing influences. It would seem that even at the lower prices, those orchardists who give close attention to their calling have netted handsome profits. This has been brought about by improved means of handling their products, better knowledge, through experience, of the varieties of fruits wanted, and also the better and more practicable way of packing and marketing them.

Cultivating vegetables is receiving renewed attention, and promises to be a growing industry as the Eastern distributive markets expand and improved means are brought out for transporting them by rail. This, of necessity, applies more particularly to the southern part of the State, where garden truck can be cultivated so as to be marketable at a much earlier day than it is possible to be in other parts of California. For proof of the large business in vegetables, see overland shipments via Southern Pacific Railroad.

The high prices received the past year for California bred horses and the speed records made by them, are drawing more attention to the breeding of standard or thoroughbred horses. This attention is not confined to speed animals, for we find that greater attention is being given to general utility and draft horses. The days of bronchos and scrub animals in general appear to be numbered with the past.

Closer competition with the Central States in dairy products has brought about the very natural result of introducing approved modern ways employed elsewhere in the making and marketing of butter and cheese. In consequence, we find that creameries, proprietorship and also cooperative, are being introduced. They not only lessen expense, but also admit of better general average grades of butter being placed on the market. With the establishing of creameries it is noticeable that milch cows are in better demand and fetch more money. It is no longer the fair to good milch cows that are taken, but it is the large milkers of the better class of thoroughbreds that are in demand. This change for the better is gratifying and speaks well for the future of the industry.

Sheep husbandry appears to be receiving more attention. The renewed interest is not developed toward large holdings, but toward small numbers that can be utilized advantageously on farms. The high price and increasing consumption of mutton make this a profitable auxiliary farm industry. Of necessity, carcass and not wool-breeding is the prime object aimed at by a farmer who keeps from 50 head and upward on his farm.

The poultry business appears to be gaining in importance, as knowledge, through experience, is acquired by which breeders are enabled to keep their fowls healthier. The business is also forging ahead owing to the large consumption of eggs and also of poultry, and for which good remunerative prices are obtainable the year round.

Overland Shipments.

It is to be regretted that the Santa Fe Railroad Co. does not furnish the shipments Eastward over its route, so we could give a full and complete statement of California products marketed east of the Rocky mountains. The following are the shipments in pounds made in 1891 overland over the S. P. R. R. route and also the leading points from which they were made:

ARTICLES.	Lbs.	San Francisco	Oakland	Sacramento	San Jose	Stockton	Marysville	Los Angeles	Colton	Totals Lbs.
Beans		6,928,360	122,570	43,940						
Canned goods		10,537,320	1,529,450	8,397,020	11,111,030					
Dried fruits		802,080	6,432,410	14,073,770	25,498,020					
Deciduous fruits		115,870		53,878,140	12,926,940					
Citrus fruits		67,370								
Raisins		1,017,110	43,340	3,885,280	191,540	30,079,200				
Honey		199,610				22,640				
Hops		826,630	11,150	3,202,830	179,340	28,550				
Nuts		211,990	32,950	274,660	20,780					
Onions		817,920		133,560						
Potatoes				5,107,960	1,799,850	2,113,200		2,022,390	20 100	28,774,050
Vegetables		10,178,410	147,530			1,929,930	281,320	17,006,190	1,142,340	47,121,450
Wine		6,573,850	66,510	2,340,370		277,790	2,216,080	4,803,070	1,051,300	58,447,390
Brandy		38,074,740	628,615	11,690,510		175,690	4,619,520	188,998		77,761,310
Wool, grease		1,553,380		874,480	1,773,330	3,117,270	1,958,760	1,601,100	160,100	31,759,660
Wool, pulled		14,682,980		99,080		1,601,100	20,000	59,340,490		38,901,310
Wool, scoured		1,150,630	185,730	1,150,630		334,350	394,730	3,021,710	353,070	618,530
Hay		800,160		627,190	210,900	12,500		2,645,190		4,008,470
Cattle		7,708,460		13,920						1,720,020
				92,920						1,119,520
				420,000						1,947,360
										7,717,380
						29,980				112,900
						1,180,000				1,600,000

There was shipped in addition to the above, from San Francisco, 37,500 lbs. butter, 1,420,230 lbs. mustard seed, 4160 lbs. mohair.

Produce Receipts.

The receipts of California farm produce at this port during the past year were fully up to the average of previous years. The receipts of wheat show an increase of over 2,200,000 centals, as compared with the year 1890. The arrivals of flour, barley and potatoes last year were also considerably heaver than in the year preceding.

The following table shows the receipts of certain leading articles during the past two years:

Articles.	1891.	1890.
Wheat, ctls.	15,843,250	13,613,685
Flour, qr. sks.	5,614,129	5,459,919
Barley, ctls.	2,461,078	1,781,497
Oats, ctls.	111,699	136,633
Beans, sks.	397,386	446,808
Corn, sks.	285,728	285,304
Rye, ctls.	111,417	145,594
Potatoes, sks.	1,129,589	1,018,913
Onions, sks.	170,228	92,764
Hay, tons	128,027	129 575
Wool, bls.	77,191	85,909
Hops, bls.	8,972	9,546
Bran, sks	540,409	626,252
Middlings, sks.	177,838	188,090
Hides, No.	194,047	168,337
Pelts, bdls	33,156	17,523
Buckwheat, sks.	1,452	4,425
Honey, cs.	13,061	15,427
Raisins, bxs.	183,141	1 5,296

There was a general increase in the receipts of produce from up north at this port last year. The receipts of wheat were nearly 868,800 ctls. heavier than in 1890. The shipments of flour received amounted to over 423,000 qr. sks., as against 341,300 qr. sks. for the previous year. Oats arrived quite freely, and the same can be said of barley.

The following is a tabular statement of the principal receipts from Oregon and Washington during the years 1890 and 1891:

Articles.	1891	1890.
Flour, qr. sks	423,877	341,297
Wheat, ctls.	1,619,088	741,298
Barley, ctls.	213,443	52,717
Oats, ctls.	470,935	380,447
Corn, ctls.	3,800	.....
Rye, ctls.	2,257	.....
Bran, sks.	55,254	8,757
Middlings, sks	.....	1,565
Wool, sks.	13,504	18,175
Potatoes, sks	121,441	69,024
Hops, bls.	531	1,722
Flaxseed, sks.	66,881	50,968

Wheat Review for 1891.

The accompanying statement of area and product of wheat are the annual estimates of the statistican of the United States Department of Agriculture, to be published in the December report of the Division of Statistics:

States.	Acres.	Bushels.
Maine	41,017	669,000
New Hampshire	8,972	148 000
Vermont	19,673	344,000
Massachusetts	.....	.....
Rhode Island	.....	.....
Connecticut	1,888	31,000
New York	640,540	10,633,000
New Jersey	138,833	2,124.000
Pennsylvania	1,337,437	20,064,000
Delaware	97,634	1,250,000
Maryland	540,494	8,107,000
Virginia	850,073	7,651,000
North Carolina	731,573	4,975,000
South Carolina	180,995	992,000
Georgia	309,743	2,323,000
Florida	.....	.....
Alabama	281,327	2,251,000
Mississippi	61,965	483,000
Louisiana	.....	.....
Texas	536,247	6,435,000
Arkansas	232,940	2,236,000
Tennessee	1,198,553	11,626,000
West Virginia	332,295	3,423,000
Kentucky	1,037,870	13,181,900
Ohio	2,662,603	45,531,000
Michigan	1,606,670	30,295,000
Indiana	2,917,518	52,807,000
Illinois	1,945,332	35,065,000
Wisconsin	916,128	13,043 000
Minnesota	6 453,817	55,333,000
I wa	1,803,036	27,586,000
Missouri	1,782,082	25,732,000
Kansas	3,539,700	54,866,000
Nebraska	1,205,350	18,080,000
California	2,815,007	36,595,000
Oregon	092,055	13,149,000
Nevada	20,338	372,000
Colorado	100,832	2,037,000
Arizona	27,227	395,000
North Dakota	2,927,274	52.105,000
South Dakota	1,954,883	30,714,000
Idaho	90,531	1,811,000
Montana	92,883	1,856,000
New Mexico	93,328	1,073,000
Utah	136 764	2,393,000
Washington	698,040	12,216,660
Wyoming	5,500	110,000
Totals	39,916,897	611,780,000

WHEAT ACREAGE.

The following gives the acreage seeded by counties, in this State, for three years past. Compiled largely from the assessment rolls:

Counties.	1889 Acres.	1890. Acres.	1891. Acres.
Alameda	21,265	16,429	30,685
Alpine	450	400	400
Amador	4,560	3,575	3,800
Butte	92,208	73,767	91,117
Calaveras	8,500	6,500	6,500
Colusa	403 008	338,477	208,128
Contra Costa	77,915	50,250	44 502
Del Norte	60	36	.....
El Dorado	2,597	973	4,134
Fresno	169,512	196,904	295,150
Glenn	.....	.....	150,425
Humboldt	20,564	1,526	2,517
Inyo	399	2,316	1,379
Kern	12,000	17,000	20,000
Lake	6,220	4,200	7,950
Los Angeles	50,760	75,150	63,242
Marin	343	.....	344
Mariposa	639	527	459
Merced	240 000	177,500	230,500
Modoc	45,800	35,200	43,500
Monterey	120,000	135,000	145,000
Napa	8 653	7,462	8,385
Placer	16,249	11.147	16,037
Sacramento	78,100	55,000	81,150
San Benito	46,600	35,800	51,202
San Bernardino	3,551	4,651	4,302
San Diego	14,026	25,145	26,038
San Joaquin	290,805	199,579	301,150
San Luis Obisp	98,385	95 617	101,650
San Mateo	1,825	1,500	2,000
Santa Barbara	71,427	54,720	55,725
Santa Clara	17,240	15,950	16,300
Santa Cruz	5,126	5,248	5,517
Shasta	14,051	2,154	13,620
Sierra	151	300	300
Siskiyou	9,554	13,125	16,215
Solano	57,624	48,210	83,616
Sonoma	15,820	12,250	13,460
Stanislaus	283,182	211,342	291,431
Sutter	123,920	43,412	66,414
Tehama	91,410	82,312	83,678
Trinity	10,002	100	1,200
Tulare	349,000	350,365	415,585
Tuolumne	4,000	3,500	3,600
Ventura	2,637	3,671	5,810
Yolo	155,000	103,500	149,843
Yuba	28,375	15,760	30,000
Totals	3,078,527	2,586,950	3,190,716

PRICE OF NO 1 WHITE WHEAT IN THE SAN FRANCISCO MARKET FOR 26 YEARS FROM JUNE, 1864, TO JULY 1, 1891.

Year.	Highest.	Lowest.	Difference.	Average.
1864-65	$5.30	$2 30	$3.00	$4.15
1865-66	2.15	1.60	.45	1.97
1866-67	2.22	1.25	.97	1.76
1867-68	3.10	1.50	1.60	2.31
1868-69	2.50	1.17½	1.32½	1.71
1869-70	1.95	1.05	.90	1.70
1870-71	3.15	1.55	1.60	2.25
1871-72	2.85	1.52½	1.32½	2.29
1872-73	2.16	1.25	.91	1.95
1873-74	2.37½	1.60	.77½	2.02
1874-75	1.85	1.30	.55	1.60
1875-76	2.32½	1.65	.67½	1.96
1876-77	3.00	1.45	1.55	1.93
1877-78	2.46	1.82½	.62½	2.10
1878-79	1.77½	1.57½	.20	1 64
1879-80	2.15	1.46	.70	1.81
1880-81	1.57½	1.25	.32½	1.40
1881-82	1.75	1.30	.45	1.62
1882-83	2.05	1 60	.45	1.73½
1883-84	1.87½	1.42½	.45	1.64½
1884-85	1.50	1.17½	35	1.32½
1885-86	1.50	1.25	.25	1.36
1886-87	2.10	1.22½	.87½	1.52
1887-88	*2.12½	*1.22½	.90	1.37½
1888-89	1.63¾	1.25	.38¾	1.43
1889-90	1.36½	1.25	.1 ¼	1.29½
1890-91	1.76¼	1.31½	.45	1.53½

*Wheat collapse.

CALIFORNIA NO. 1 WHITE WHEAT IN LONDON.

The following comparison of the highest and lowest quotations by months in 1890 and 1891 for California No. 1 white shipping for cargoes in various positions shows a decided gain in prices this year over 1890:

	1890. Off coast High.	Off coast Low.	Just ship'd High.	Just ship'd Low.	Nearly due High.	Nearly due Low.
Jan.	36s 9d	34s 9d	36s 6d	34s 9d	36s 0d	35s 9d
Feb.	36 3	35 [illegible]	35 0	34 6	[illegible] 9	35 9
March	36 3	35 [illegible]	35 0	34 0	[illegible] 0	35 0
April	35 9	34 9	35 6	34 0	35 [illegible]	35 0
May	36 3	35 9	36 [illegible]	35 6	[illegible] 3	35 9
June	35 9	35 3	35 [illegible]	35 [illegible]	35 [illegible]	35 0
July	38 6	35 9	37 9	35 9	38 3	35 9
Aug	38 9	37 6	38 6	37 3	38 9	37 9
Sept	38 9	37 3	38 6	37 3	38 9	37 3
Oct	38 0	36 6	37 9	36 6	37 [illegible]	36 6
Nov	38 6	37 0	[illegible] [illegible]	37 [illegible]	37 9	37 0
Dec.	38 6	37 6	38 0	37 [illegible]	38 0	37 0
	1891.					
Jan.	39 0	[illegible] 6	[illegible] [illegible]	38	38 [illegible]	38 6
Feb	39 3	38 3	38 0	37 9	[illegible] 6	38 0
March	41 6	39 [illegible]	46 [illegible]	38 9	41 [illegible]	39 6
April	46 0	42 [illegible]	46 [illegible]	41 0	46 [illegible]	41 6
May	45 0	43 [illegible]	45 0	44 3	45 [illegible]	44 0
June	44 6	42 0	44 3	42 0	44 3	42 0
July	42 0	40 [illegible]	42 3	40 6	42 [illegible]	40 3
Aug	45 9	42 0	46 6	42 3	45 [illegible]	42 0
Sept	45 9	43 6	[illegible] 0	43 [illegible]	45 9	43 6
Oct	44 6	43 6	44 9	43 [illegible]	44 6	4 6
Nov	46 3	44 0	46 0	44 3	46 0	44 0
Dec.	44 9	42 9	44 9	42 9	44 9	42 2

RANGE OF VALUES BY MONTHS IN THIS CITY

The wheat market in 1891 was strong, with over $1.80 per cental paid for No. 1 white shipping wheat in April and again in November. To obtain a better idea of the fluctuations in prices, the following table is compiled by months:

Date.	Price.	Date.	Price.
JANUARY.			
2	$1 35	16 to 19	1 35 @1 36½
3	1 36½	20 to 29	1 36½@1 89½
8 to 15	1 36½@1 37½	30 to 31	1 37½@1 40
FEBRUARY.			
2	1 37½@1 40	17 to 18	1 36½@1 37½
3	1 36½@1 38½	19 to 28	1 38½@1 40
4 to 16	1 36½@1 37½		
MARCH.			
2	1 42½@1 45	9 to 18	1 50 @1 52½
3	1 43½@1 46½	20 to 21	1 47½@1 51½
4 to 6	1 45 @1 47½	23 to 30	1 50 @1 52½
7	1 47½@1 48½		
APRIL.			
1	1 52½@1 55	17	1 65 @1 67½
2 to 7	1 53½@1 56½	18	1 70 @1 72½
8	1 55 @1 57½	20 to 22	1 75 @1 80
9 to 14	1 56½@1 60	23 to 28	1 75 @1 77½
15 to 16	1 60 @1 63½	29 to 30	1 70 @1 73½
MAY.			
1	1 73½@1 77½	9 to 15	1 71½@1 75
2	1 72½@1 75	16	1 70 @1 73½
5 to 6	1 70 @1 72½	18 to 28	1 72½@1 75
7 to 8	1 72½@1 75	29	1 73½@1 77½
JUNE			
1 to 6	1 70 @1 72½	19 to 23	1 60 @1 65
7 to 9	1 65 @1 71½	24 to 26	1 57½@1 60
10 to 12	1 63½@1 68½	27	1 55 @1 57½
15 to 18	1 62½@1 67½	29 to 30	1 52½@1 55
JULY.			
1 to 16	1 50 @1 52½	23	1 52½@1 55
17 to 21	1 47½@1 51½	29 to 30	1 53½@1 56½
23 to 27	1 51½@1 53½	31	1 55 @1 57½
AUGUST.			
1 to 10	1 55 @1 57½	20	1 65 @1 68½
11 to 13	1 57½@1 61½	21 to 26	1 67½@1 71½
14	1 60 @1 62½	27 to 31	1 68½@1 72½
15 to 19	1 62½@1 66½		
SEPTEMBER.			
1 to 6	1 67½@1 70	13 to 25	1 62½@1 66½
7	1 65 @1 67½	26 to 30	1 65 @1 68½
OCTOBER.			
1 to 8	1 65 @1 68½	26 to 29	1 67½@1 70
9 to 20	1 67½@1 70	30 to 31	1 68½@1 71½
21 to 26	1 65 @1 68½		
NOVEMBER.			
2 to 3	1 71½@1 73½	17 to 21	1 83½@1 86½
4	1 75 @1 77½	23	1 87½@1 90
5	1 77½@1 80	24 to 26	1 85 @1 87½
7 to 10	1 82½@1 85	27 to 30	1 82½@1 85
11 to 16	1 80 @1 83½		
DECEMBER.			
1 to 14	1 80 @1 82½	19	1 75 @1 77½
15	1 75 @1 77½	19 to 31	1 77½@1 81½
16	1 72½@1 75		

The year 1891 has gone into the history of the world's wheat trade as a breaker of records. Had the same conditions and the same influences bearing on the market in last year made themselves felt as late as a decade and a half ago, they would have sent values the world over to famine prices, but with more general introduction of steam and electricity it becomes a difficult matter to

corner supplies. The network of the railroad systems of civilized nations facilitates inland transportation to such an extent that shipment to tide water only consumes a few hours, against nearly as many days nearly two decades ago. Then, again, deep water carriage has been revolutionized, for instead of sail vessels employed in short deep-water voyages, steamers of large carrying capacity are now in use, reducing the time in passage from one-half to nearly three-quarters. The steamers not only take large cargoes and make the run quicker, but they charge less for freight. While this is the case for short voyages, the introduction of steamers on long voyages, or between this coast and Europe, has not proven a success, consequently sail vessels maintain their supremacy in the Pacific Coast wheat traffic. But the displacing of sailers on short voyages have made them more plentiful on long voyages, which naturally causes lower charters to obtain. This is well illustrated in the history of this coast's wheat trade. A few years ago less than 40s per long ton for a handy-sized iron vessel, with favorable options to charterers, was considered low, but now over 40s for same options and for same sized iron vessel is considered high.

The consumption of wheat the world over is enlarging. So rapid has been the increase that the outturn of land devoted to its cultivation in supply countries has fallen short of the requirements, causing the large reserves in all civilized countries to steadily decrease, so that to-day the reserve stock is virtually exhausted. This change in the reserves must at all times cut an important figure in future markets. The increased consumption and the decreased reserve is better illustrated by the following compiled statistics of the world's production and consumption:

Year.	Estimated Production (bu).	Estimated Consumption (bu).
1882	2,187,000,000	1,985,000,000
1883	1,963,000,000	2 005,000,000
1884	2,184,000,000	2 025,000,000
1 85	1,999,000,000	2,045,000,000
1886	2,090 000,000	2,065,000,000
1887	2,127,000,000	2,085,000,000
1888	2 044 000 000	2,105,000,000
1889	1,950,000 000	2,125,000,000
1890	2.040,000,000	2,145,000,000
Year.	Inc. in Reserve Stocks (bu).	Dec. in Reserve Stocks (bu).
1882	202,000,000	.....
1883	.....	42,000,000
1884	159,000,000	.....
1885	.....	46,000,000
1886	25,000 000	.....
1887	42,000,000	.....
1888	.....	61,000 000
1889	.....	175,000,000
1890	.....	105,000,000
	428,000,000	429 000,000
Total decrease for the 9 years		1,000,000

It appears from the foregoing table that during nine years the reserve stocks have decreased 1,000,000 bushels. In this period these reserves reached their highest point in 1887, when 340,000,000 bushels had been added to them. During the years 1888–89–90 they were reduced by 341,000,000 bushels, and by June 30, 1891, therefore, they will be as low, if not lower, than they were June 30, 1882, at which time, as we have before stated, they were almost exhausted.

The effect of light reserves was shown quite fully in last March and April, when it became known beyond the question of a doubt that France's wheat crop and Russia's rye crop were comparatively a failure. To realize this more fully, it is only necessary to state that France, next to the United States, is the largest producer of wheat, while Russia's rye crop is larger than that of any other country. A writer in the London *Agricultural Gazette* says that in 1879 the French wheat crop was supposed to have yielded not much more than 27,000,000 quarters, and the imports were just over 10,000,000 quarters; in 1885 the crop was estimated at 39,000,000 quarters and the importation was just over 2,000,000 quarters; in 1890 the crop was estimated at 42,000,000 quarters, and the importation amounted to over 5,000,000 quarters. As there are no means of ascertaining the amount of wheat held in reserve by growers, it is not possible to say how much France will need to buy, but presumably something more than the 10,000,000 quarters referred to. This year France set to work and bought largely early in the season regardless of cost, and forced up values considerably, reducing her import duties on wheat by 3s. 6d. per quarter. The world's market thus had a new experience; hitherto the United Kingdom, with her requirements of something like 20,000,000 quarters of foreign breadstuffs, has practically been the only buyer of importance, France, with her average requirements of some three or four million quarters, coming next, with the wants of other countries individually smaller still. But France, as a buyer in the market, with an open order of from ten to fourten million quarters to fill, made all the difference.

Russia's rye crop, which was placed at 53,300,000 qrs. early in the year, was increased later on to 64,800,000 qrs., but even this increase on the first estimate gave a shortage of 17,000,000 qrs. when compared with the 1890 crop, while the wheat crop was short 2,500,000 qrs. The prohibition by Russia of exporting wheat from that country did not go into effect until November, or until about the time winter laid an embargo on further shipment from Russia by closing her ports with ice. In anticipation of the prohibition, the exports of wheat from that country were largely increased up to the month of November.

To offset the wheat shortage abroad, the United States crops of wheat and corn were the largest on record, while the Argentine Confederation and Canada also turn out larger crops than ever before. Shipments the last half of 1891 from this country were the largest ever before within the like time, and yet the year went out with a very large available surplus to market, which the railroads at the East are being taxed to their full extent, and still the cry is "more cars."

The foregoing general review covers the general situation in 1891 and affords a clearer insight into several of the causes which produced the wide ranges in prices in the San Francisco market, as tabulated in another column. While saying the above it is but proper to state that the crops on this coast have had much to do with the values with us. There was a large increase in acreage seeded to wheat, yet deficient rainfalls reduced the outturn. There were only two days during the rainy season when the precipitation exceeded one inch, which were on Dec. 3, 1890, and Feb. 15, 1891, when the rainfall was respectively 1.83 and 3.38 inches. Without good, soaking rains early in the season, with seasonable rains in the spring months, the crop naturally suffered, and instead of a yield of about 2,000,000 tons, we only had about 1,400,000 tons. Oregon and Washington, on the other hand, had the largest crops on record. Although there was a light yield to the acre in this State, yet the grade averaged better than for several years past. This was due to fairly cool weather in maturing time. The cool weather caused many more fields to be harvested with fair result than would have been had even moderately warm weather prevailed. The receipt of first consignment of wheat in 1891 was in May and the price at which it sold was quite high, higher than the first consignment fetched at any time since 1871, as shown by the following table of first arrivals of new wheat, and prices paid for the same:

Year.	Month.	Price.
1859	July 14	$1 90@2 00
1860	July 3	1 50@1 55
1861	July 24	1 50@1 62
1862	July 11	1 62@1 65
1863	June 25	1 50@1 60
1864	July 9	2 80@2 95
1865	June 12	2 20@2 25
1866	June 25	1 50@1 60
1867	June 17	1 65@1 70
1868	June 13	1 90@2 00
1869	June 15	1 40@1 45
1870	June 9	1 70@1 80
1871	June 23	2 30@2 37
1872	June 10	1 80@1 85
1873	June 7 (Vallejo)	1 75@1 80
1874	June 11	1 65@1 67
1875	June 2 (Vallejo)	1 65@1 67
1876	June 9 (Oakland)	1 75@....
1877	June 2 (Vallejo)	2 40@....
1878	June 13	1 70@....
1879	June 20	1 65@....
1880	June 24	*1 00@....
1881	June 7	1 25@1 40
1882	July 6	1 67@....
1883	June 19	1 65@1 70
1884	June 20 (Port Costa)	1 42@....
1885	June 2	1 42@....
1886	June 5	1 30@....
1887	June 10 (Port Costa)	1 75@....
1888	June 15 (Wheatport)	1 31½ ....
1889	May 24	1 37½ ....
1890	May 20	1 30@....
1891	May 24	†2 02½ ....

*Inferior.

†Sold by auction at a fancy price, actually worth, by sample, about $1 65. It was Sonora, rather pinched and somewhat mixed with barley. It came from the Kimberlena farm, Kern Co. Last year's first consignment also came from Kern Co.

The monthly exports from San Francisco during the year ending December 31, 1891, were as follows:

Months.	Centals.	Value.
January	1,302,604	$1,779,886
February	1,293,846	1,772,365
March	1,854,904	2,743,813
April	1,574,954	2,438,681
May	1.128 830	1,938,320
June	736,228	1,244,751
July	1,386,205	2,202,455
August	1,499,159	2,476,553
September	1,315,362	2,218,088
October	1,269,452	2,120,934
November	1,708,115	3,049 620
December	1,878,258	3,338,485
Totals	16,947,917	$27,323,951
1890	13 014,306	17,277,604
1889	12,115,075	16,641,194
1888	11,763,436	17,390 382
1887	9,065,152	14,683,875
1886	15,832,155	21,443,167

The exports to Europe in 1891 and 1890 compare as follows:

To—	1891.	1890.
France, ctls	7,916,294	1,584,875
Great Britain	7 668,951	10,257,490
Belgium	1,088,430	772,825
Cape Verde Islands	91,198	.....
Totals	16,764,873	12,614,590
Increase, 1891		4,150,283

The following shows the exports to each country in 1891:

To—	Centals.
France	7,916,294
Great Britain	7,668,951
Belgium	1,088,430
Peru	98 613
Cape Verde Islands	91,189
Brazil	47.140
Central America	16,530
Hawaiian Islands	9,433
Australia	8,360
Chile	1 620
Tahiti	656
British Columbia	396
Ecuador	283
Japan	13
Total	16,947,917

The total exports of wheat (flour reduced to wheat) from this port are as follows, by years since 1885 inclusive:

	Centals.	Value.
1885	15,733,700	$21,782,900
1886	19,194,400	25,857,800
1887	11,461 600	18,104,500
1888	14,241,900	20,796,500
1889	15,509,900	21,413,600
1890	16 585,977	22,114,382
1891	20,643,896	33,105,541

The tonnage question was one of more than ordinary interest during the past year. The outlook at the beginning of the season and for some time afterward, was particularly favorable to ships, inasmuch as chartering ahead was carried on to such an extent that there was scarcely any available disengaged tonnage in port for wheat exporters to work on, and comparatively high rates were the rule. But the speculators in ships overreached themselves in their endeavor to control the market, and toward the close of the year disengaged ships were more freely attracted to this port by the high rates ruling. Then came a reaction in wheat abroad, and the inability of exporters to take ships at the asking rates, the local wheat market not having declined sufficiently to allow any profit on shipments. A prominent charterer found himself with a large number of high-priced ships on hand, with no chance to effect recharters except at a sharp decline in rates, and no wheat of his own to load them. The situation grew worse for the tonnage interest, and from 45s, at which a number of vessels were chartered to arrive, the market just before the close of the year went down to 23s, this rate having been accepted for an iron vessel, U. K., Havre or Antwerp. The great drop in freights was taken advantage of by the wheat interest, and prices were held up well considering the less encouraging condition of the foreign markets.

In studying the local market, it is not only interesting but instructive to examine into the invisible supply of grain that becomes available the last half of the cereal year. For this purpose we give the following statement of the quantity of breadstuffs on hand in the State Dec. 1st, estimated by the Produce Exchange, in comparison with the quantity at stock-taking for five years past:

LOCATION.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ctls.	Rye, ctls.
San Francisco and Oakland wharf, including grain afloat in harbor and in transit	28,514	671,565	432,042	114,621	69,286	48,145	28,435
Sonoma, Humboldt, Napa, Solano, Yolo, Colusa and Glenn	41,309	1,746,840	260,095	38,500	700	6,355	.....
Sacramento, Yuba, Sutter, Butte and Tehama	23,670	1,038,725	140,615	1,380	2,850	15,850	200
Contra Costa and Alameda	2,020	2,605,210	305,366	2,010	940	100	5,910
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern	26,640	2,932,975	243,410	1,318	120	610	.....
San Mateo, Santa Clara, San Benito, Santa Cruz, Monterey and San Luis Obispo	11,745	669,940	768,365	18,255	81,155	580	.....
Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and San Diego	6,145	309,320	730,710	2,320	120,675	91,140	5,000
Totals	140,043	9,984,575	2,883,602	189,404	275,126	263,255	39,545
June 1, 1891	121,166	1,620,562	353,882	45,074	46,682	76,738	14,136
December 1, 1890	118,123	12,169,993	1,615,655	61,085	174 291	302,921	37,150
June 1, 1890	81,090	4,811,063	1,004,457	61,235	39,503	91,111	16,892
December 1, 1889	116,225	15,300,388	3,321,860	120 356	107,419	134,915	60,540
June 1, 1889	100,565	2,092,430	2,052,630	119,246	60,415	38,925	10,215
December 1, 1888	96,906	10,814,630	4,087,050	120,175	235,320	286,747	7,040
July 1, 1888	71,920	3,881,960	2,063,450	62,095	83,675	82,200	800
December 1, 1888	69,979	9,730,060	4,522,990	65,380	109,925	121,300	4,850
July 1, 1887	50,275	2,790,400	796,500	42,400	74 405	72,380	1,360
January 1, 1887	89,605	7,812,850	2,590,250	47,400	243,650	138,650	44,650
July 1, 1886	102,325	1,262,600	114,950	31,150	103,700	27,625	1,080

The stocks of wheat reported in the State by the Produce Exchange are generally available for export. At first glance this does not appear to be a correct statement, since 1,250,000 people have to be fed for six months from every stock-taking, besides once yearly there must be an allowance for seed. For these two purposes it is customary to allow 300,000 tons per annum, although 350,000 tons would be nearer it now. That this quantity is not taken from the stocks publicly reported is easily proven. In most years, it is true, drafts are made on the visible stocks for both seed and food. The quantity varies, but it is never up to the full quantity reported. An examination of the stocks and export movement for a number of years shows that the quantity reported in sight at the end of the first half of the cereal year is mostly available for export. The annexed illustrations under this head abundantly prove the assertion, as follows:

Stock January 1, 1887	403,083
Exported first six months 1887	267,377
Difference	135,706
Official stock July 1, 1887	147,061
Addition to visible supply	11,355
Stock January 1, 1888	495,499
Exported first six months 1888	207,742
Difference	287,757
Official stock July 1, 1888	204,886
Local draft on visible supply	82,871
Stock December 1, 1888	555,367
Exports six months thereafter	386,901
Difference	168,466
Official stock June 1, 1889	119 701
Local draft on visible supply	48,765
Stock December 1, 1889	782,452
Exports six months thereafter	494,162
Difference	288,290
Official stock June 1, 1890	252,106
Local draft on visible supply	36,184
Stock December 1, 1890	626,168
Exports six months thereafter	521,967
Difference	104,211
Official stock June 1, 1891	99,503
Local draft on visible supply	4,708

From all information at hand, we think that the last half of the present season will be no exception, and when the stock in the warehouses is taken, in next June, it will be demonstrated that the invisible supply not only met the consumption and spring seeding demand, but supplied part of the demand for export.

Flour.

Close competition the past year did not add materially to the millers' exchequer. This competition looks very much as if it is the big millers trying to force the smaller to the wall. The output of the mills shows a large increase, but this is not reflected so much in the exports as it is in the lessened receipts of flour from up north. With lighter receipts from Oregon and Washington, there has been a larger home consumption demand of Californian. One of the causes if not the only one, for the lessened receipts from up north is the establishing of steamship lines to the Orient by the Canadian railway, and a much lower rate of freight given to shippers. As this competition began to tell on our shipments to China, the Pacific Mail Steamship Co. lowered its freight rates. The low freight had the effect of stimulating the consumption of flour in the Orient.

The monthly exports were as follows:

Months.	Bbls	Value.
January	106,981	$438,817
February	123 060	501 465
March	98,272	410 889
April	127 545	582,311
May	63,085	325,617
June	67,403	343,478
July	137,851	698,005
August	56,129	265,970
September	112 487	535,608
October	92,447	456,927
November	100,059	492 974
December	146,674	730,529
Totals	1,231 998	$5,781 590

The following shows the exports to each country in comparison with 1890:

To	1890. Barrels.	1891. Barrels.
United Kingdom	432,936	366,159
China	417,546	402,695
Central America	160 286	179,126
Hawaiian Islands	57,294	59,104
Australia	685	1,172
Ecuador	32,067	31,159
Japan	43,309	45,102
Panama	11,907	12,553
Society Islands	13,166	11,443
Asiatic Russia	15,482	16,907
Philippine Islands	11,200	4,850
Mexico	5,660	9,067
British Columbia	3,238	3,100
France	1,375	5,000
Samoan Islands	395	330
Brazil	275	.....
Marquesas Islands	182	134
Marshall Islands	117	102
Gilbert Islands	25	30
Peru	160	12,840
Singapore	125	62
Hervey Islands	50	26
East Indies	125	2
Corea	2	80
Chile	.....	70,349
Totals	1,207,607	1,231,993

The price of flour throughout the year fluctuated with the price of wheat.

Barley.

To better understand the condition of, and influences bearing on, the barley market in 1891, the following tabulated statement of the acreage seeded for three years past is given:

Counties.	1889. Acres.	1890. Acres.	1891. Acres.
Alameda	20,987	20,415	63,432
Alpine	460	400	400
Amador	12,515	10,980	19,000
Butte	24 619	19,721	25,800
Calaveras	1,100	250	3 000
Colusa	48,683	23,0 2	26,925
Contra Costa	42,270	30,540	28,400
Del Norte	300	164	320
El Dorado	2,002	560	1,506
Fresno	36,242	34,471	40,250
Glenn	.....	.....	12,560
Humboldt	19,450	1,513	2,069
Inyo	571	455	397
Kern	25 000	3,000	4,500
Lake	3,870	2,600	3.100
Los Angeles	35,290	34,170	33,124
Marin	417	.....	225
Mariposa	5,078	1,802	1,6 2
Merced	52,000	25,000	36,650
Modoc	33,000	32 100	31,600
Monterey	75,000	60,000	80,000
Napa	5,847	6,374	5,985
Nevada	587	....	.....
Orange	.....	19,760	50,000
Placer	9 670	1,718	10,346
Sacramento	38,460	26,725	34,215
San Benito	16,915	13,680	15,140
San Bernardino	103,587	93.450	91,260
San Diego	30,447	27,350	41,086
San Joaquin	10 920	53.049	58,129
San Luis Obispo	48,360	51,429	75,360
San Mateo	3,720	3,000	3,500
Santa Barbara	38 149	32,865	38,840
Santa Clara	20,370	18,560	17,820
Santa Cruz	3,110	3,226	3,292
Shasta	6,215	545	7,116
Sierra	1,850	1,000	4,000
Siskiyou	5,380	2,588	4 065
Solano	35,720	22,510	31 059
Sonoma	13,159	.....	8,352
Stanislaus	33,149	28 150	33,163
Sutter	21,840	4,899	14,174
Tehama	27,840	21,760	16,659
Trinity	200	200	200
Tulare	63,425	65.346	71,250
Tuolumne	2,000	1,800	1,500
Ventura	58,738	33,625	45,150
Yolo	20,000	12,700	13 550
Yuba	11,060	4,850	8,500
Totals	1,167,627	852,902	1,118,867

The decline in acreage seeded to barley in 1890 was over 25 per cent. The influences that brought about the falling off was alluded to as follows in the annual review for that year: "For three years preceding 1890, the barley market went from bad to worse, with the lowest prices, (52½ to 62½ cts. for feed touched in 1889), ever before known. The above low range was brought about by large quantities of weevil barley thrown upon the market, breaking prices, which caused large holdings of hypothecated barley to be sold by those who had advanced the money." The decline in the market value of barley in California had a disastrous effect on the industry in Eastern Oregon and Eastern Washington, owing to San Francisco being their chief demand market. The result was that up north the acreage seeded to barley was not up to what it would have been in ordinary seasons.

Farmers who look at the condition of the market and never at the influences on it, did not recognize the fact that with the increasing attention given to the fruit industry there would be a steady increase in the number of work horses, which would mean an enlarged demand for feedstuff. In former years, it was safe to estimate that for every sack of barley sent to this city for feeding and exporting, five were fed out in the country, but now it is a safe proposition, based on crop returns and other statistical information, to place the quantity fed out in the country at eight sacks for every sack fed out at and exported from this city. The increased attention given to the dairy industry by establishing creameries, has created freer feeding of rolled and ground barley, and as this industry appears to be only in its infancy, it is quite within the bounds of reason to claim that within the next two years the requirements from dairymen will be fully double what it is now.

The market in 1891 opened at $1.45 to $1.53 3-4 per cental, for good to choice feed, against 75 cts. to 85 cts. per cental at the like date in 1890. The market fluctuated slightly around $1.43 3-4 to $1.51 1-4, up to the first week in February, when, under a dry weather season, large feeding and poor pasture, prices began to be advanced by holders, but with sellers' higher pretensions, feeders reduced their buying. With heavy rains in the third week in February, the bears on Call began systematic raids and succeeded in hammering the market down, so that by the first week in march the range for feed was $1.35 to $1.41 1-4. At the low prices to which the market fell, strong buyers came in and took every available ton obtainable without exciting the market. This done, then a bull campaign was inaugurated and successfully carried out owing to the light reserves in Oregon and Washington. There was a steady advance, with slight fluctuations in the market, up to the new crop season (June) when the highest prices, $1.55 to $1.65, were reached.

The first receipts of new crop barley and prices received since 1870 are as follows:

Year.	Month.	Price.	Year.	Month.	Price.
1870	June 19	$1 20	1881	June 21	$ 90
1871	June 12	1 57½	1882	June 12	1 65
1872	June 6	1 40	1883	June 25	95
1873	June 5	1 10	1884	June 28	90
1874	June 9	1 45	1885	June 16	1 25
1875	June 20	1 35	1886	May 26	1 25
1876	May 30	90	1887	June 3	1 15
1877	June 30	1 55	1888	June 5	92½
1878	June 11	80	1889	June 1	75
1879	June 30	75	1890	May 31	1 06½
1880	June 24	64½	1891	June 6	*1 42½

*Auction off in Produce Exchange Hall. Market price about $1.20 per cental.

With the 1891-92 season fairly opened, prices for feed gradually set off until in the last week of June the range was $1.02½ to $1.12½. With the decline, buyers became more plentiful and sellers scarcer, which caused an advance, and by the middle of July, $1.15 to $1.25 was the range. From that time to the close of the year, the market fluctuated between $1.03¾ to $1.12½ and $1.15 to $1.25. These fluctuations made barley more atractive for gambling in futures on Call. The last half of 1891 was noted for light receipts from up North, owing to large overland shipments from Eastern Oregon and Eastern Washington, with a large export demand and light supplies of Surprise.

The exports in centals by sea and by rail by months in 1891 compare as follows with 1890 and 1889:

Months.	1889. By Sea.	1889. By Rail.	1890. By Sea	1890. By Rail	1891. By *Sea
January	28,805	20,939	33,319	10 960	31,634
February	33,918	10,833	11,659	1 684	14 751
March	13 812	2,873	18,023	308	13,006
April	14,109	4,004	19,916	.....	32,147
May	13,319	.....	17,006	.....	23,198
June	20,172	3,874	15.108	.....	10,179
July	41,585	17,335	27,735	.....	137,319
August	125.993	7,127	40.523	.....	23 667
September	234,880	26,077	18,516	.....	160,597
October	201,628	51 600	96,301	.....	271,767
November	83,978	14 739	18,035	.....	146,664
December	15,244	4,675	23,034	.....	70,764
Totals	832,843	162,876	389,174	12,952	936,793

* No overland shipments.

The exports to countries are as follows in centals:

	1889	1890.	1891.
Great Britain	352,962	44,811	323,501
New York	295,424	90,536	166,567
Hawaiian Islands	138,053	165 568	172,302
Australia	30,934	14,504	.....
Elsewhere	14,570	23,755	6,936
South America	.....	.....	115,205
Cape Verde Islands	.....	.....	82,152
Canary Islands	.....	.....	69,550
Totals	832,843	339,174	936,793

The United States Agricultural Department reports the imports of barley into the United States in 1890 at 5,078,733 bushels (less than 2,400,000 centals). All statistical information received in this month indicates that the imports in 1891 exceed those of 1890, and this, too, with a high duty in force.

Oats.

The acreage seeded to oats in this State compares as follows:

Counties.	1889.	1890.	1891.
Alameda	175	210	196
Alpine	630	650	600
Amador	75	50	150
Colusa	215	66	143
Contra Costa	.....	1,600	1,600
Del Norte	1,500	9.7	100
El Dorado	.....	204	990
Fresno	526	81	450
Humboldt	25,792	3,749	13,260
Inyo	681	836	841
Lake	720	450	890
Los Angeles	.....	.....	2,232
Marin	522	320	814
Mariposa	634	.....	.....
Merced	.....	7,500	8,350
Modoc	3,840	11,360	12,000
Mono	.....	24	.....
Monterey	7.500	6,000	5,000
Napa	1,976	1,645	1,865
Nevada	1 235	.....	1,050
Orange	.....	100	.....
Placer	2,865	1,718	1.930
Sacramento	415	215	510
San Benito	510	50	440
San Diego	1,550	1,582	2,109
San Joaquin	417	309	810
San Luis Obispo	4 246	4,341	5,200
San Mateo	2,916	1 900	2,500
Santa Clara	115	174	140
Santa Cruz	4,920	5 060	4,750
Shasta	1,121	409	930
Sierra	1,000	1,200	1,008
Siskiyou	3,646	1,766	2,455
Solano	191	...	.....
Sonoma	4,728	.....	4,327
Stanislaus	425	343	261
Sutter	368	880	[illegible]
Tehama	3,300	2,350	2,612
Trinity	500	500	350
Tulare	375	560	750
Tuolumne	800	700	750
Ventura	.....	98	110
Yuba	1,271	805	3,000
Totals	115,601	60,197	96,620

The above affords an interesting study. It shows that in Humboldt county while the acreage seeded in 1891 was three times that seeded in 1890, yet it was more than 50 per cent less than that in 1889. Other counties present a few changes. Humboldt oats have always stood high, selling along side of Oregon. California is not and probably never will be a large oat producer. This is easily accounted for by reason of Western Oregon and Western Washington being better adapted to its cultivation. The acreage seeded up north in 1891 to oats was 233,037 acres in Oregon and 178,466 acres in Washington.

The market opened with the year at a range of $1.82½ to $1.91¼ per cental for fair to choice feed oats. February witnessed a slight increase in the range, but in March and April the range was lower, being as low as $1.70 to $1.78¾ in the latter month. May witnessed an advance of 10 cents per cental, which was sustained in June. With barley coming in freely, and with the receipt of confirmed advices of a large outturn to the acre up north, buyers became offish, and prices began to gradually settle, until $1.32½ to $1.51¼ was touched the first week in August. The market held to steady prices throughout that month, but under heavy receipts from up north they fell from 5 to 7½ cents per cental in the first part of September. The market held at around $1.25 to $1.40 the remainder of the year.

Owing to more attention being given to breeding of fine horses and the more general use of roadsters, bridle horses and match teams, the consumption in California of oats is enlarging.

Corn.

It is to be regretted that County Assessors do not collate the acreage seeded to different cereals more correctly. Many counties fail to have any returns made. Estimates based on the best obtainable information is the only way by which those not reporting can be filed out. The counties reporting acreage planted to corn in 1891 were as follows:

Counties.	Acres	Counties.	Acres.
Alameda	500	San Diego	2,635
Alpine	20	San Luis Obispo	470
Calaveras	100	Santa Barbara	1,125
Colusa	1,096	Santa Clara	379
Contra Costa	2,200	Santa Cruz	2,062
Del Norte	7	Siskiyou	45
Humboldt	1,572	Sonoma	5,638
Inyo	1,69[illegible]	Stanislaus	110
Kern	12 000	Sutter	1,044
Los Angeles	13,631	Tehama	775
Mariposa	400	Trinity	225
Merced	1,450	Yolo	500
Monterey	1.000	Yuba	690
Napa	1,565		
Orange	5,000	Total	58,476
San Bernardino	840		

The acreage reported to corn in this State by the U. S. Department was 161,470 acres in 1891 and the yield placed at 5,571,000 bushels. While we have no data at hand to disprove this estimate, yet we feel morally certain that it is too large. In 1889 the acreage was 75,382 acres, and in 1890, 80,602 acres. While we have reason to believe that the fair prices which ruled for corn the forepart of the year may have been an inducement to give more attention to its cultivation, yet with unfavorable weather, it is not at all likely that the acreage doubled over that of 1890.

The year opened on a fairly firm market at $1.27½ to $1.32½ for yellow, and $1.31¼ to $1.36¼ for white. In February there was a slight advance, which was maintained in March, but in April an advance of from 2 1-2 to 5 cents per cental was established under a good export demand, small supplies and price in the Central States being too high to admit of shipments to this Coast. In May, whites made quite a jump, moving up to $1.62 1-2 to $1 68 3-4, with the other kinds moving in sympathy. In June, whites sold at $2.05 to $2.20. This price was maintained in July. Toward the latter part of July prices set off about 10 cents per cental, at which they held steady until toward the close of August, when an offish feeling set in and the market began to settle. By the end of September whites sold at $1.27 1-2 to $1.35 and yellows at $1.15 to $1.32 1-2. By the middle of October the range was 12 1-2 cents less for white and 2 1-2 cents less for large yellow, and 7 1-2 cts less for small yellow. At the lower prices the market fluctuated up to the end of the year. The large crop in the Central States causing lower prices there, and an absence of a free export demand with us, were against the market toward the close of the year.

Rye.

The consumption of rye in this State steadily enlarges, yet without an export outlet any marked increase in acreage seeded would be met by very low prices. The year opened on a fairly steady market at $1.32 1-2 to $1.37 1-2, from which it varied but little up to August, when, under strong buying for export, owing to a shortage in Russia, the market moved up 15 cts per cental, closing that month still higher, being quoted at $1.62 1-2 to $1.70. Throughout September it held fairly steady, but in October prices began to set off, closing the month at a decline of from 5 to 7 1-2 cts per cental. At around the lower prices the market fluctuated the remainder of the year. The supply in this State is about exhausted. Oregon sent us several consignments toward the close of the first half of the season.

Hay.

County Assessors of the following counties report the acreage in hay in 1891 as follows:

County.	Acres.	County.	Acres.
Alameda	92,344	San Bernardino	33,205
Alpine	250	San Diego	18,762
Amador	7,000	San Luis Obispo	36,620
Butte	11,000	San Mateo	10,500
Calaveras	9 500	Santa Barbara	13,500
Colusa	3,696	Santa Clara	35 178
Contra Costa	48,400	Santa Cruz	5,285
Del Norte	135	Shasta	11 496
El Dorado	4,927	Siskiyou	52,686
Humboldt	25 275	Sonoma	8 470
Inyo	6 972	Stanislaus	1,500
Los Angeles	13,300	Sutter	4,555
Marin	10,120	Tehama	15,466
Mariposa	6 330	Trinity	3,500
Merced	11,340	Tuolumne	900
Modoc	107,000	Yolo	11,500
Monterey	90,0 0	Yuba	10,000
Napa	16,765		
Nevada	4,289	Total	681,751
Placer	9,845		

The remaining counties, from which no returns were received, it is estimated brought the acreage up to fully 800,000 acres. Notwithstanding the large and steadily increasing acreage given over to hay, the crop is considerably below the rapidly-enlarging feeding requirements of this State. Nevada and even Oregon send us supplies. Fully 20 per cent. of the crop of the former State is marketed in California. The steady inroads on the pasture lands, largely increased and steadily-increasing acreage given over to the fruit industry, combined with more attention being given to milch cows for dairying, are the prime factors in promoting the large consumption. The outturn to the acre in 1891 was not up to the usual average, while the grade was not of the best.

The market ranged around at about $12 to $19 per ton the first five months of the year. In the forepart of July, prices for new ruled at $9 to $14.50 per ton. This was the lowest range of the year, for buyers came in and took all the obtainable supplies, after which the range was moved up one dollar. The market hung around at $10 to $15.50 the remainder of the year, with at times slightly higher prices secured.

Vegetables.

GARDEN TRUCK.—This industry continues to enlarge in the southern counties with experience and better inland transportation facilities and improved means of marketing the product at distributive points east of the Rocky mountains. It promises to assume such proportions as to entitle it to further recognition from the various transportation companies. In the more favored localities, south, garden truck is cultivated which is marketed toward the close of the year, and by January and February the quantity becomes so large as to make itself felt in this city. The counties bordering the bay, and also on the tule land bordering the San Joaquin and Sacramento rivers, each year witness an increase in the acreage devoted to the industry. Dealers report that, considering the number of inhabitants, the consumption of garden truck in this State is simply enormous.

ONIONS.—The market opened this year at $2.25 to $3.50 per 100 lbs., to which it held steadily up to the first week in February, when it began to strengthen, and by the end of the third week in the month quotations had been advanced to $4.00 to $4 75. This high range brought in freer supplies and also limited buying, which caused holders to reduce their pretensions fully one cent per lb. The market did not remain long at the lower prices, for by March 10th the range was $3.75 to $4.35. The only change in quotations for the next fortnight was a reduction in the inside quotations from $3.75 to $3 00. In the forepart of April the range was $3.50 to $4.75, and even $5.00 per 100 lbs was secured for something extra. With new improving in quality, the trade turned to them toward the close of April, the range being $2 00 to $2.50 per 100 lbs. With free receipts the market soon broke to a range of $1.00 to $2.00, and by the middle of May it was quoted at 65 cts. to 90 cts., and within a week afterward reds sold at 50 to 75 cts. and Silver Skin at 75 cts. to $1 00. It held around at these ranges up to the middle of July, when reds were quoted at 35 to 50 cts. and Silver Skins at 60 to 80 cts. At the lower prices the trade ran on the latter. Even the increased buying did not prevent them going down 15 cts. per 100 lbs. At the decline the market held fairly steady up to October, when an advance of 15 cts. per cental was established. The market gradually gained in strength, and finally closed the year at about 75 cts. to $1.25. The low prices the last half of the year were due to large crops on the bottom lands along the rivers. The increased acreage along the rivers was due to low water.

POTATOES.—The market opened in January barely steady at a range of 80 cents to $1.60 per 100 pounds for fair River Reds to choice Burbank Seedlings. The tone was weak, due to the fact that at several points in the interior large supplies were held

ready to be dumped at a day's notice, while in the southern part of the State the second crop turned out to be large. With freer receipts of new and heavy receipts of old, the market closed with January at a range of 70 cents to $1.35 for the latter. By the middle of the month the outside range for more choice kinds had advanced with it, reaching $1.50 as an outside for Burbank Seedlings. The advance brought in more liberal supplies, and the range receded to 60 cents to $1.25 by Feb. 24th. This range was maintained with only slight changes up to the close of April, when, with new showing to much better advantage, the range fell off 15 cents per 100 pounds, which was followed by still lower figures in May. In June, quotations for old were withdrawn, as new were principally dealt in and quotations for old were nominal. The range was 60 cts. to 90 cts. per 100 pounds. This range was maintained until in the fourth week in June, when, with more varieties coming in and receipts increasing, the range was 45 cts. to 80 cts. With July, Burbank Seedlings became more plentiful, admitting of their being quoted, which gave the range 40 cts. to $1.25 per 100. By the last of July the range was 25 cts. to $1. One week later the outside figures had dropped to 90 cents. At this range the market fluctuated around up to the third week in September, when it showed signs of strengthening, which resulted in an advance at the close of the month of 15 cts. in Burbank Seedlings. This caused slightly higher figures for the other choice kinds. This advance was only temporary, for with heavy receipts it set back 10 cts. In November the market began to strengthen, which was carried into December. The year went out on a range of 35 cts. to $1.25 for the poorer kinds to choice Burbank Seedlings. In 1890 large quantities of potatoes were brought from the East but in 1891 our overland shipments were very heavy. Not even did the exceptionally heavy shipments overland relieve our market, so large was the crop. The price sunk to such low figures that feeding the poorer kinds to stock became quite general. Not only were they fed to stock, but two or three starch factories were established in the southern part of the State, so as to take advantage of the low figures.

The large crop was brought about by the river bottoms not being flooded, which admitted of cultivating many hundred acres to potatoes in 1891 that were not available in 1890. Many orchardists cultivated potatoes between their trees. It is quite safe to say that the acreage in 1891 devoted to potatoes was double that of any former season. Oregon and Washington have had only fair crops.

BEANS.—The bean industry is forging ahead, and train loads are no longer objects of curiosity. The superior quality of California beans causes them to be sought for at the East, where up to a few years since the imported held full sway. The high prices which ruled during the season of 1890–91, and consequent good profits secured, encouraged more attention to be given to their cultivation in Ventura and Santa Barbara counties. This, naturally, gave a large surplus, notwithstanding the yield to the acre was not up to the average.

Hops.

The market opened the year strong at from 30 to 40 cts. The strength of the market was due to very light available supplies and strong Eastern and foreign markets. The market held nominally at 30 to 40 cts. the first three months of the year, when quotations were given out at 25 to 30 cts. up to July, in which month another decline took place, and before new came in, sales are reported to have been made as low as 15 to 20 cts. In reviewing the market an exchange says that prospects early in the season of 1891 appeared favorable for one of the heaviest yields ever gathered, not only in this country, but also in Europe. Although later on indications were in the main good, there was some speculative demand in May, June and July for forward deliveries of 1891 hops at 18@20 cts for desirable growths. Contracting was by no means general, however, growers as a rule not being disposed at that time to negotiate very extensively, the bids appearing very low as compared with the values which had been ruling. Instead of getting better, the market continued to weaken, and this in face of the fact that the crop prospects on this coast were much less promising, lice and mold threatening serious damage in Washington and Oregon, the injury later on proving to be about as great as had been generally feared would be the case. The weakness of the market in August and September was based mainly on the reports from Europe, as to the condition of the crop in England and Germany, the advices being of such character as to afford little or no encouragement to anticipate any special foreign demand for American hops the current season. In August 15 cts was a full quotable figure for new, and in September the market was much of the time lifeless, with 10@14 cts the nominal range for fair to choice 1891 hops. In the latter part of September inquiry began to develop, not only on local, but also on foreign account, and it soon became evident that the European crop was not so large as had been anticipated. Values began to harden early in October, but rather slowly, as holders were tolerably free sellers at 12@13 cts for good medium grades, very many not caring to take the chances of carrying into the latter part of the season. After heavy reductions in supplies, through shipments outward, bids were advanced to 15 cts in November for good merchantable quality, and choice not obtainable under 18 cts. There was continued and steady reduction in stocks in December, with values stiffening, and before the close of the year 19 cts was readily obtainable for a choice hop, with few sellers of choice under 21 cts, and not many to be had at this figure.

Instead of more hops being produced here in 1891 than in previous year, there is ample evidence of a reliable character that the yield of 1891 was lighter than of 1890, by about 7000 bales, there being a heavy reduction in Washington, with only a moderate increase in California and Oregon. Lice and mold were serious drawbacks in Washington and Oregon, but in the latter State the increased acreage brought the yield ahead of 1890. While the California crop was considerably heavier than the previous year, many of the hops of last year were deficient in color and strength, the Russian river being about the only section of this State which turned out quality fully up to the average of former seasons. The *Grocer and Country Merchant* says that the yield on this coast for the past two years is in apportionment and in the aggregate about as follows:

	1891. Bales.	1890. Bales.
California	35,000	33,400
Washington	32 000	43.000
Oregon	20,000	17,600
Total	87,000	94,000

Shipments outward from this State since the beginning of the current season were 26,000 bales by rail and 600 bales by sea.

Honey.

The market during the year averaged better prices than in 1890. Up to the arrival of new crop, honey quotations were more or less nominal. On first arrivals of 1891 crop the market was quotable at 13@15c. white comb in 1-lb frames, and 12@14cts. for 2 lb frames, with amber at 8@10c., and extracted at 5¾@6¼c. for liquid white, 5¼@5 1-2c. for amber, 5c. for candied. There was soon a narrower range on comb, white going at 12@14c with latter figure obtainable only on 1-lb frames, and amber commanded 9@11c, as to condition. There was very little deviation subsequently from these figures, comb honey at the close of the year being quotable at practically the same prices as were current in June. The market for comb, however, has not shown any special animation at any time during the season, and a very large portion if not the bulk of supplies now remaining are of this description. Extracted honey advanced about half a cent in July, with the range 5-1-2@6-1-2 cts for the various qualities, and there was a further hardening in values of about quarter of a cent for the better grades in October, dark and candied continuing at old figures. The market for extracted at the close of the year showed decided firmness for best qualities, with fairly active export demand, and hardly enough offering at prevailing rates to accommodate the inquiry. White liquid extracted was not obtainable under 7 cts., and little of amber color, even where candied, for which 6 cts. would be accepted by holders.

The crop in 1891 was short, because in the southern counties of the State, where most of the apiaries are conducted, the season was backward, with much cool and foggy weather, unfavorable for the development of saccharine matter in the white sage and other wild flowers upon which the beemen most depend. Receipts in San Francisco in 1891 were 12,362 cases, as against 19 800 cases in 1890, and 11,428 cases in 1889. The total export movement for the year was only 10,250 cases, while in 1890 the shipments aggregated over 23,000 cases. Of the total export movement for 1891, about 8,200 cases were forwarded since the beginning of the current season. The shipments by sea included 4515 cases to England, 1094 cases to Germany, 612 cases to New York, with minor quotations to Australia, British America, the Hawaiian and other islands of the Pacific. The largest single quantity which went forward in 1891 was 1049 cases in November last per ship Langdale for Liverpool. The next largest amount was 960 cases per bark J. C. Pfluger, sailing for Germany in June last, this lot of honey being of the crop of 1890.

Dairy Products.

The receipts from California sources and from the East compare as follows:

	California. Pounds.	Eastern. Pounds.	Totals. Pounds.
BUTTER.			
1891	10,484 900	1,580,900	12,065,800
1890	11.491.500	1,067,700	12,559,200
1889	11,098.600	4,325,000	15,423 600
1888	8,376,700	3,597,500	11,974,200
1887	9 547,100	783,600	10,330,700
1886	9,979 200	627,800	10,607,000
1885	3,019,600	494,400	9,504,000
CHEESE.			
1891	4,427,800	1,820,500	6,298,300
1890	5.146,400	1,672,500	6,818 9 0
1889	4,272,000	1,155,200	5,427,200
1888	3,321,700	1,614,300	4.936,000
1887	3,989,400	968,400	4,957,800
1886	4.070,900	548,100	4,619,000
1885	3,657,500	471,000	4,128,500
	EGGS. Dozens.	Dozens.	Totals. Dozens.
1891	2,156,288	4 525.000	6 681,288
1890	2,479,886	3,602,500	6,082,386
1889	2,66),993	4,210,300	6,871 290
1888	2,210,(15	3,168,741	5,378,756
1887	1,391,745	1,735,335	3,127,080
1886	1,663,200	2,192,900	3,856,100
1885	2,778,280	1,154,090	3,932,370

The above receipts show the unfavorable effect of short forage crop in 1891.

BUTTER.—The market opened in January at 30 to 40 cents for good to gilt-edged, but with freer receipts it weakened off by the middle of the month 2½ cents per pound. These prices ruled until the close of the first week in February, when a reduction, owing to freer receipts, of 1 cent was made. This was soon followed by another 1-cent decline. By the last of February the range was 27 1-2 to 32 1-2 cents, and one week later the range had dropped to 20 to 25. From these prices there was a decline of 1 cent, but by the middle of March there was an advance of 2 cents. The advance only held a few days, when under free receipts and strong selling the market began to ease off, and in the first week in April the range for good to gilt-edged in rolls was 18 to 22 1-2 cents. This range held fairly steady up to the middle of May, when an advance of from 1 to 2 cents took place. At the latter advance the market held steady up to June 10th, when a weaker tone, under heavy receipts, set in, and the market for good was marked down to 17 1-2 to 18 cents and gilt-edged to 21 to 21 1-2 cents. These prices obtained up to July, when an improved feeling set in, and an advance of 1-2 a cent in good and 1 1-2 in gilt-edged was established about July 8th. By July 25th the market, under steady advances, was quoted at 22 1 2 to 23 1-2 cents for good and 27 1-2 to 28 1-2 cents for gilt-edged. The first week in August another advance of 2 cents was established. The latter did not hold long, for under heavy receipts quotations were reduced 1 1-2 cents per pound. From this reduction there was a rapid advance, until the range in the first week of September was 32 1-2 to 39 cents for good to gilt-edged. This brought in free receipts, which caused the market to set back from 5 to 7 1-2 cents, but it soon recovered 2 1-2 cents of the decline. In October there were further slight advances. The market held around 32 1-2 to 37 1-2 cents the remainder of the year, sometimes selling slightly lower and at other times slightly higher.

The dairy industry of this State is fast reaching that point when it will be self-sustaining, and we will not be dependent for supplies on the East during any part of the year. When this point is reached it will no doubt be credited entirely to the establishing of creameries. During the year quite a number of large creameries have been built and equipped with the latest improved machinery. Nevada, Washington and Oregon report increasing attention to building creameries. Creamery butter sells at an advance over round rolls, owing to its being considered of better quality.

The first half of the year the butter market was unfavorably affected by free importations of Eastern creamery—not even low prices keeping it out, but the latter half the receipts of Eastern creamery gradually fell off, not even higher prices being an inducement to importers. Why it could not be marketed on this coast at a profit was that the markets on the Atlantic coast made such an up move, under lighter supplies, that it was more profitable to send butter from the Central States eastward than westward to this coast. Several firms here, having butter contracts in the Central States, secured quite a profit by allowing the sellers to cancel them.

The high prices of butter the latter part of the year caused a strong effort to be made to introduce oleomargarine and butterine.

CHEESE.—The light rains during the winter of 1890–91 and the spring of 1891 made short pasture, which was felt in the lessened output of cheese, notwithstanding the newly established creameries added largely to the general production. The market throughout the year, taken as a whole, was favorable to manufacturers, owing to the average range of values being on a higher plane than usually obtains. The receipts of Eastern at this city in 1891 were larger than ever before, yet they went into consumption without seriously disturbing the market. The lighter supplies of butter have had a favorable influence on cheese, for prices for the latter generally moves in sympathy with butter values.

The market for mild cheese opened the year at a range of 10 to 14 cts. per lb. By the last of January, the more choice grades had been advanced to 15 cts. as an outside figure. The 10 to 15 cts. range held up to March, when a weaker tone set in, and by March 10th the range was reduced to 10 to 13 1-2 cts. The decline was brought about by free receipts and the known heavy supplies to draw from. The market gradually settled until by the last of March the range was 9 to 12 cts. In April the market ruled at around 8 1-2 to 12 cts., in May at around 8 to 11 cts., and in June at around 7 1-2 to 10 1-2 cts. In July the market began to strengthen, which resulted in the month going out on a strong market at a range of 9 to 12 cts. The market held strong throughout August. In September the range was advanced one-half ct. Under moderate receipts and a good demand with poor supplies, the range in October was 11 to 15 cts., at which it held the remainder of the year.

EGGS.—One of the anomalies of the times is the small attention given to poultry, either as a special industry or as an auxiliary to the farm. There is nothing that gives better returns than poultry, when properly cared for and strict attention given to feeding and cleanliness, and seeing that the coops are free from draughts and care taken to protect them from sudden changes in temperature. Our wet and dry seasons make these precautions absolutely necessary to secure health and the best results. We have to import from the Central States fully 25 per cent of the poultry consumed in this State, while one-half of the eggs consumed are imported, with the receipts in this city of the latter being double that of the Californian market. The lessened time in transit between the Central States and this coast, together with improved means of transportation, enable dealers in those States to lay eggs down in our city within a few days after purchase, which makes them comparatively fresh. In the majority of cases they are fresher than the general run of eggs received from the more distant points in this State.

The year 1891 like its predecessors, maintained a steady decline in values up to May or June, with slight fluctuations, when it turned for the better and steadily advanced under fluctuations up to October or November, after which it remained firm to the close of the year. January of 1891 opened on an easy market at a range of 27 1–2 to 30 cts. for good to selected; by the 15th it fell off 2 1–2 cts., then ran up 5 cts., after which the range began to steadily set off until by March 15th it was 15 to 22 1–2 cts. In March and April the market fluctuated around 15 to 22 1–2 cts. In June the range was from 3 to 4 cts. higher, which held up to July 20th, when under a steady advance the range was on July 25th 22 1–2 to 29 cts., with the trade running on strictly choice fresh laid, owing to hot weather. In August there were steady advances, the month going out on a 27 1–2 to 35 cts. range. September witnessed still higher prices; by the middle of the month the range was 32 1–2 to 42 1–2 cts. for fair to choice selected. In October the market held steady up to the 15th, after which it advanced to 40 to 50 cts. The market in November and December held strong, fluctuating between a range of 35 to 45 cts. and 40 to 50 cts.

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WHEN IN TULARE patronize E. D. CASTLE'S livery and feed stables.

Humboldt County Progress.

BLOCKSBURG, Jan. 9, 1892.

TO THE EDITOR: I send you a few items from our mountain village, which may interest some of your readers seeking homes in a high, healthy and fertile country, 1650 feet above the level of the sea. For the past 20 years our hills have been used simply as pastures for countless sheep and cattle, but of late years small farm holders have made homes on 40, 80 or 160 acres of land, and it is surprising what fine places can be made wherever industry and perseverance have been employed. Of course some failures have been made, but they can be traced to lack of energy or mismanagement in nearly every case.

We are too near the coast for our winters to be very severe. Although we usually have some snow, it is not in sufficient quantities to prevent us from having fresh vegetables the year round. Celery, green onions, lettuce, turnips, cauliflower, etc., being on hand all winter, and young cabbage in April. Yesterday I noticed strawberries in bloom, and I have geraniums planted out in our garden nine years ago still flourishing. Fruit of all kinds grow to perfection, even on our dry hillsides, while on the river and creek bottoms the climate is perfect in winter and oranges thrive.

People are just awakening to the value of the land for fruit. A company of moneyed men from Eureka have bought a tract of 340 acres of land (the Francis place, one and one-half miles from our village) which they intend setting out in French prunes and apples. They are putting the land in order to set out 40 acres right away. Mr. Casterlin on the adjoining ranch will add 800 trees to his present orchard. V. Hope will set out several hundred trees, thus adding to his already large orchard and vineyard. Mr. Burgess is also enlarging his orchard, besides many others too numerous to mention. Apples, pears, peaches, plums, French prunes and grapes of all varieties grow to perfection; also grain, corn, etc., and alfalfa will grow even on our hillsides without irrigation, and by next harvest we shall have a flour mill in operation about nine miles below us. Our only drawback has been too great distance from market, but we are assured of more roads ere long, and Eel river a few miles distant is navigable to Humboldt bay. We are also promised a railroad through our county inside of two years; there is a gap of about 111 miles to build. These facts are from one who has lived here for 17 years.

MRS. E. HOPE.

[Our correspondent sends also a box of apples grown on the hillsides in the region which she describes. They are eloquent testimony to the adaptations of the district.—ED. PRESS.]

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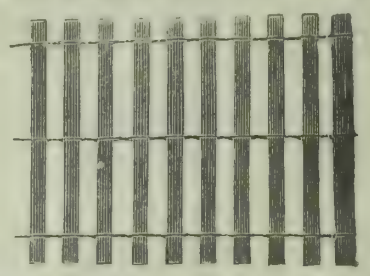
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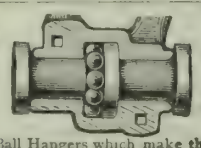


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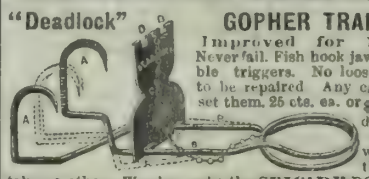
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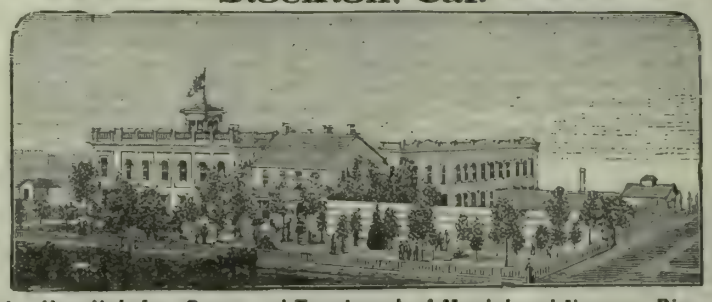
REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:

1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
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9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.
All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

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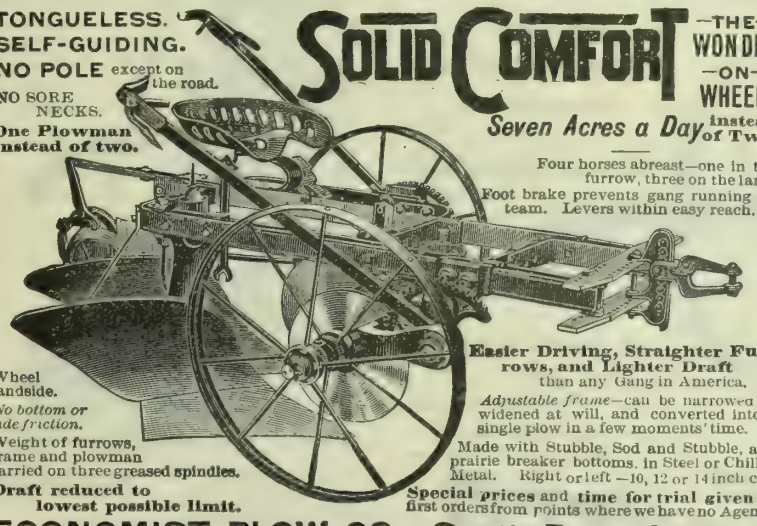
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Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

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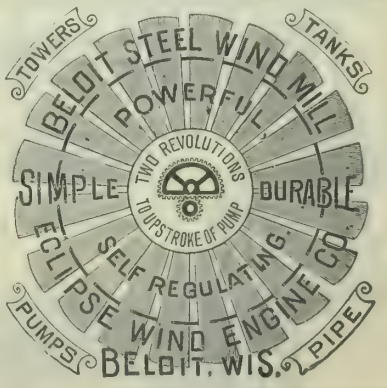

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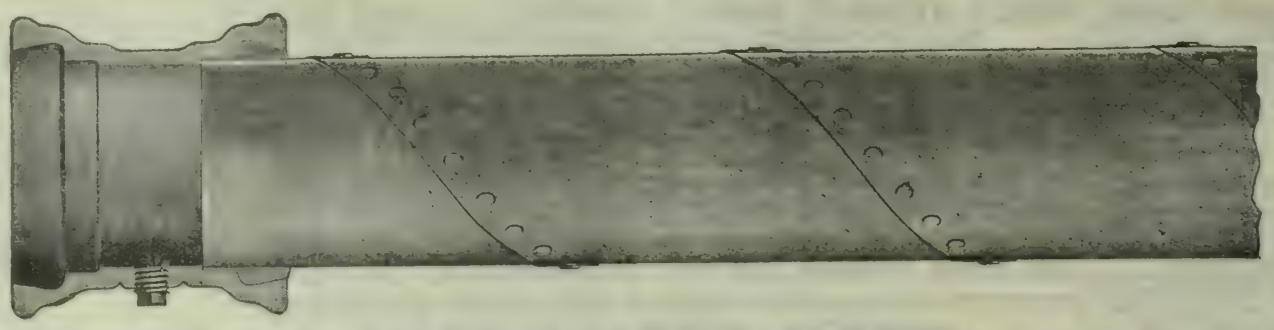
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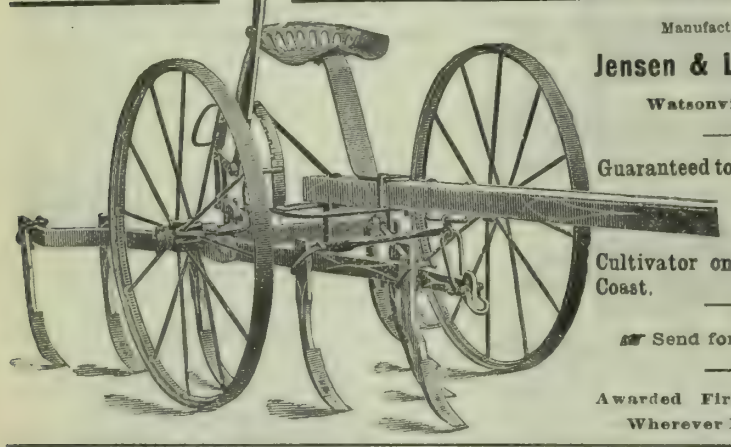
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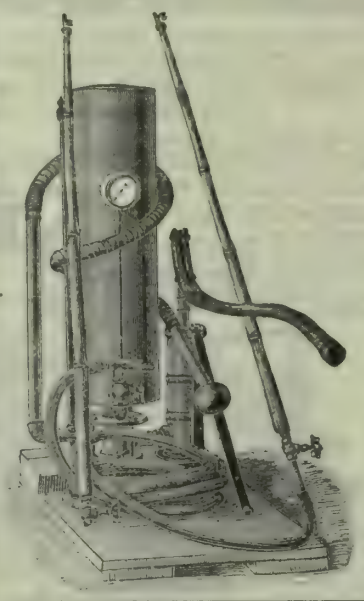
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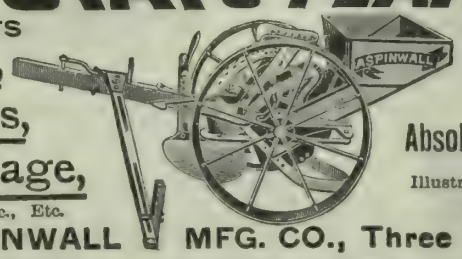
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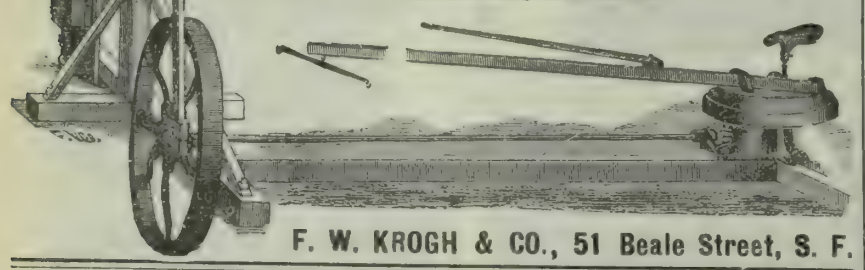
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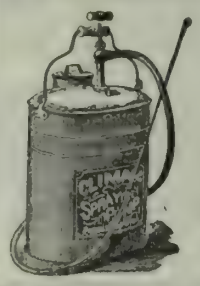
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BEST IN THE WORLD.

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Equipped complete, ready for use, with hose, short-hand extension and our latest improved spray nozzle.

We refer to more than 1000 California orchards where our machinery is in satisfactory operation. In many instances single fruit growers have in use from five to fifteen Chapman outfits.

We manufacture several sizes and styles. Write for illustrated descriptive catalogue and price list.

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Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

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S. L. ALLEN & CO., 1107 Market St., Philadelphia.

Selling Walnuts at the South.

In our issue of January 9, we copied from the Ventura *Free Press* an item relating to the sale of southern grown walnuts which it seems from correspondence just received was incorrect in some particulars. We therefore reprint the item and the comments which we have received on the subject:

Manipulation of Walnuts.

A well-known walnut grower of this county was talking about walnuts the other day and went on to tell how the market was worked to the grower's detriment. "At the sale of the Los Nietos walnuts this fall," said he, "two buyers were in field from Los Angeles. One of them represented a house which usually tries to get in on every product, and the other was a young man representing most of his own capital. The young man outbid the other on a forty-car-load lot, by a fraction of a cent a pound, and he was given the walnuts. The other man, in order to teach those growers a lesson, went home and sent word East and to those in the business, not to buy walnuts, as there was a big stock and prices would fall down. As a result the purchaser of the nuts could not dispose of his buy, and as he was unable to make the proper advance the Los Nietos growers are still in possession of their crop. Of course this is not a usual case, bnt it goes to show how unprincipled some commission men can get."—*Ventura Free Prsss.*

FROM THE CONTRACTING FIRM.

LOS ANGELES, Jan. 25.

TO THE EDITOR:—Referring to your article on 33d page of your January 9th edition, headed "Manipulation of Walnuts," wherein you quote from the Ventura *Free Press*, would state that your item, as far as it pertains to the action of the house which failed to secure the walnut contract, and its subsequent effort to break the market, was perfectly correct.

As to the result mentioned, viz: "That the purchaser of the nuts could not dispose of his buy, and that the walnuts are still in possession of the Los Nietos growers," we enclose you two copies of the Downey *Champion*, under date of Dec. 26th and Jan. 16th. We have marked two items. The item of Dec. 26th gives you an itemized list of growers and respective amounts paid them for their crop. Item of Jan. 16th plainly shows you that the article which appeared in your issue is not only incorrect, but does us great injustice.

We are the firm who secured this walnut contract. We received every sack of walnuts covered by our contract, and had them all sold far in advance of the time that growers could get them ready for shipment. Our contract gave us till Dec. 20th to receive the nuts. We had them all received and shipped by latter part of November (some 35 or 36 carloads).

It is probably unnecessary to state that the firm who took this reprehensible manner of getting even, utterly failed to accomplish their object, as their reputation for slippery dealing was sufficient to keep the trade from putting any confidence in them. Their efforts worked injury to themselves, as the walnut growers in this section and Ventura are well acquainted with the circumstances, and will bear them in mind for future use.

SIMPSON-MONTGOMERY FRUIT CO.

COMMENTS BY THE DOWNEY "CHAMPION."

One of the enclosures to which our correspondents refer is the following:

As the representative journal of the Los Nietos valley, the *Champion* cannot allow certain inaccuracies in the foregoing article to pass without correction, particularly as the RURAL PRESS, a journal of great popularity and influence, and extensive circulation, in its issue of the 9th inst., republished the article and sent it forth to mislead its thousands of readers.

Though the actions of rival dealers to depress the market of a great staple crop of this valley is a matter of deep concern to our growers, it is not our purpose at this writing to refer to the reprehensible charge laid at the door of an unsuccessful bidder.

"As a result, the purchaser could not dispose of his buy, and as he was unable to make the proper advance, the Los Nietos growers are still in possession of their crop." This much of the article we pronounce without truth. The successful bidder received all the walnuts contracted for by him, paying the Ranchito and Los Nietos Walnut Growers' Association the handsome sum of $58,020.83, cash.

Furthermore, the officers and directors of the association are wealthy and shrewd business men who transact their affairs after correct business methods. The successful bidder for their walnut crop is required to enter into a written contract, and secured by heavy bonds. The article quoted implies a slip-shod method of doing business, not in accord with the reputation and business ability of our walnut growers and is calculated to do them great harm. We feel assured that the RURAL PRESS will make due correction.

We are glad to made the correction both for the sake of setting the matter right before our readers and to emphasize as well the fact that the walnut producers of the Los Nietos region have an effective organization through which they are doing business successfully. This is an item of general importance and significance.

ENTOMOLOGICAL.

Mr. Kœbele's Mission.

Prof. D. W. Coquillett, Agent U. S. Division of Entomology, stationed at Los Angeles, writes to Hiram Hamilton, President of the Orange County Horticultural Commission, as follows:

The short note I sent you in reply to yours of the 1st inst., asking for information concerning the ladybirds recently sent me by Mr. Kœbele, did not convey as much information as the subject demands, and I have therefore thought it well to write you more fully upon this subject.

I judge from the wording of your letter that you have seen the article in the San Francisco *Chronicle* of the 27th ult., giving an interview with the officers of our State Board of Horticulture. A few of the published statements will require modifying; thus, instead of 30 species of beetles being represented in the package it contained only 14 species, and instead of these attacking all the different kinds of insect pests that infest citrus and deciduous fruit trees in this State they are thus far known to prey upon less than half a dozen different kinds. It will be many years yet—perhaps centuries, but more likely never—before we succeed in introducing beneficial insects that will free our fruit trees of all the insect pests that attack them.

As regards the two species that prey upon the red scale, and which, therefore, concern your people most, i. e., the blue ladybird (*orcus chalybeus*) and the six-spotted ladybird (*orcus australasiae*), I cannot as yet speak with any degree of assurance. While they may in time free our citrus trees of these pests, the statement given out that they will be to the latter what the vedalia was to the cottony-cushion scale should be received with a great degree of allowance. The work which the vedalia accomplished is without precedent in the entire annals of economic entomlogy, and, therefore, we can scarcely hope for a repetition of it in the case of the recently imported species.

A word concerning these insects may not be out of place here. Our State Legislature, at its last session, appropriated the sum of $5000 for the purpose of importing beneficial insects into this State from other countries, and turned this over to our State Board of Horticulture; the latter, by a resolution, placed the entire sum at the disposal of Secretary Rusk, of our National Department of Agriculture, with the request that he send Mr. Kœbele on this mission. This he consented to do, specifying that Mr. Kœbele go as an agent of the Department, from whom he would receive his salary and instructions and to whom he is to report. These facts are given on page 38 of Secretary Rusk's annual report for the year 1891. One of the officers of the State Board also informed me that Mr. Kœbele received his instructions from the Entomologist of the Department. It will thus be seen that the introducing of these insects is now in the hands of the United States Department of Agriculture.

Mr. Kœbele will be put in possession of the facts gleaned by Prof. Riley through correspondents in foreign lands, and will be made acquainted with naturalists and other observers who are familiar with the various predaceous and beneficial insects occurring in their several localities. Every possible effort will be made to introduce, propagate and distribute every kind of beneficial insect that will prey upon the different kinds of insect pests found within the State; but until we are quite certain that the species thus introduced will be able to perform the task expected of it, our fruit growers are advised to continue the use of insecticides as heretofore.

Please acquaint the growers in your county with the facts above mentioned, and assure them that when an effectual parasite is received and has sufficiently demonstrated its usefulness, they will be put in possession of this fact at the earliest moment possible.

Alessandro Notes.

TO THE EDITOR:—There has been more continuous cold weather during December and January than ever known in our section before. The frost has done considerable damage to young orchards and seed beds, especially in the low lands of the valley.

There has been very little rain so far, but grain planting is going steadily on, many thousands of acres of new land being seeded, and we can see new camps every day where the plowmen are coming in to break up land. From the high lands, along the foothills, the valley looks like a checkerboard, where the plowed land and the unplowed are about equally divided. Alessandro is improving. Mr. Warner, the Postmaster, has just built himself a fine residence, and a store building where he will dispense groceries and mail matter. New houses are going up every day in the valley, and we have stopped counting them long since. The new brick blocks are now occupied, in Moreno, by grocers, hardwaremen, etc. They now have a blacksmith shop, meat market and a lumber yard, where they seem to be kept busy.

Water is now distributed, in pipes under ground, to most of the ten-acre lots in the tract, and the desert will soon be made to blossom. Everybody seems to be hopeful, in spite of the temporary backset given them by the cold snap, and planting will soon go on with renewed vigor. L. S. LYMAN.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JAN. 26, 1892.

467,681.—MAIL BAG—C. Dickenson, Portland, Or.

467,882.—CAR COUPLING—F. A. Fox, S. F.

467,607 —ROTARY EXCAVATOR—W. P. Humphreys, S. F.

467,685.—EXTENSION LADDER—E. W. Hammon, Medford, Or.

467,687.—FRUIT GATHERER—D. B. Matlock, San Jose, Cal.

467,620.—DISH WASHER—W. C. Nelson, Santa Rosa, Cal.

467,612.—HYDRAULIC MOTOR—E. I. Nichols, S. F.

467,772.—DUMP CAR—C. D. Page, Tacoma, Wash.

467,614.—CAR COUPLING—David Stark, S. F.

467,696.—FLASH-LIGHT BURNER—S. M. Williams, S. F.

The following brief list by telegraph, for Feb. 2d, will appear more complete on receipt of mail advices: Mark Anthony, Berkeley, and W. C. Savage, Oakland, Cal., thimble and bushing for barrels; G. W. Bedbury and E. F Badgley, San Francisco, pile armor and casing; Edgar M. Brideweli, McMinnville, Oregon, anti-friction axle-box; Henry Bryan, Modesto, Cal., grain-cleaner attachment; Columbus F. Cardwell, Bridal Veil Oregon, door securer; James A. Christy, San Francisco, Cal., telephone holder; Gilbert T. Franklin, Walla Walla, Wash., gravel-screening machine; Alexis Janin, San Francisco, Cal., amalgamating silver ores: Charles J. Koefoed, San Francisco, band-saw mill; William F. Loan, Portland, Oregon, holders for brushes and dusters; Henry C. Lynch, San Francisco, Cal., cable-grip adjusting device; David R. McKim, Gold Hill, Nev., valve; Dennis O. Sullivan, Spokane Falls, Wash., sling cinch; Robert W. Parker, Camp Huachuca, Ariz., rifle sight; Emlio Prunetti and G. Avignone, Sierra City, Cal., aerial tramway; Fairfax H. Wheelan, Santa Barbara, Cal., separator; Henry G. Gates, San Francisco, ball-bearing device.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

STUMP PULLER.

Removal Notice.

I take this opportunity to inform my friends and the public generally that I have removed to the corner of Brannan and Zoe streets, between Third and Fourth streets, where, with increased room and improved machinery, I will have better facilities to meet the rapidly increasing demand for my machine. It is a fact that many of our American farmers, in an honest effort to clear a timber farm and compete in the price of their products with their more fortunate neighbor of the prairie, have been reduced to a condition nearly approaching that of the Russian serf or Polish Jew, and that men possessing the progressive spirit and boasted intelligence to which our American farmers are justly entitled, should hail with delight the invention of a machine which would elevate them above this condition of affairs, is little to be wondered at, and is fully attested by the many praiseworthy letters which I am receiving from the different sections in which my machine has been introduced; hence the necessity of my seeking more commodious quarters, for just so sure as the earth's diurnal revolution changes the day to night, or its annual revolution changes the seasons, just so sure will the CALIFORNIA STUMP PULLER prove itself the great successful medium in changing the forests of America into a garden spot Illustrated descriptive catalogue sent free on application. Address Geo. Harvey, corner Brannan and Zoe streets, San Francisco, Cal.

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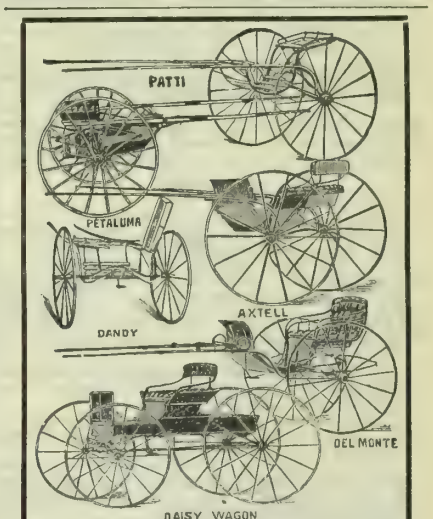
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ST. JACOBS OIL.

He used it freely all over his bruises. I saw him next morning at work. All the blue spots rapidly disappeared, leaving neither pain, scar nor swelling. C. K. NEUMANN, M. D.

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P. H. MURPHY, Perkins, Sac. Co., Cal., Importer and Breeder of Shorthorn Cattle and Poland China Hogs.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

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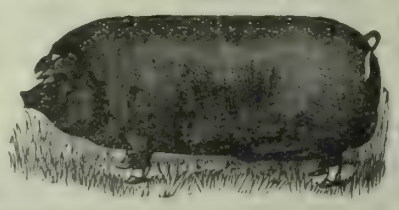
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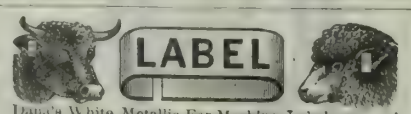
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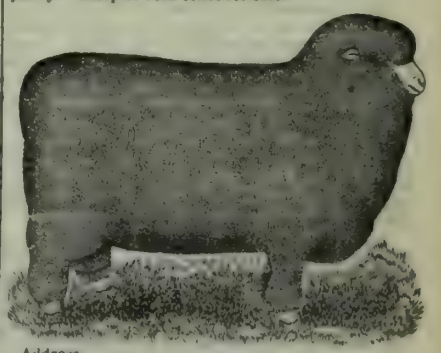
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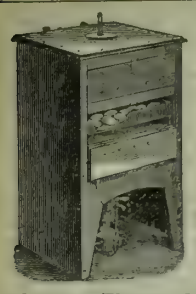
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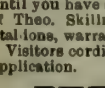


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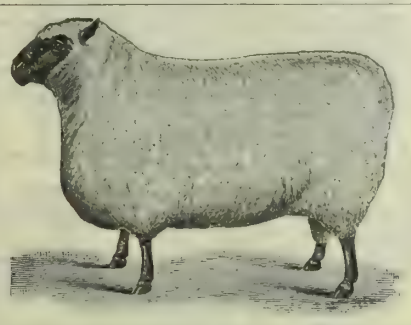
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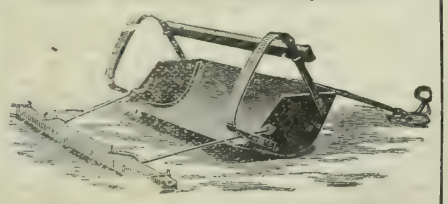
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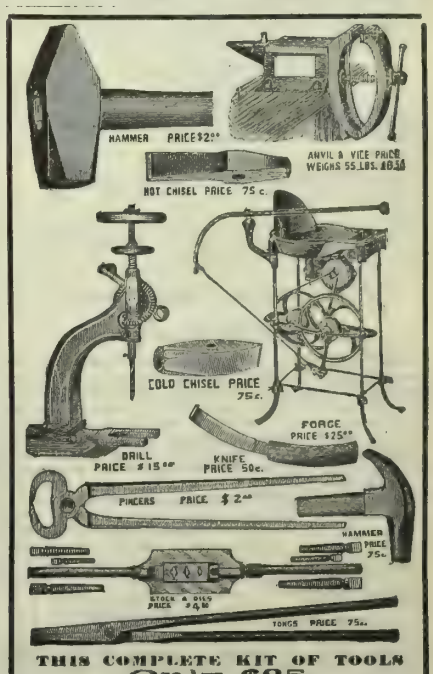
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 3, 1892.

Rains the past week were general, with the southern part of the State visited by a most generous downfall. Previous to this rain, several southern localities were reported to be suffering for the want of rain, with strong fears expressed of a drouth, but now all such fears appear to be allayed. From all information at hand, it appears within the history of the State has so large an acreage been devoted to grain as has been this winter, while the acreage being planted to fruit continues to steadily enlarge. The money market is reported easy, with rates of interest favorable to borrowers who offer first-class security. Wheat charters appear to have touched bottom, for with continued favorable crop weather, ships are disposed to tie up until next season. For new crop business, iron ships, handy sized, are obtainable at 30s, with favorable option to charterers. The introduction of whaleback steamers bids fair to revolutionize the carrying trade of this coast. In a voyage rounding Cape Horn they make steamship time, while carrying a sailer's cargo. In England a large number is being built.

Foreign Grain Review.

LONDON, Feb. 1.—*Mark Lane Express:* English wheats again declined 1s. Foreign wheats are depressed; California, 40s 3d; American Red Winter, 38s 6d. Barley is neglected; oats are dull; American, 18s 3d. Corn is dull; American, March shipments, 21s 3d. At to-day's market, American wheat lost 6d and oats declined 3d. American flat corn dropped 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.	June
Thursday	....	....	7s11½d	7s11d	7s11½d	7s11d.
Friday	....	7s11½d	7s11d	7s10d	7s09½d	7s10½d
Saturday	....	7s11d	7s10d	7s09½d	7s09d	7s09½d
Monday	....	7s11d	7s09¾d	7s8½d	7s08½d	7s8½d
Tuesday	....	....	7s09½d	7s8¾d	7s08¾d	0s8¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s3d	40s3d	40s3d	Heavy.
Friday	40s3d	40s3d	40s3d	Steadier.
Saturday	40s6d	40s6d	40s0d	Weaker.
Monday	39s6d	39s3d	39s3d	Very dull.
Tuesday	39s3d	39s3d	39s3d	Quiet but steady.

To-day's cablegram is as follows:

LIVERPOOL, Feb. 3.—Wheat rather easier, California spot lots, 7s 10d; off coast, 39s: just shipped, 39s; nearly due, 39s; cargoes off coast, slow; on passage, weak; Mark Lane wheat, very quiet; French country markets, very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	170	171¼	171	170⅛	167⅝
Friday	170½	171½	172⅛	159⅛	166⅛
Saturday	169⅝	170½	171	169⅝	166
Monday	169	170⅛	170⅛	168⅛	165⅛
Tuesday	167	168½	168¼	167	163½

The following is to-day's telegram:

NEW YORK, Feb. 3.—Wheat, 99¾c for February, $1.01½ for March, $1.00¼ for April, 99½c for May, 97½c for June and 96¼c for July.

CHICAGO, Feb. 3.—Wheat, 88¼c for May.

San Francisco.

WHEAT.

	Buyer Season.		Buyer 1892.		Seller 1892.	
	H.	L.	H	L.	H.	L.
Thursday	170¾	170½	....	....	....	....
Friday	169¾	167¾	....	....	....	....
Saturday	165½	164¾	....	....	147½	147⅝
Monday	164	162¾	....	....	143	142¾
Tuesday	162¾	161½	....	....	143	142¾

The following are to-day's recorded sales on Call:

Morning Session Buyer Season—100 tons, $1 60½; 2800, $1 60¾; 1100, $1 61; Seller 1892—3.0 tons, $1 41½; 100, $1 42 ₩ ctl. Afternoon session buyer season 100 tons, $1 61½; 600, $1 61⅝; 700 $1 58½; 800, $1 58¾; 300, $1 59; 100, $1 58¾. Buyer August 500 tons, $1 44. Seller 1892—100 tons, $1 41; 200, $1 40½; 100, $1 40¼; 100, $1 40¼ ₩ ctl.

BARLEY.

	Buyer Season.		Seller Season.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	107¾	107½	....	....	....	...
Friday	106¾	105¾	101½	101½	...	....
Saturday	103¾	103¾	....	....	....	....
Monday	103	101½	98½	98	....	....
Tuesday	102¾	101¾	....	....	90	90

The following are to-day's recorded sales on Call:

Morning session—Buyer season: 100, tons, $1.00¾; 200, $1.00¼; 3.0, $1.00½; 200, $1.00¾; 300, $1.00⅝ ₩ ctl.

Afternoon session Buyer season: 500 tons, 99½c; 300, 99¾c; 250, 99c; 100, 98½c; 200, 98¼c; 100, 98½c; 100, 98¼c. May—100 tons, 94½c; 100, 94¼c ₩ ctl.

Markets by Telegraph.

Eastern Lima Bean Market.

NEW YORK, Feb. 1.—There is rather more interest manifested in California Lima beans by local and out-of-town firms, and between reports as to transactions in the Eastern distributive centers and advices from primary markets, a difference is found that arouses curiosity if nothing else. The popular quotation on the coast is now 2¼c ₩ lb. It is learned however, that bids on upward of 10 carloads have been solicited. Not long ago this line was purchased at $1.62 ₩ bushel landed here, to arrive by steamship. Carload lots to arrive by rail route have since been sold at $1.86, landed here, and smaller parcels at $2 and a shade under, spot. From New England points it was advised carloads had been offered to arrive there at 3c ₩ lb, within the past few days.

Eastern Wool Markets.

NEW YORK, Feb. 1.—There is more activity at seaboard markets, but there is nothing to strengthen the low tone of prices. Manufacturers admit of good orders in view, but insist that they are to be filled on the basis of recent raw rates. This is somewhat confirmed by their "shipping around" policy, and as they so meet tired holders and orders to realize upon consigned parcels, they control the situation. Fleeces are really off; double X Ohio sold in Boston at 29@30c; Delaine stock, 32@34½c. On unwashed wool the Pacific Coast shows the best range, but there were certainly intermediate lines of spring sold low enough to indicate the prevalent weakness. The London market opened steady for marks suitable for American. The sales at Boston were 2,206,400 pounds of domestic, including 215,000 spring California at 16@24c; 50,000 on private terms; 1,037,000 foreign, about half Australian, at 32@41c. The first was cheap carpet. Philadelphia's sales were confined to moderate current wants at no better prices.

Eastern Hop Market.

NEW YORK, Feb. 1.—Spot eased off one-half on choice Friday. Brewers bought lightly, and cables, though not lower, have not favored buying for export. Common to choice State range 22@27c; ninety-ones, Pacifics, 21@26c; other unchanged. Options close lower: February, 25c asked; March, 26c; April, 24c; May, 26c; June, 27c, with 25c bid; July, 27¼c asked, 26c bid. The call system does not yet meet full favor. A movement to discontinue it was rejected by a small majority. The impression somewhat obtains among many old-fashioned dealers, particularly brewers, that the new system has a feverish tendency upon quotations. They also fear that "paper" hops may be detrimentally introduced, though prominent operators on 'Change say emphatically that the fear is groundless.

Eastern Dried Fruit Market.

Unpeeled evaporated peaches are offered freely here and at Philadelphia at 6½c. Prunes—There is a return of a good undertone, with some business, not of sufficient volume, however, to enlarge shipments. Bags, four sizes, 7@7¼c; five sizes, 7½c. Boxes five sizes, 8¼c; four sizes, 8@8¾c. Fifties and sixties brought 8¾c. Raisins are quiet. London layer California raisins are doing a shade better. Apricots—Good bags bring 7@7¼c; fancy, 9c.

CHICAGO, February 2: Prunes and raisins meet with a steady demand, and choice grades are firm. Apricots and peaches of fair quality sell fairly, but there are a number of only fair lots on sale which are dull; the demand for these fruits is from the better class of dealers, and as prices are low only the finest grades are wanted.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 1, '92, were as follows:

Flour, qr. sks	86,930	Bran, sks	5,191
Wheat, ctls	28,223	Buckwheat "	189
Barley, "	15,276	Middlings "	2,041
Rye, "	411	Chicory, bbls	120
Oats, "	1,511	Hops, "	....
Corn, "	522	Wool, "	141
*Butter, "	608	Hay, ton	1,933
do bxs	12	Straw, "	75
do bbls	....	Wine, gals	246,670
do kegs	....	Brandy, "	14,800
do tubs	....	Raisins, bxs	1,567
do ½ bxs	118	Honey, cs	97
†Cheese, ctls	261	Peanuts, sks	486
do bxs	....	Walnuts "	....
Eggs, doz	80,910	Almonds "	84
do " Eastern	11,970	Mustard "	....
Beans, ctls	5,025	Flax "	....
Potatoes, sks	15,740	Popcorn "	....
Onions, "	1,195	Broom corn, bdls	33

*Overl'd, — ctls. †Overl'd, 506 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Feb. 1, '91.	July 1, '91 to Feb. 1, '92.
Flour, ½ sks	186,115	302,788
Wheat, ctls	794,057	1,085,773
Barley, "	181,337	28,207
Oats, "	222,788	330,974
Wool, bales	5,790	5,733
Hops, "	333	339
Rye, sks	....	3,299
Potatoes, sks	44,441	41,456

Cereals.

The Produce Exchange Call Board, reports the following stocks of grain, etc., in city Call Board warehouses at the close of January, and on the 1st of that month.

Tons.	1st.	31st.
Wheat	4,827	2,648
Barley	17,965	16,763
Oats	5 032	4'334
Corn	3,350	2,434
Bran	1,210	216

At the close of January, 1891, the stocks were as follows: Wheat 7796 tons; Barley, 9867; Oats, 1684; Corn, 3033; Bran, none. The receipts in January, 1892, were 5650 tons barley, 1232 oats, 986 corn and 2341 bran. The stock of wheat, January 31, 1892, in all Call Board warehouses, was as follows in tons: San Francisco, 2648; Stockton, 44.824: Port Costa, 58,275. Total, 105,747; as against 153 086 tons on December 31, 1891.

European mail advices report as follows: "Reports from Spain are quite favorable in regard to the appearance of the wheat crop. It is expected that there will be some improvement in the Spanish trade in foreign wheat, as native wheat is offered sparingly. The crop reports from France the first week in January were satisfactory. In Germany the recent severe cold weather had not been favorable, but the general condition was fairly good. In Hungary the outlook was still favorable. In Russia, according to the official reports, the autumn drouths in the Southern and Southwestern Provinces prejudiced the wheat crops to some extent. From the Argentine, reports have been received of serious damage to the wheat crop by rain. [Later advices report the Argentine crop unprecedently large.—COMMERCIAL EDITOR RURAL PRESS.] In reference to the general situation, *Beerbohm* says that, while the stocks of wheat at present amount to about 210,000,000 bushels in sight, including American on passage and in Europe, against about 167,000 000 bushels last year, it must be borne in mind that the requirements are also much larger. For instance, the British and French requirements this year are put at 264,000,000 for the entire year, while net imports so far this season have been 125,700 000 bushels, leaving a balance of requirements of about 139,000 000 bushels, or about 21,000,000 bushels more than for the same time last year. If the extra requirements of Belgium, Holland and Germany until the next harvest are added, the total requirements will not fall far short of 48,000,000 bushels more than last year. Leaving Russia out of the question, Australia and Argentine will not be able to equal last year's contribution, and America and Canada will have to make good Russia's shortage, and, to some extent, the lessened supplies from other countries. India is not likely to repeat her last year's unprecedented exports of 32,000,000 bushels from Jan. 1 to July 31, or, in other words, America and Canada will have to supply at least 144 000,000 bushels up to July 31st.

The first report of the wheat crop of Berar, India, states that the area is 834,997 acres, and the general condition of the crop favorable. The exports of grain from Braila-Galatz last year were 12,400,000 bushels of wheat, 10,600,000 bushels of corn, 4,900,000 bushels of barley and 2,200,000 bushels of rye.

Up to the first of January France had imported 42,224,000 bushels of wheat. Holland imported in the past year 22,500,000, against 16,500,000 last year; rye, 16,300,000 bushels, against 15,800,000 bushels.

Wheat the world over has been receding in price under strong systematic bear pressure, based largely on favorable crop prospects in Europe and in the United States. Late advices from Russia are confirmatory of previous received information that the crop outlook is all that can be desired for a large yield. While the present outlook is favorable to bears, yet the fact must not be lost sight of that weather influences will soon be an important factor in controlling values, and that this being the case any unfavorable turn in the weather, either at home or abroad, will undoubtedly bring about higher values for wheat. Receipts of wheat from up north are lighter. The falling off, while largely due to low wheat charters on Puget Sound and at Portland, is also traceable to the rapid decline in the price of wheat in our market.

On Call, the dealing in wheat and barley futures has shown more activity, with monthly options beginning to be dealt in. After the present season monthly options are to be dealt in almost entirely, which, it is accepted, will be more favorable to the wheat interest.

The bears on Call have succeeded in hammering barley to still lower figures, and this, too, in the face of reduced receipts, smaller stocks and depleting supplies in the country under a continued large consumption. From up north receipts continue light. A threatened strike by hands in the breweries is taken advantage of by buyers to try and force brewing grades to lower ranges.

Oats are steady with a firm tone reported owing to light receipts and light supplies to draw from. The receipts of Californian the past week show a slight increase over preceding weeks.

Corn is stronger under an improving export demand, but fears that the Central States will throw liberal quantities on this market in the event of higher prices being asked acts as a damper and at present is against sellers.

Rye is weak and slow.

Buckwheat is steady.

Feedstuff.

Bran and middlings are weak at lower prices. Ground barley is selling at lower prices, but feed meal is steady. While the consumption of ground feed is falling off, yet it is in excess of former seasons, when pasture was about what it is now.

Contrary to the general expectations held by dealers, hay holds to strong prices under continued free feeding and light obtainable supplies. All advices report that range and pasture feed is steadily improving.

Dairy Produce.

The butter market has ruled weak and in buyers' favor. Freer receipts with buyers confining their purchases cause a company which is a large receiver to force the market so as to sell to lower figures. Several firms report that they place their consignments at full figures, although they are compelled to follow the downward move. Improving pastures and an increasing number of milch cows will soon bring the receipts of butter up to high figures.

Cheese is unchanged so far as quotations are concerned, but the tone of the market is weak with a downward tendency.

Eggs have sold at lower figures. The demand is increasing, which fairly cleans up the market. Receipts are increasing from all shipping points in this State. The receipts of Eastern are decreasing.

Fruit.

Apples are fairly steady. Receipts do not appear to be so large, while the demand shows no falling off. Choice mountain apples are readily placed at outside quotations. Oregon continues to send us liberal supplies.

The receipts of oranges continue quite large, but as the bulk is poor, low prices are still the order. Shipments eastward are unusually large. The free shipments are being made so as to take advantage of the 90c freight rate. If growers send as poor stuff East as they do to this city, it is calculated to have an injurious effect by creating an unfavorable opinion with Eastern consumers. For the good of the industry it would be much better to destroy trashy stuff than attempt to market it. California oranges' reputation stands too high to have it undermined by either frosted or windfall oranges.

In our market the quotations for oranges take on a wide range, being governed by the quality and demand.

The dried fruit market continues unsettled and irregular, making quotations more or less nominal. To force sales, low prices must be accepted, while to buy full prices are paid. Choice large prunes are scarce and higher. All choice grades of fruit have a stronger tone.

Raisins are slow, but holders of choice London layers appear to entertain firmer views. It looks very much as if the market will very soon begin to do better, but of necessity this will depend upon the demand from the Eastern distributive centers.

Vegetables.

Spring garden truck continues to come to haud from Los Angeles. For two nights past there has been frost in the bay counties, but so far as we have been able to learn, no serious injury has been done to outdoor plants.

Onions are higher for choice good keepers. Oregon advices report that, owing to the open winter, there has been more sprouting than for years past This being the case, it ought to lessen our receipts from that quarter.

Potatoes continue in oversupply, although toward the close receipts begin to show a slight falling off. Mild, moist weather necessitates more or less marketing of potatoes inclined to sprouting. Large dealers look for an improvement in the market soon. Oregon is increasing her shipments to this city.

Live Stock.

The market for choice, well-conditioned bullocks, mutton sheep and hogs, shows quite an advance. Selling offers have fallen off very materially. This is probably due to better feed causing owners of range stock to withdraw from the market until their stock have taken on more flesh. Stall-fed cattle are in better demand.

Miscellaneous.

From reliable advices up to Feb. 3, the following summary tonnage movement is compiled:

	—On the way—		—In port—	
	1892.	1891.	1892.	1891.
San Francisco	237,958	286,940	*114,182	*67,152
San Diego	27,609	15,300	4,240	.....
San Pedro	1,935	6,519	4,150	11,844
Oregon	24,452	35,811	40,178	
Puget Sound	15,249	16,511	.....	
Totals	302,194	360,181	162,754	78,996

*Engaged for wheat, 1892, 46,710; 1891, 12,997

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891.	1890.
Wheat, ctls	9,919,390	6,478,099
Flour, bbls	661,289	628,288
Barley, ctls	788,306	191,078

Bags are strong at 7⅜ to 7¼ cts

Poultry has held to fairly strong prices. Large, well-conditioned continue to be comparatively scarce.

Honey is in light supply. Fair shipments were made the past week to Europe.

Beans continue dull and heavy under a strong bear pressure. It looks as if supplies are being concentrated in the expectation of better prices in the spring.

Hops continue to rule strong under light obtainable supplies and strong bolding. It is reported that there are buyers in the field for next season's hops. English advices report a strong market, with old-crop hops being cleaned up.

In wool there is comparatively little doing. Eastern mail advices indicate that this year's clip is likely to meet with slightly better prices than have obtained for two years past, but of necessity that is largely dependent upon what fashion will demand in wearing goods.

IN AUSTRIA, experiments are being made with the view of replacing steam by electricity for rapid, long-distance railroad travel.

SUDDEN DEATHS.—It is claimed that eight men die suddenly to one such death among women.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 3, 1892

BEANS AND PEAS.				FLOUR.		
Sayo, ctl	1 75	@ 2 05		Extra, City Mills	5 00	@ 5 25
Butter	2 20	@ 2 65		Do Country Mills	5 00	@ 5 25
Pea	2 45	@ 2 70		Superfine	3 15	@ 3 45
Red	1 75	@ 2 05		NUTS—JOBBING.		
Pink	1 75	@ 2 00		Walnuts, Cal. lb	7	@ —
Small White	2 25	@ 2 65		Do Choice	8	@ —
Large White	2 10	@ 2 45		Do paper shell	8	@ 9
Lima	1 70	@ 2 10		Do Chili	7½	@ 9
Wld Peas, blk eye	1 35	@ 1 65		Almonds, sft shl	11	@ —
Do green	1 70	@ 2 50		Paper shell	13	@ —
Do Eastern do	2 55	@ 2 75		Hard Shell	6	@ 7½
Do Niles	1 30	@ 1 45		Brazil	6½	@ 8
Split	3 85	@ 4 15		Pecans small	12	@ 14
BUTTER.				Do large	15	@ 17½
Cal. Poor to fair, lb	15	@ 22½		Peanuts	3	@ 4
Do good to choice	27½	@ —		Filberts	11½	@ 14
Do Gilt edged	32½	@ 35		Hickory	7	@ 8
Do Creamery rolls	32½	@ 34		Chestnuts	11½	@ 16
Do do Gilt edge	34	@ 35		ONIONS.		
Eastern	20	@ 32½		Silver Skin, Ch'e	1 25	@ 1 60
CHEESE.				Fair to Good	90	@ 1 15
Cal. choice mild	13	@ 14		Cut	70	@ —
Do fair to good	10	@ 12½		POTATOES.		
Do gilt edged	14	@ 15		Early Rose, ctl	25	@ 40
Young America	12	@ 15		Burbank Seedling,	30	@ 50
EGGS.				Do do Salinas	95	@ 1 20
Cal. ranch, doz	24	@ —		Do do Oregon	80	@ 1 10
Do do selected	26	@ —		Do do Humboldt	80	@ 90
Do store	22½	@ —		River Reds	25	@ 40
Eastern	20	@ 25		POULTRY		
FEED				Hens, doz	5 50	@ 8 00
Bran, ton	20 00	@22 00		Roosters, old	5 50	@ 7 00
Feedmeal	26 00	@ —		Do young	6 00	@ 9 00
Gr'd Barley	22 00	@23 50		Broilers, small	4 00	@ —
Middlings	22 50	@24 00		Do large	5 00	@ —
Oil Cake Meal	25 00	@27 00		Fryers	6 00	@ —
Manhattan Food ₩ cwt	1 75	@ 2 00		Ducks	6 50	@ 9 50
HAY.				Geese, pair	1 75	@ 2 50
Wheat, per ton	13 50	@ —		Turkeys, Gobl'r.	11	@ 14
Do choice	15 00	@ —		Turkeys, Hens	14	@ 16
Wheat and Oat	12 50	@ —		Do Dressed	14	@ 17
Wild Oats	11 00	@ —		Manhattan Egg		
Cultivated do	12 50	@ —		Food ₩ cwt	11 50	@ —
Barley	11 00	@ —		PROVISIONS		
Alfalfa	10 00	@ —		Cal Bacon, he'vy, lb	9½	@ —
Clover	12 00	@ —		Medium	11	@ —
Straw bale	50	@ 60		Light	12½	@ —
GRAIN ETC				Lard	9	@ 11
Barley, feed, ctl	90	@ 1 02½		Cal. Sm'k'd Beef	11½	@ —
Do Choice	1 03½	@ —		Hams, Cal salt'd	10	@ —
Do Brewing	1 05	@ —		do Eastern	12½	@ —
Do do Choice	1 10	@ —		SEEDS		
Do do Giltedge	1 15	@ —		Alfalfa	7	@ 8
Do Chevalier	1 10	@ 1 45		Clover, Red	12	@ 13
Do do Giltedge	1 48½	@ 1 52½		White	9	@ 20
Buckwheat	1 70	@ 2 10		Flaxseed	2 50	@ 2 80
Corn, White	1 27½	@ 1 32½		Hemp	3½	@ 4
Yellow, large	1 22½	@ 1 27½		Mustard, yellow	3 25	@ 3 75
Do small	1 26½	@ 1 30		do Brown	3 00	@ 3 25
Oats, milling	1 46½	@ —		WOOL.		
Feed, choice	1 43½	@ —		SPRING, 1891.		
Do good	1 35	@ —		Humb't & Men'cino	20	@ —
Do fair	1 27½	@ —		Sac'to valley	16	@ —
Surprise	1 50	@ —		Free Mountain	19	@ —
Black Cal	1 45	@ 1 75		S Joaquin valley	13	@ —
Do Oregon	1 37½	@ 1 55		do mountain	15	@ —
Gray	1 30	@ —		Oals'v & F'th'l	16	@ —
Rye	1 60	@ 1 72½		Oregon Eastern	14	@ —
Wheat, milling.				do valley	21	@ —
Gilt edged	1 62½	@ —		So'n Coast, def	11	@ —
Do Choice	1 60	@ —		So'n Coast, free	13½	@ —
Do fair to good	1 57½	@ —		FALL, 1891.		
Shipping, choice	1 72½	@ —		San Joaquin	9	@ 12
Do good	1 58½	@ —		Mountain	10	@ 15
Do fair	1 55	@ —		Humb't & Men'cino	14	@ 18
Common	1 52½	@ —		HONEY.		
Sonora	1 55	@ 1 67½		White Comb, 2-lb	10	@ 13
HOPS.				do do 1-lb frame	12	@ 11
1891 Choice to Ex.	24	@ —		White extract'd	6½	@ 7
Fair to Good	20	@ —		Amber do	5½	@ 6½
				Beeswax, lb	22½	@ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, f'a, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com	3	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2½	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	4½	@	—
Do do choice, do	5½	@	—
Do do fancy	6	@	6½
Evap. unpe'd, choice	6	@	—
Do do fancy	7	@	7½
Do Lady Apples	75	@	1 25
Do Eastern, bbl	3 75	@	5 00
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	12	@	18
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	—
Garlic, lb	2	@	2½
Squash, Mrft, tn	4 00	@	8 00
Do Summer, lb	10	@	15
Pumpkins, ton	7 00	@	—
Tomatoes, box	1 50	@	2 00
Asparagus, lb	15	@	20
Peas, green, lb	8	@	12½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 3, 1892

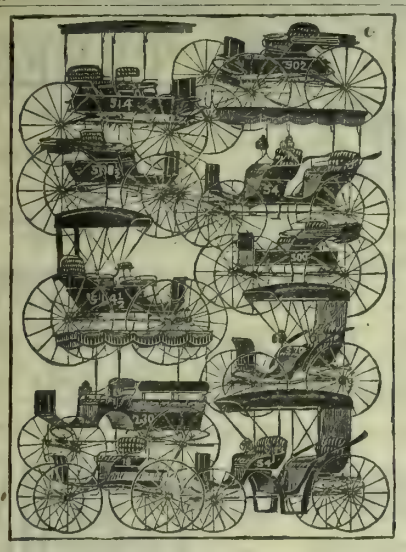
Limes, Mex	7 00	@	—	Do Lady Apples	75	@ 1 25
Do Cal	75	@	1 00	Do Eastern, bbl	3 75	@ 5 00
Lemons, box	1 25	@	3 50	Beets, sk	—	@ 1 00
Do Sicily	5 50	@	7 00	Carrots, sk	35	@ —
				Okra, dry, lb	15	@ —
Oranges, Winter small box	50	@	1 00	Parsnips, ctl	—	@ 1 25
Do Seedlings				Peppers, dry, lb	12	@ 18
River side	1 25	@	2 00	Do green	20	@ 35
Los Angeles	1 00	@	1 50	Turnips, ctl	50	@ —
Do Navels—				Cabbage, 100 lbs	60	@ —
Los Angeles	1 50	@	2 50	Garlic, lb	2	@ 2½
Riverside	2 00	@	3 50	Squash, Mrft, tn	4 00	@ 8 00
Duarte	2 00	@	3 50	Do Summer, lb	10	@ 15
Apples, box	50	@	90	Pumpkins, ton	7 00	@ —
Do choice	1 00	@	1 25	Tomatoes, box	1 50	@ 2 00
Do extra choice	1 50	@	2 00	Asparagus, lb	8	@ 12½

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Grass fed, extra	6½	@	—	Ewes	10	@ 10½
First quality	6	@	—	Lamb, yearling	11	@ 12½
Second quality	5½	@	—	Do Fall	15	@ —
Third quality	4½	@	—	HOGS.		
Bulls and thin Cows	2½	@	3½	Light, ₩ lb, cents	5	@ —
VEAL.				Heavy	4½	@ —
Range, heavy	4½	@	5½	Feeders	4½	@ —
Do light	6	@	8	Stock Hogs	3½	@ —
Dairy	7	@	9			

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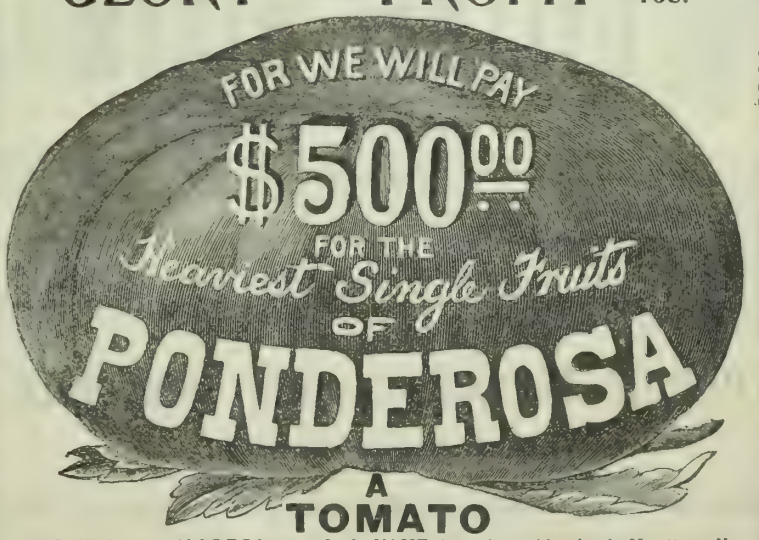
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GLORY and PROFIT AWAIT YOU.



so valuable that we paid $250 last year for the NAME alone when sold under the No. "400." This year we think more of it than ever and to aid in making its merits still wider known we have doubled the amount of the money prizes.

NOW THEN FOR 1892 WE OFFER **$500.00**

for the heaviest single fruits raised from seeds of Ponderosa bought in 1892 in our sealed packets. Full details in Catalogue mentioned below, where also its fine qualities are told at length. It should be grown in

Every Garden in the Land

because the essential features of EARLINESS, SIZE, WEIGHT, COLOR, SOLIDITY and QUALITY, that make the ideal Tomato, this Ponderosa variety possesses in the superlative degree. Delicate persons will always prefer it because it is nearly seedless.

Price per packet 20c, 6 packets for $1, 12 packets for $1.75, 25 packets for $3.

DON'T FORGET, that with every order for a packet or more we will send FREE, our CATALOGUE of EVERYTHING for the GARDEN, (which alone costs us 25 cents) provided you will state where you saw this advertisement. This Catalogue of 150 pages is bound in illuminated covers, and is the largest and handsomest ever issued. It is replete with many engravings and colored plates of all that is new and desirable in SEEDS and PLANTS.

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FRENCH PRUNES on Myrobolan, Peach and Almond Roots.

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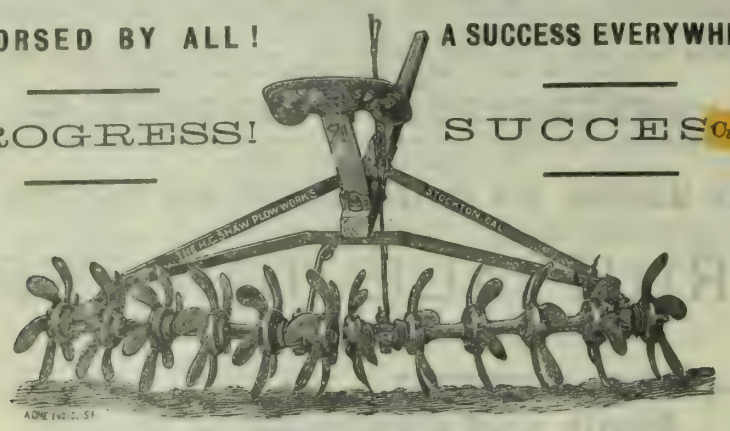
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PROGRESS! SUCCESS!



Style "A."

Greatest Pulverizer of the Age.

SOMETHING NEW AND ORIGINAL.

DO NOT BE DECEIVED BY IMITATIONS.

TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

H.C.SHAW PLOW WORKS

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STOCKTON, CAL.

SOMETHING NEW IN CREAM SEPARATORS.

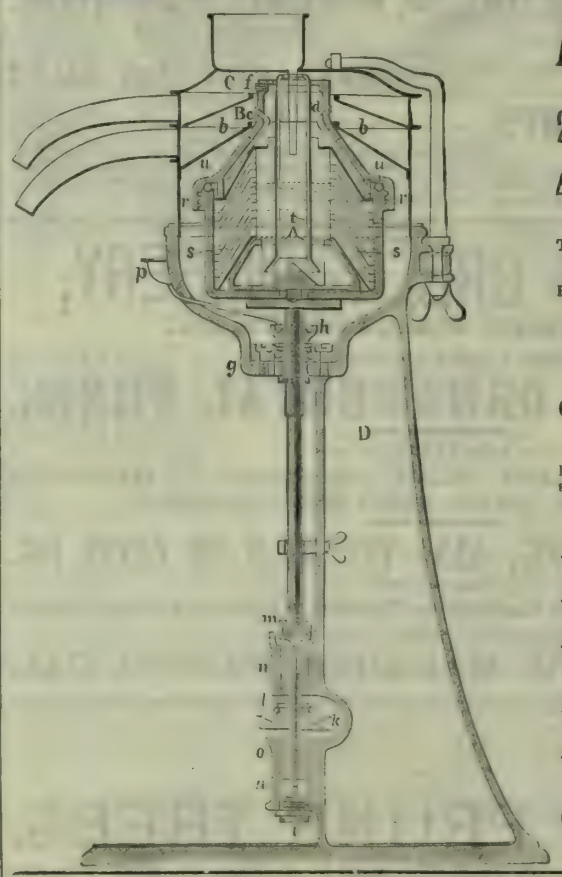
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If You Want a Separator You Want the BEST.

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The Alpha De Laval, both belt and turbine, differs from the Standard De Laval in the construction of the bowl [illegible] of plates distributes the milk and constitutes the "Alpha" invention BY WHICH THE CAPACITY IS VERY [illegible]Y INCREASED AND THE SEPARATION MADE ABSOLUTELY COMPLETE. Meeting with wonderful reception and universal success in every country, its sale is simply a question of supplying the demand.



Alpha A1 De Laval.

ACTUAL CAPACITY:

2000 LBS. PER HOUR.

Essential Speed Only 6000 Rev. at MOST.

Turbine Requires only 35 Lbs. Steam Pressure.

But the Overwhelming point gained is

Thoroughness of Separation,

Getting ALL the CREAM and LEAVES NONE AT ALL.

This saving of cream alone, over what has been accomplished heretofore by any separator soon assumes large proportions.

STYLES AND CAPACITIES OF THE "ALPHA:"

Alpha A1,
Actual capacity, 2000 Lbs. per hour.

Alpha Acme,
Actual capacity, 1200 Lbs. per hour.

Alpha Baby No. 3, Hand or Power,
600 Lbs. per hour.

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300 Lbs. per hour.

Acme and A1, Both Belt and Turbine.

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THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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Manufacturers and Jobbers of Windmills, Pumps, Tanks, TUBULAR WELL TOOLS, Pipe, Fittings, Etc., Etc.

P & B BUILDING PAPER. IDEAL ROOFING. PAINTS.

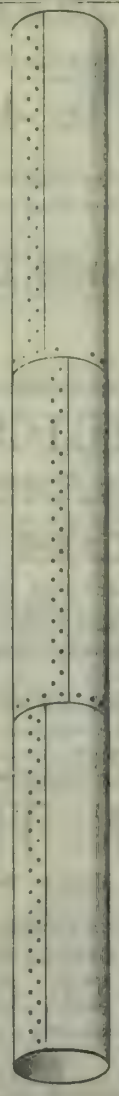
WATER ALKALI ACID PROOF!

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SAMPLES AND CIRCULARS FREE.

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IRON PIPE

ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES.

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

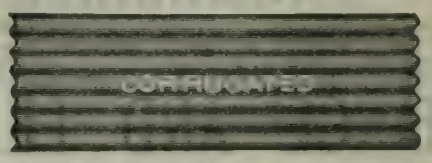
The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a **high grade** of annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit.** It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of

HAY BARNS, DRY HOUSES, STABLES, ETC.

W. W. MONTAGUE & CO.

SAN FRANCISCO—SAN JOSE—LOS ANGELES.



SPRAY YOUR FRUIT TREES AND VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculio prevented by using EXCELSIOR SPRAYING OUTFITS. PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address WM. STAHL, Quincy, Ills.

PACIFIC RURAL PRESS

Vol. XLIII. No. 7. SAN FRANCISCO, SATURDAY, FEBRUARY 13, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

Abraham Lincoln's Log Cabin.

Every reader of the RURAL will, we imagine, be interested in the picture which adorns this page. It represents a cabin still standing in Macon county, Illinois, which Abraham Lincoln assisted in rearing, and which was for several years his home. The photograph from which our picture is taken is of recent date and shows the cabin in its present condition. The only additions to it since Lincoln's time are the shingle roof of the left section, the brick chimney and the glass windows. It would be difficult to find in the whole breadth of the American continent a more primitive or humble home, and yet there came from it a man who, as the Savior of his country, eclipsed even the great fame of him who is justly styled its Father. Measured by all the elements of lofty character and by all the standards of high achievement, Abraham Lincoln was the greatest man America has ever known, and, in our judgment, not all the annals of secular history present a name entitled to be written higher than that of Lincoln. His fame rests upon the topmost summit of human greatness.

How little, how pitifully little, are the loftiest character and the highest achievement dependent upon what the world reckons as opportunity! Lincoln's "opportunities" were not greater than that of any one of the millions of boys born on the farms or in the remote wildernesses of America. Of course, it would be foolish to say that any boy can do what he did, but it is not too much to say that there is not a boy in the land who by the same devotion to high principle cannot develop in himself the character upon which Lincoln's great career was founded, and which after all was the best of the man and of his work. To be a true man in the sense that Abraham Lincoln was a true man, is not beyond the humblest situation or the humblest talents. The lesson of Lincoln's life should be an inspiration to all humankind.

It will interest many to know that the cabin which our picture represents will be taken to Chicago and be on exhibition next year at the great fair. We are frank to say that we are among those who regard the removal of this cabin from the spot where it now stands as a sort of sacrilege and therefore essentially wrong, but there will be in it this advantage—that thousands will see it, and from seeing it, learn a wholesome and practical lesson.



ABRAHAM LINCOLN'S LOG CABIN.

A GREAT FRUIT PROPOSITION.—It is reported that P. B. Armstrong has recently arrived in this State for the purpose of organizing "One large corporation to own so much of the fruit-growing interests as can be profitably admitted to the company, both large and small growers being eligible, provided, however, that enough small growers in a given locality come into the corporation to make the care, culture and handling of their products profitable to the corporation, in which all would be interested to the extent of the agreed upon value of their properties." To accomplish this it is anticipated that it may be necessary to have a capital stock of $50,000,000, and to have this stock listed on the New York stock exchange, and to operate on a broad plan throughout. We give this statement as a current rumor, reserving expression of opinion thereupon until further information is available.

THE assault upon American sailors at Valparaiso grew out of Chilean prejudice and hatred of the American name and flag. This sentiment is most extraordinary when it is recalled that we have always been friendly with Chile, and that only a year ago Chilean representatives joined cordially in Mr. Blaine's convention for promoting closer social and commercial relations between the countries of the American continent. For this changed feeling something or somebody is to blame, and there is serious reason to believe that the fault lies with United States Minister Egan. Our Government ought at once to investigate his course with a view to his dismissal if the insinuations against him are found to have any basis in fact. Egan's appointment was a serious error. He had barely become an American citizen after having made himself extremely offensive as an antigovernment agitator in his own country, and the only motive of his appointment was to "tickle the Irish vote." If Mr. Harrison and Mr. Blaine felt that political recognition was due to an Irishman they might at least have selected somebody who had been long enough in the country to learn its ways and to have assumed definite character as an American citizen.

THE management of the Stanford University is showing a commendable disposition to adapt the work of the University to the practical life of the people of California. A bulletin just received announces for the week beginning February 15th a series of popular lectures for the benefit of fruit growers, to be delivered in one of the University lecture rooms. The subject for February 15th will be "Horticultural Education;" for Tuesday, "The Origination of New Varieties of Fruit for California; for Wednesday, the 17th, "The Selection of Fruit Trees;" for the 18th, "The Location of Orchards and Vineyards;" for the 19th, "The Present and Future of Fruit-Growing in California." These lectures will be delivered by Prof. Emory E. Smith. In conjunction with these lectures, and at different hours, there will be a series of lectures upon insects by Prof. Henry Comstock and another series on the "Fishes of California," "Irrigation" and "Geology." Room and board can be obtained at Menlo Park, Mayfield or any of the neighboring towns.

IN England more than two hundred cities and towns utilize their sewage for fertilizing the farms near by.

Make the Fresno Meeting a Success.

No doubt RURAL readers are all aware that at Fresno on February 18, there will assemble a convention of raisin and dried fruit producers which should receive the attention of all in those important lines of work. The meeting is regularly called by the State Board of Horticulture, at the request of representative committees appointed by several well known local organizations. An attempt has been made to render the meeting broadly representative in its character and we hope it will so prove. To ensure this, we still further urge upon individuals and upon local societies to secure a voice in the meetings, if it be possible to meet the expenditure of time and money which will be required. The time is certainly ripe for united and progressive work among producers of raisins and dried fruits. Their product has been made game of in a thoroughly reprehensible manner. With themselves, and with themselves alone, lies the chance of rendering such disappointment and losses impossible hereafter.

Do not stay away from the meeting because you doubt whether any broad scheme involving the whole State can be made practicable. It may not be necessary to attempt any such scheme as such. It may be possible to arrange for the fullest local management in each fruit region, which shall meet local requirements and still enjoy the advantages of general cooperation. Do not think that your valley has nothing in common with some other valley. It is not true. Suppose your crops are different, your methods different and your difficulties seem to be different, the difference is probably merely superficial and the issues the same. Pool them. You will find that you are all in the same boat, some in the hold, some in the cabin, some hanging over the gunwale—all driven by the same wind upon the same rocks. You can only get into fair sailing again by united effort. Make it at Fresno on Thursday, Feb. 18, and make it wisely and forcibly.

EVER since the election last year the politicians of both the great parties have been profoundly concerned as to the political action of the nine Alliance members of the House of Representatives. The Democrats and Republicans have each claimed that this little band would attach itself as a sort of tail to their party kite. Their surprise must be great to find that the Alliance members will flock by themselves and strictly maintain their identity. This course was definitely agreed upon at an Alliance caucus held last Saturday at Washington City. It is just what those who sent these men to Congress expected.

FRUIT REVIEW.—We call especial attention to the comprehensive review of the fruit production and trade of last year which appears on other pages of this issue. It has been prepared with much application and care, and the hope is held that it is reasonably correct. We trust it may prove interesting and valuable to our readers.

CESSION OF ARID LANDS.—It is telegraphed from Washington that the proposition to cede arid lands to the States, to be reclaimed by them, was carried by an almost unanimous vote at a recent meeting of the House Committee on Irrigation.

SWINE YARD.

A New Importation of Poland-Chinas.

NILES, Alameda Co., Feb. 1, 1892.

TO THE EDITOR :—I have an item of news which ought to interest all your readers. As I probably know the straight of it better than anybody else could, I will venture to write it up myself, though it may seem like blowing my own horn. I have just brought out from Iowa, the leading hog State in the Union in point of numbers, and the highest of all the Western States in their average value, as shown by Government reports, a herd of the best obtainable Poland-Chinas, regardless of cost. I got them out of the herd which in 1890 won more premiums than any other at the State fairs of Iowa, Nebraska and Kansas, including first and sweepstakes at all three on the head of the herd; and in 1891 carried off two first, four second and three sweepstakes on Poland-Chinas in Iowa, and three first, two second and four sweepstakes in Nebraska. This is the famous Marsh Farm herd, of Jessup, Iowa, one of the last that will ever be able to boast of including Tecumsehs that were sired by the original Tecumseh himself.

I have one of his granddaughters, by King Tecumseh, his most famous son. King Tecumseh's greatest son is Geo. Wilkes, said to have sold for the highest price ($625) on record for a hog under one year old at public sale, and the most celebrated hog of the present generation. I got one of his best daughters, for which one of the highest prices was paid at a public sale, averaging $55 per head. I have two of the four sows that won herd sweepstakes in Nebraska this fall. I have the sow that won second in Iowa, over six and under twelve months old, but was not shown in Nebraska because too near farrowing, and three of her pigs.

You may imagine I had to pay for such hogs. I paid more for sows than many of the best Eastern breeders pay for boars to head their herds, and twice as much as the average breeder pays for the head of his herd. The lowest price I paid was $100 for three young sows under six months. It is not customary to squander anything like so much of the breeder's capital on the dams, but I chose the policy of laying a good foundation, and while I was importing sows I determined that California should have the best that was going, as she has in other kinds of stock. It was my intention, at any cost, to have one of the half-dozen highest-bred herds in America, the highest west of the Rocky mountains, and equal or superior to any west of the Missouri river.

To say that I have accomplished this would be invidious to my competitors in the Poland-China business, with whom I desire to maintain friendly and cooperative relations, and besides, it will take time to develop its merits or demerits. So far as it shows for itself, the admiring crowds that gathered around the car to get a peep at it as it came through, were all of one mind, as also those who have visited it since its arrival. And the same might be said of the scores of thousands of men, women and children who saw some of my hogs in the pens and show-rings of the State fairs where they were exhibited last fall.

The Iowa fair was probably the greatest hog show ever held on this planet. I speak from the reports of recent fairs in all the great hog States from Ohio to Nebraska. There were 2161 hogs on the grounds. Of these 1667 were Poland-Chinas, and it must have taken good hog flesh to get any kind of Poland-China ribbons. About 77 per cent, nearly four-fifths, were of that breed, and they numbered more than ten times as many as any other one breed. There were 125 Berkshires, 146 Duroc-Jerseys, 158 Chester Whites, 32 Victorias, and 33 Essex. About the same proportions hold good in all the great swine States, except Missouri, the average value of whose hogs was $3.64 in 1890, against $5.94 in Iowa, and a little less than Iowa in all the other swine States, including Ohio, which is less than half as far from New York as Iowa, and if it had as good hogs, ought to realize much better values.

It is variously estimated that from two-thirds to nine-tenths of the hogs packed in Chicago, and the other western centers of the industry, are strongly marked Poland-Chinas, and an astonishingly large proportion of them are full blood. This does not prove that they are the best for California, but is a very striking fact of national industrial importance, and does prove beyond question that they deserve a very thorough trial here, along with the other and better-known breeds. The brave pioneers who are already, at so much expense and trouble, laboring to introduce them, deserve credit and encouragement.

There isn't as good a market here for blooded hogs of any breed as there is for the least popular in the East. The field seems to be in about the same condition as it was in Iowa and around there before the general introduction of the Poland-China. The swine breeders had not a journal in the United States, not a National association, State association, record association, or any organization or machinery. Now there are four record associations in Poland-Chinas alone. One has reached its Vth, two their XIIth, and one its XIIIth volume. These registered close to 20,000 pedigrees last year. There are several successful swine-breeders' journals, and a leading one of them, recently picked up at random, contained the ads. of 201 Poland-China herds, to 92 of all other breeds, showing how well this breed supports the class journals, and how absolutely they depend on it for existence. There were 27 Berkshire herds and not so many of any other.

I write this for your own information, and not for publication in its present form. I am 30 1-2 miles from your city, a mile from the station, and if you or any friends wish to see the Great American "Mortgage Lifter" in his highest development, you can see him here as well as if you traveled 2000 or 3000 miles to visit an Eastern State fair. It cannot fail to interest you and your readers. Visitors giving due notice will be met at the station.

HENRY J. PHILPOTT.

[Our correspondent states expressly that he did not write for publication, and yet we cannot resist the temptation to print a letter which contains so much interesting and important information. We are especially desirous to develop the swine industry of this State, and glad to note the spirit of enterprise which Mr. Philpott manifests. If he and others in the swine interest will write us more freely of what they are doing and hoping to do, we shall be thankful.—ED. PRESS.]

Help Wanted in Ringing Hogs.

TULARE, Jan. 28, 1892.

TO THE EDITOR:—I write to learn if there is any sort of thing to put hogs in while ringing or splitting their noses. I once made a narrow box for the purpose; for a bottom I used four scantlings on edge, two in the center and the other two formed the bottom or lower edge of the sides. This made an open bottom. The scantlings were a foot or so longer at front end than the box, and at the front end I bored a hole through all four and put a rod through the holes to work as a hinge, when I would hitch onto the back end of the box with block and tackle. I thought with the hog's feet through the bottom and the back end hoisted up to an angle of 45 or more degrees, his nose would stick through the hole in the front door and I could ring his nose at leisure. I had no fear it would not work. But I was surprised at the hog putting his feet straight forward with his nose and against the door and pushing hard enough to keep his nose back inside. Instead of being helpless as I expected, of all the flouncing I ever saw a hog do, he did the worst. To say it made me sick would be too light, for of all the hard and almost impossible jobs that turn up on the farm, gashing the big hogs' noses is the worst. Muddy and slippery, they are hard to hold. After ringing a few, I resolved never to steel-point any more hogs' noses. The only thing seems to be to make about three cuts and the soreness stops their rooting, and they may not think of it again for a year. But it is so hard to do, and the strait one is in when they begin to root the alfalfa is dreadful. If you can tell of any way to hold the hog still, it will be a great boon to a large number of farmers.

H. E. DYE.

[We hope some reader will help Mr. Dye out of his plight. We supposed the improved nose tongs and ringing machines which have been introduced during the last few years, had done away with nearly all of the trouble which he describes. Who will write from successful experience?—ED. PRESS.]

THE APIARY.

California State Bee-keepers Association.

SAN MATEO, Feb. 4 1892.

TO THE EDITOR:—The apiarian readers of the RURAL PRESS will be glad to hear that we have at last got a State Association organized. We have a live president—Mr. J. F. McIntyre; a reliable man as treasurer, Mr. Brodbeck, and the secretary is no other than the "Rambler," who has at last settled down at Riverside and become a full-fledged "California Bee-keeper." I may add that the chief object of the Association is to promote the general interest of bee culture in California, and any person interested in apiculture, may become an annual member upon payment to the secretary of 50 cents. Ladies interested in apiculture, will be admitted free. Every live bee-keeper should join the Association at once. Below I give a copy of circular.

WM. STYAN.

TO THE BEE-KEEPERS OF CALIFORNIA.

On the 7th of January, 1892, according to a call issued by many prominent apiarists, who, realizing the necessity of continued efforts upon the part of the honey producers of the entire State, organized a State Association upon a broad and liberal basis.

Upon the organization of said Association, a committee, consisting of the executive board, was appointed with full power to confer with the Southern California World's Fair Committee, then in session in the Chamber of Commerce at Los Angeles. The committee learned that, while it is reasonable to expect that the honey producers will receive their proportion of the State funds *if there is any left* after the erection of State buildings, etc, and while working for it, that we should not put too much dependence upon aid from that source.

It is well known that in addition to the above State funds, that all of the counties of the State are empowered to levy an assessment in proportion to their valuation, and as this will be the principal source of procuring funds for the exhibit, we would emphasize the fact that all local organizations should be on the alert to present their claims and secure the share they are justly entitled to. In the absence of a local organization the leading honey producers should take it upon themselves to urge their claims.

That there will be an exhibit of the products of the apiary under the auspices of the State, should lead the bee-keepers and all interested in California apiculture to bestir themselves and now begin to plan for their contribution for the coming exhibition. The exhibits must be in place in April, 1893.

As to what action different States may take in preparing or getting their exhibits in shape, or what action California may take, it is too early to state. But all who intend to produce anything for exhibition should put themselves in communication with the State Association, and information will be given as plans are developed.

In relation to the exhibit, strenuous efforts will be made to secure ample room for what should be expected from a State so widely known as California.

There should be as many distinctive qualities of California honey as possible from various portions of the State.

While the main exhibit should be in practical, salable shape, there should be some novelties in the shape of production, peculiarly distinctive of California. The same might be said of beeswax and foundation. Pressed flowers of all the different honey flora could be prepared by the youthful members of the fraternity. Also enemies of bees, both birds and insects. Models of apiaries, photographs of apiaries and scenery, California extractors, etc. Anything distinctive of California, either closely or remotely connected with the apiary will be interesting to Eastern visitors.

The California bee-keeper, while taking a laudable pride in the extent and beauty of the exhibit, should ever have before him the vital fact that this exhibition at the World's Fair is the best opportunity ever offered for the opening up of new and world-wide markets for his products, and he should be prepared to offer more direct and systematic methods of sale.

The California State Association was organized to forward all such laudable plans and desires to keep in close contact with all local organizations and enterprising apiarists in every portion of the State, and with that end in view ask for your earnest cooperation.

JOHN H. MARTIN, Sec., Riverside, Cal.
J. F. MCINTYRE, Pres., Fillmore Cal.
GEO. W. BRODBECK, Treas., Los Angeles, Cal.

THE VINEYARD.

A California Congressman upon California Products.

Hon. W. W. Bowers, Congressman from the California Sixth District, writes to the *Citrograph* as follows under date, Washington, Jan. 15th:

A few days ago I was making some purchases in one of the large fruit and grocery stores here. Seeing some nice-looking raisins, I inquired the price. "Forty cents a pound," was the answer of the clerk. Whew! He nearly took my breath away. After recovering somewhat, I asked if he had any cheaper. "Oh, yes; these are 35, these 30 and these 25 and these a shilling"—the last about like the refuse of stemmed raisins worth perhaps two cents a pound. I asked the proprietor if he had any California raisins. No, he had kept them, but had none now. I asked if the Malaga raisins were so much better. "Oh, yes." "In what respect?" "Well, they are thinner-skinned and better-flavored." This conversation determined me to investigate the raisin business a little from the retail standpoint. Accordingly, I have visited a number of the largest stores. The second one asked 35 cents for, apparently, the same quality of raisins as the first charged 40 for, and was about five cents cheaper all around. But he had no California raisins. He, too, considered the Malaga the best. The last store I visited asked 25 cents per pound for the quality usually sold in our retail stores in California for a bit. I had considerable talk with the proprietor, who seemed a very intelligent gentleman. He had no California raisins, but usually kept them. To the question as to quality, he said: "The ordinary California layer raisin is superior to the ordinary Malaga raisin, much so; but the best Malagas are superior for a table raisin, larger, finer, have been handled carefully, and look better. We pay $5 per box for the best Malaga and sell them at 35 to 40 cents, while we can buy the best California raisins for $2.20 to $2.30 per box and sell them for 25 cents per pound." This man talked sense. He said: "We must keep for sale what people want to buy." He was an American and had no *prejudices against American products.* I could not help noting the contrast with some of the other dealers. Without saying it, they made one feel that they had a certain feeling of pity, let us say, for one who would ask for California raisins, or indeed any domestic production, when the imported could be had. The fact is, that with all our boasted independence and superiority, we are the greatest nation of snobs, imitators and copyists on the face of the earth. Our newspapers caricature the dudes, for they're "English don't yer know;" but the free and independent American who expresses his contempt for the dude and his ways is clad, as he informs his friend, in "real English goods," has French calf boots, the finest Swiss watch in his vest pocket and an imported cigar in his mouth. Nine-tenths of all the so-called olive oil used in the United States is made from the cotton seed exported from this country, and comes back the "finest olive oil"—imported, you know. I was in a restaurant in this city a few days ago. The bill of fare had "English mutton chops," "English breakfast bacon," etc. Could anything be more silly? Even at a third-rate tavern in the United States the bill of fare must be in French, don't yer know. We ape every nation on earth. Ten gallons of French wine are drank in the United States for every gallon exported from that country. Many thousands of gallons of French (?) wine are sold and drank in California every year that were never outside the boundaries of that State. The wine men have dropped on to the racket.

But to come back to the raisins. I see by the reports that the growers in California are getting from $1.40 to $1.60 per box for London layers—that is an average of 7½ cents per pound. They are transported by the railroad 3000 miles for $1.50 per 100 pounds, isn't it? Say total cost laid down in the Eastern cities, nine cents for the best by the box, retail at 25 cents. Let us put it this way:

The producer gets for the packages ready for retail, per pound	07½
The railroad monopoly hauls them 3000 miles for	01½
The commission merchant who sells to the trade and hauls them ten rods or half a mile gets, per pound	02½
The retailer who weighs them out, per pound	13½
Total	25

That's about the way the matter pans out, and the retailer, like many other good men, is outraged at the extortion (?) of the railroad companies, although he takes more than the producer, the railroad company and the commission merchant combined. Now, let some of the railroad extortion howlers ponder over these figures. Possibly I have got the amount too low for the railroad, but it will not exceed 2 1-2 cents or the tribute taken by the commission merchant.

These being the facts—and they are the facts—what, in the immortal words of the immortal William Tweed, are the raisin makers "going to do about it?" It is easy to find fault—to show the wrong. Any one can do that; but to show a remedy is another thing. I have thought of several methods and abandoned them one by one. For a few days my favorite idea was that the raisin growers of California should combine, establish a depot in every principal city and sell their raisins through these depots. Let each agency say to all the retail dealers: "We will sell you

good raisins at a reasonable price and will not retail if you will buy of us. If you do not buy of us, we will advertise and retail raisins at half your price and then get more for our product than we are getting now. We only ask a fair divide." Perhaps this can be done; but the more I ponder on the matter the more I am convinced that the oil men and the wine men have the practical solution of the matter. They have learned that from the farmer, who hauls his few sacks of grain to market and his chickens and eggs to trade for groceries, clear to the highest nabob in the land, including the most enthusiastic American, all believe the "imported" article is the best. They have been taught that. California wines can take the first premium in France, as they did, *but not in the United States*. The people of the United States must have the "imported" article.

When the President of the United States was dined in the Palace Hotel in San Francisco in the State that took the first prize in Paris, France, for wine, all the wines used were imported. It would never have done to put home-made wine before such distinguished Americans. It must be French, you know.

The raisin makers of California *must furnish* the people of the United States *the imported article*, just the same as the wine makers and the olive oil makers do. They can do it. Their raisins are just as good.

I have just been eating some raisins that I paid 30 cents a pound for. The label on the box was "Malaga," but if these raisins were not California raisins, then there is no difference between the imported and the California.

Now, I am not going to discuss the moral turpitude involved in deceiving the American people into purchasing a good domestic article while they fondly imagine they are getting an "imported." I am only looking at the matter from a business point of view. If, by labeling their raisins "Malaga" instead of "Three Crown" or "London Layers," "Riverside," "San Diego" or "Fresno," they can sell them for nearly double, why not do it? If people want to buy labels, why not sell them labels, when, in fact, neither the farmer nor the man in the White House in this city nor all the men between them can tell the difference between a first-class California raisin and a Malaga raisin, because there is no difference. At a restaurant in San Francisco, a man has just ordered a bottle of imported claret; cost, $1.50. At the opposite table facing him, another man has ordered a bottle of California claret; price, 50 cents. Both are satisfied. The wine was drawn from the same cask in a cellar in San Francisco—good, sound, pure wine. The labels were printed at the same office in San Francisco, cost the same, one-quarter of a cent each; but one man bought the wine and the other the label, and both are satisfied. Patriotism, love of and pride in one's country are all commendable, but business is business. The country demands imported raisins, and the California raisin grower can furnish them. The country demands imported (?) wine and imported olive (?) oil and gets one from California and the other from the cotton plantations of the Southern States. Why shall it not have "imported" raisins from California?

W. W. Bowers.

[Mr. Bowers writes in a racy style, and no one will find his writing dull. We do not wholly agree with him, and may give our opinions on the matters involved in another column.—Ed. Press.]

Florist and Gardener.

Flowers for the World's Fair.

Chicago, Jan. 19, 1892.

To the Editor: The Bureau of Floriculture hopes to make such arrangements as will give to chrysanthemums, cyclamen, Chinese and other winter flowering primulas, cinerarias, calceolarias, amaryllis, Dutch bulbs, narcissus and other winter and spring flowering plants, a magnificent representation during their season of beauty, from November 1, 1892, to April 1, 1893.

The proposed plan is to have displays of the plants and bulds mentioned above in such quantities as to form a great attraction during their best season of flowering.

In the case of cyclamen, cinerarias, primulas, calceolarias and mignonette, all the seed from different firms contributing will be sown on the same day; the same treatment will be given to all; the same soil will be used; and at the final potting an equal number of plants from each contributor will be selected and grown together. When in flower it is expected that awards will be made in the order of merit, and all contributors will have the privilege of attaching their business cards and addresses, subject to the rules of the department governing the same. A record of all contributions will be kept and credited to the party supplying the seeds, etc.; all will be treated in the most confidential manner, and such methods will be pursued as will insure perfect justice to all.

All seed must be supplied free of cost to the department; thoroughly capable men will have charge of the growing of the various plants so that the highest state of cultivation may be developed, and the growing and cultivation of the plants will be carried on without expense to the contributor.

Seeds in sufficient number should be sent to make it certain that no less than 100 plants of each will be in good condition at the time of final potting.

Cyclamen seed must be sent immediately upon receipt of this communication, as it is now late in the season; the sowing of cyclamen will be made not later than February 4, 1892. They may be represented in 10 kinds.

Chinese primulas may be shown in 12 kinds, and must be sown not later than March 1; cinerarias and calceolarias in mixture, 200 plants, to be sown by March 1; mignonette will also be sown by March 1.

It is hoped that this offer will be thoroughly appreciated by those to whom we make it. John Thorpe,

Chief, Bureau of Floriculture.

Horticulture.

Pruning Deciduous Trees.

[An essay recently read before the San Diego County Horticultural Association by H. Culbertson of El Cajon.]

The first and chief consideration is, that a tree have strength to carry its load of fruit, instead of showing distorted and trailing branches from overbearing. The low heading of trees is also essential, as such develop more uniformly in size and vigor, and avoid the danger of injured trunks from exposure to the sun. But equally important is it to observe economy in the pruning and gathering of fruit. In pruning, cut deciduous trees back to not less than 15 inches above the ground, and leave three or four branches to grow the first year. They should have attention at least weekly, for six weeks, when the growth begins to keep the superfluous shoots rubbed off in the bud, because taking away a small shoot is a serious loss to the young tree. It is better to remove a shoot six inches long at the beginning. For the good of the tree, I should let it go and remove the following winter. In leaving these shoots to begin the head of the tree, bear in mind that they are to be permanent and that they may attain a diameter of six or more inches. With proper care the first year, the branches should not grow less than three feet, and for a healthy development four feet seems more satisfactory.

The treatment the first winter is to remove at least two-thirds of this growth. At the beginning of activity the second year, allow two or three shoots to develop from each branch, rubbing off all sprouts while in the bud or very small. Some of the growths this year may, under good care, reach five to seven feet, and should not be less than four feet on any tree. In pruning the second winter, take off from one-half to two-thirds of the previous growth. In general, the upper bud left after cutting back should be on the outside to aid in spreading the top, with the exception of a few varieties that naturally spread. It should be understood that in trees headed low the main branches will grow much more upright than when they are headed high, and hence more effort is required to make them spread. This point is especially true of the pear.

So far, we have given all kinds of deciduous fruits the same treatment, but at this point they must be separated. I would still continue the cutting back from one-half to two-thirds of the previous growth, and if the trees are coming on well this cutting should be done every winter, whatever the variety or age, except perhaps for the fig.

The peach bears its fruit on wood of the previous year's growth, and there is very little tendency to produce new wood except on the outside of the tree. The nectarine has more of a tendency to form short interior growths, and fruit buds are formed on the larger new growths, thus enabling the pruner to cut them back more closely, and yet have an abundance of fruit buds remain.

The apricot bears still more than the nectarine on spurs and very short new growths on the interior of the tree, thus enabling the pruner to cut back still more largely of the new growth on the outside of the tree with material advantage to its productiveness.

The plum family would come next in the tendency to grow its fruit on spurs alone, with very little tendency to produce fruit on the previous year's growth. These spurs are of very slow growth, and only an inch, more or less, in length, according to circumstances, and continue to be productive from year to year.

The pear and apple come next in the order of the method of pruning and in the order named. The pear has more of a tendency to fruit on the tips of the previous year's growth than the apple. The older trees of each kind fruit almost entirely on short spurs of the larger branches. These spurs require to be two or more years old before becoming fruitful.

We thus have the two extremes in methods of fruit-bearing, the peach at one end and the apple at the other. All trees in California have more of a tendency to fruit on new wood than those of Eastern States. This difference in pruning is the reason for difference in treatment. It can readily be seen that the peach, fruiting only on wood of the previous year's growth, bears fruit farther away from the body of the tree each year, and the small shoots of from one-eighth to three-sixteenths in diameter begin to decline when the fruit is removed. To have healthy growth, all of these small branches must be removed the first winter following their fruiting, when there is a greater tendency to form small new growths which may fruit the following season. In the peach, it will seldom be found necessary to remove any interior branches, except suckers, until they have produced a crop, when they will begin to decline and should be removed. At the other extreme, the apple fruits largely on short spurs that continue to bear for a number of years, and the growth of these spurs should be encouraged. Their increase in number and strength is largely aided by judicious thinning and cutting back, but it should be remembered that any tree producing fruit mainly on these spurs, if they grow rapidly, may be disappointing in the early production of fruit in paying quantities—in prunes, for instance, which are naturally good growers, and may be slow in the formation of these spurs.

I would certainly not cut peach trees back less than one-half in the winter pruning, and our trees are getting too large for their age even with that amount of pruning. This has suggested, in other localities, summer-pruning or shortening in, with success in some places. So far, my own experience is favorable. It will be noticed on trees kept growing rapidly that the fruit buds are near the ends of the shoots, and it seems to take away too many of these buds to cut back one-half in the winter-pruning, but by cutting back about one-half the new growth in August, fruit buds are developed lower down, and where they would not be without the summer-pruning. This method is comparatively new, but seems worthy of trial to ascertain what is best. Some say, however, where trees are not growing rapidly, this method is not advisable.

With the apricot, summer-pruning is proven to be almost a necessity, cutting back even three-fourths or more of the season's growth about August 1st. Experience teach that there is no deciduous fruit tree but requires thoro and intelligent pruning for long-continued profitable fru ing. No pruning may produce a little more fruit while the tree is small, but such treatment reduces the later fruitfulness with heavy compound interest.

Fruit Marketing.

A Fruit Growers Union Proposed in Florida.

It is an interesting fact that Florida fruit growers are inclined to move in the same line upon which California growers are entering. The difficulties to be met seem identical and no doubt much can be learned by mutual comparison of methods. In view of the fact that a general meeting of California producers will be held in Fresno next week, we publish an account of the organization which the Floridians have agreed to attempt.

A meeting was held at Jacksonville the middle of January with the avowed purpose of organizing.

In his opening address, the chairman, Mr. Delano, said that the object of the meeting was to discuss all things pertaining to the orange industry, such as transportation, distribution, commission, etc. He stated that in a unity of the growers there was great strength, and suggested that a complete organization be effected. Previous organizations had been attempted in the interest of some commission house or institution of a like character. An organization to be a power must be untrammeled by allegiance to any other than its own interests, and then it will be a power to rectify the abuses which its members are made to suffer.

The committee selected to suggest a plan of organization reported the following:

The time has come when the fruit growers of the State of Florida must take steps to protect their own interests. The methods of marketing the crop and the existing rates and facilities for transportation are anything but satisfactory, and have created great uneasiness as to the future prospects of the fruit business. In view of these facts and for the purpose of serving the interests of the fruit grower in all directions, we, fruit growers, here assembled in Jacksonville, the 14th day of January, 1892, do most urgently recommend to all the fruit growers of the State to meet in their respective districts and organize under the following articles:

Article 1. The name of the organization shall be the Florida Fruit Growers' Union.

Article 2. The organization at large shall consist of local unions and county and State conventions.

Section 1. Local unions—The local union shall consist of the individual fruit growers who in any district shall band themselves together to work in connection with the county and State conventions in accordance with the articles and rules of the organization. To become and continue a member of the local union, one must subscribe to the articles and rules herein laid down, and pay all assessments that may be made by a m jority vote of the local union or State convention, provided that no single assessment shall exceed $1, and not more than two such assessments shall be made in any single year. The officers of the local unions shall consist of a president, secretary and treasurer, who shall hold office for one year.

The regular meeting shall be held once a month, and extra meetings may be called at any time by the officers of the union.

Sec. 2. County conventions—The county conventions shall consist of delegates to be elected by the local unions on a basis of representation of one delegate to every ten members, providing that a local union of less than ten members shall be entitled to one delegate.

The officers of the county conventions shall be a president and secretary, to be elected each year. The meetings of the county conventions shall be held on the first Wednesday in April, at 9 o'clock A. M., in the various county seats, excepting the first convention, which shall be held on the first Wednesday in March, 1892.

Sec. 3. State conventions—The State conventions shall consist of delegates from the conventions on a basis of representation of one delegate for every two local unions, provided that any county with only one local union shall be entitled to one delegate. The officers of the State convention shall consist of a president, to be elected each year by the convention, and a secretary and treasurer, who shall be elected by the board of directors.

The meetings of the State convention shall be held on the second Wednesday of April of each year, excepting the first convention after this meeting, which shall meet the second Wednesday in March, 1892, at 9 A. M., in Jacksonville.

Sec. 4. Board of directors—It shall be the duty of the State convention to elect a board of directors who shall have the entire management of the business affairs of the State organization. The officers of board of directors shall consist of one representative from each county containing a local union, to be elected annually by a majority vote of the State convention.

The officers of the board of directors shall be a president, secretary and treasurer and an executive committee to be elected by the board. The secretary and treasurer of the board of directors shall also be secretary and treasurer of the State convention.

Article 3. Section 1. Every member of the Florida Fruit Growers' Union shall be bound by personal patronage and influence to do all he can to forward any scheme set on foot by the State convention or board of directors for the advancement of the fruit interests of the State.

Sec. 2. Any article or section of this constitution can be amended by a two-thirds vote of the convention at any annual meeting.

This report was adopted as the constitution of the organization.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The women of the farm have many, very many trying duties to perform. They are not only expected to be splendid cooks, seamstresses, dairy-maids, butter-makers, housekeepers, governesses, teachers, gardners, poultry-raisers, accountants, advisers, nurses and entertainers, but they are frequently expected to share the honors of the axe-man, the teamster, the shepherd and the fireman. Truly, the duties of the willing housewife are manifold and never ending. But the patient matron is ever ready to do her full share, not only on the farm and in the house, but she is foremost in doing intelligently and willingly a good share of the work of the Grange. The dignity, the stability, the prosperity, and the promise of the future, great strength and honor of the Grange are all largely due to the counsel, devotion, steadfastness and refining influences of woman. To the women of the Grange every husbandman extends his sincerest gratitude, and though he may not speak, he thinks. All honor to the women of the Grange.

There are many people in the world who are constantly doing good, but who never get any public recognition of the service rendered. Then there is another class, who are continually getting praise for things they never did, and honor for words they never wrote or spoke. It is too bad that such a condition of affairs exists. It is especially bad that the latter condition exists so universally as it does exist. The ordinary politician of our day seems to raise himself into office, most frequently, by the things he never said or did. It is always what he is *going to do* that makes him the successful candidate—the winning horse if you please. Isn't this wrong? Why not select for office a man, a farmer, or carpenter, or blacksmith, or miller, or miner, or shoemaker, or some one of that class, who has done something? Give him the honor and put on him the responsibility! The men of family and with homes have as much to induce them to be faithful, to be honest and to be worthy as any men on earth can have. Then let us see to it that such men get our votes, our help, our approval.

California, Illinois and Pennsylvania are the only three states in the Union that have each appropriated $300,000 for the World's Fair. Now the conundrum is which State will make the best display? Gentlemen of the California World's Fair Commission, here is your opportunity. Outdo the sister States of Illinois and Pennsylvania. You have the State with equal, or better resources; you have the coin; now display the tact, energy, economy and the success will be ours. Otherwise we will have spent our money in vain.

Will not the farmers of Solano county have a Farmers' Institute? It will cost you nothing except hall rent and local expense. The State University—Agricultural Department—will furnish the speakers. Both Prof. Hilgard and Prof. Wickson are at your command. Let me suggest that Worthy Master Kline of Dixon Grange, and Worthy Master Ashley of Vacaville Grange arrange for a Farmers' Institute to be held at early date at Suisun. Brother J. H. Bauman of Suisun can be relied on for help sure.

Keep an eye on those of your public men who have control of the expense account! See where the money goes! Does your Road Fund go on the roads; the School Fund into the schools; the Indigent Fund to the hospital, and so on? Or does a good share of each of these and the other funds go to well-fed and well-clad office-holders? Keep an eye on the county and on the State "Cash Box!"

Public affairs should be run on an economic, not parsimonious basis. Get one hundred cents of value for every dollar of public money spent. That is the way we try to run our private business.

Owing to ill health Sister Mary T. Merrill declines to serve as Chairman of the Committee on Woman's Work, but she will gladly work as a member of the Committee. In the meantime, and till the Committee shall do otherwise, let Sister Hattie S. Jones of Yuba City Grange act as Chairman. I hope the Committee will *at once* get to work for the good of the order.

Sister C. E. Kinney begs to be excused from active duty as one of the Committee on Womans Work. She says that since her home is so far from the Grange centre, it is very difficult for her to meet with the other members of the Committee or with any of the subordinate granges. When we remember the good work Sister Kinney has done, and when we stop to realize the difficulties mentioned, it seems but fair to excuse Sister from active work on the Committee. We feel she will help the women of the Grange at any time, even though relieved of Committee duty.

Duty before pleasure all the time. Do your duty by the Grange. Do your duty to your neighbor. Take duty with you all through the year; yes, keep companion duty on guard at all times; and my word for it, you will have that welcome plaudit, "Well done." Then let duty be your watchword, your password and your by-word.

GIVE IT GOOD ATTENTION.—The Constitutions, By-laws, circulars and blank applications for membership of the Patrons' Relief Association have just been forwarded to each Grange in California. Let every Grange devote time to the matter of discussing and joining the Association. We think it is believed to be based on a safe plan and well calculated to greatly benefit each member that joins it and prove a solid help in the progress of the Order.

THERE is a probability that the Executive Committee of the State Grange will hold a special session this week.

Vaca Valley Grange.

Past Master Flint recently installed the officers of this Grange and speaks highly of the pleasant time and harvest feast had on the occasion, saying: "One feature of this Grange is they have a worthy sister for their Master. I hope the result will be as encouraging as it was to Watsonville Grange when they tried the innovation of electing a sister to the mastership.

After the installation the writer gave them a thirty minutes' talk on the objects and aims of the Grange, how to gain membership and make it beneficial to the farmers.

Several short speeches were made and one especially to the point.

I do not know of a place in California where there should be so large a Grange and that should bring such benefit to its members as one in this valley. The valley and the side-hills are one continuous orchard and vineyard for miles and miles. Land is so precious they can soarcely spare enough for their buildings. They do not grow the hay and grain they consume, and little attention is paid to house gardening.

It must be an interesting sight to be in this valley at the height of harvest time.

The first conundrum that I proposed to these fruit-growers was, where do you get your help to harvest these vast acres of orchards? If Congress continues to cinch the Chinese, field-labor will be so scarce and dear in a few years that there will be no profit in fruit culture.

I was most hospitably entertained by Brother Ashley and family at their home, one and a half miles from the village, on an elevation where it gave a fine view of the valley and surroundings.

In the morning a young brother gave a party of four of us a fine ride in the valley behind a pair of high-headed, prancing buckskin colts. I return my thanks and appreciation to the young brother (let me whisper it to the young sister grangers that he is keeping a bachelor's home), and the other genial companions that made this ride so pleasant.

D. F.

[Corrected Publication]

Executive Committee Resolutions.

The following resolutions were adopted at the recent session of the Executive Committee of the S. G. of Cal.:

WHEREAS, Our Worthy Master has devoted to the interests of the Order a large amount of labor, and is being constantly called on to visit Granges, and whereas he has heretofore expended his own means; therefore be it

Resolved, That he use his discretion in making visits to subordinate Granges, and that his expenses be paid out of the Lecture Fund.

WHEREAS It is important that our Worthy Lecturer make an active canvass of the State in the interest of the Order; organizing, reorganizing and lecturing Granges:

Resolved, That upon the presentation of his itemized bill of expenses, this Executive Committee will admit the same and allow him three dollars per day for the time actually spent in such work. All such bills shall be presented monthly.

To make the copy plainer for the compositor for our publication last week, we had the above resolutions typewritten. The type-writer, who is usually very correct, unfortunately substituted the word "Master" for "Lecturer" in the second resolution—a mistake we sincerely regret.

National Grange for Free Silver.

A dispatch from Washington City dated 9th inst says: "At the hearing before the House Committee on Coinage, Weights and Measures to-day, Leonard Rhone, representing the Legislative Committee of the National Grange, said the American farmer was asking silver to be restored to the position it occupied prior to 1873. The increased volume of money, he said, meant the enhancement of prices. He wanted Congress to protect the legal-tender qualification of money issued by the Government, so he could not be compelled to make his payments in one form of money only. Rhone said the free coinage of silver would go a great way toward bringing it into a parity with gold. Even if all that was said against free coinage were true, the farmer would not lose anything, because there was no time the farmer was so well off as in 1865, when there was a depreciated currency. He favored the free coinage of both gold and silver."

Notice.

To the Patrons of San Joaquin Co. Pomona Grange: The regular meeting of the above Grange will be held in Lodi Hall, Thursday, Feb. 25th, commencing at 10 A. M. Installation of officers, conferring the degree, with an evening session, and other important business to the Patrons; the afternoon session open to all fourth degree members. The Worthy Master of the State Grange will be present. Fraternally, J. D. HUFFMAN, Sec'y.

NOT HIS FAULT.—In a private letter of Feb. 2d, Past Master Overhiser mentioned the meeting of Lockeford Grange for Feb. 6th, adding: "Will install and have a feast." Thinking he was overmodest, we appropriated the information, and to round out the sentence, gave it to our readers as follows: "I will install officers and we will have a Harvest Feast." Bro. Overhiser did install the officers and partake of the Harvest Feast, yet it is due him to say he did not write (before being invited to officiate) the "big I," etc.

W. L. OVERHISER, P. M., and G. P. Loucks of the State Grange Executive Committee visited our office on Tuesday. Bro. Overhiser speaks encouragingly of Grange interests in Placer and Nevada counties, of which we hope to have more to say soon.

SEVERAL GRANGE COMMUNICATIONS have been delayed publication for want of space, which will appear later.

SAN JOAQUIN has probably the largest number of active Grangers of any county in the State.

Pure Food Bills.

We have received from Alexander J. Wedderburn, Chairman of the Legislative Committee Virginia State Grange, the subjoined blank petitions to Congress, with a request that the same be signed by members of the Grange and others in favor of the passage of the bills named; the petition to be forwarded to Hon. Wm. M. Springer, Chairman of the Ways and Means Committee, House of Representatives, Washington, D. C., or to some Representative or Senator from this State, requesting that the petitions be duly presented to Congress. It is also recommended that individuals write to their representatives in Congress, urging the passage of the bills.

The substance of these bills has been repeatedly endorsed by the National Grange. They simply advocate pure and honest food, drugs, liquors and lard, and their passage means the saving of millions each year to the farmers.

The petitions printed herewith can, for convenience, be clipped out and pasted on suitable writing paper, for receiving signatures.

Petition in Favor of Pure Lard.

The undersigned respectfully urge upon Congress the prompt consideration and passage of House of Representatives Bill No. 395, introduced by Mr. Brosius, and designated a bill "Defining Lard and Imposing a Tax on Manufacturers of Compound Lard."

Your petitioners reside in ..... County, in the .....Congressional District in the State of .....

SIGNATURES.

Petition in Favor of Pure Food.

To the American Congress:—The undersigned petitioners residing in .....County, ...Congressional District in the State of .....respectfully urge the prompt passage of the Paddock or the Edmunds Pure Food Bill, or some similar measure, to protect the people against the adulteration of food and drugs.

THE PATRONS' RELIEF ASSOCIATION Board of Directors will meet at No. 1304 Franklin street, Oakland, Feb. 15th, at 10 A. M.

FARMERS' ALLIANCE.

Capturing the Alliance.

CHICAGO, Feb. 9.—The *Inter Ocean* will publish to-morrow a two-column expose of an alleged scheme whereby the National Cordage Trust, through connivance with a number of the leading Alliance officials, is attempting to get control of not only all the present Alliance stores in the country, but 4000 additional ones the trust proposes starting. Statements are made by D. M. Fullwiler, the State Business Agent for the Alliance in Illinois; E. E. Whipple of the Whipple Harrow Company, St. Johns, Mich., and William Deering & Sons of Chicago that place certain prominent Alliance leaders in a compromising position. Alonzo Wardall, a member of the National Executive Committee of the Farmers' Alliance and Industrial Union, admits, so the *Inter Ocean* says, that he is hired by the National Union Company, the agency through which the cordage company is operating, and he also admitted to E. E. Whipple that he thought the National Cordage Company is behind, or largely interested in, the National Union, as he (Wardall) knew that Mr. Waterbury, the National Cordage President, gave his check to the Union Company last summer for $125,000, and he (Wardall) had it in his possession several days, showing the "boys" while in New York last June.

BUYING UP THE AGENTS.

This June meeting was the secret one that the National Union had called of all the State Alliance business agents it had induced into the scheme, that company paying all the expenses. At this meeting McCune, the Chairman of the National Executive Committee and editor of the *National Economist*; Coffeen, the State business agent for Illinois, F. M. B. A.; George G. Close, the State agent for Dakota; Alonzo Wardall; Cole, the president of the Michigan Alliance, and the business agents for a dozen other States were present, and from Wardall's statement to Whipple, all were conversant with the relation of the National Cordage Trust to the scheme. It is also stated that Whipple has a letter from President Waterbury of the National Cordage Company, stating that they are largely interested in the Union Company, and highly recommending it. The part of the scheme that has appealed so powerfully to the Alliance agents is the commission of 1-2 of 1 per cent allowed to the State agents for all goods sold in their territory. It is asserted that the National Union Company is preparing to capture the St. Louis conference on the 22d inst., and get an indorsement. This, the *Inter Ocean* says, will be strongly opposed by many of the Alliance men and some of the strongest papers in the organization.

Resolutions by the Merced Alliance.

TO THE EDITOR:—The Merced Co. F. A. & I. U. met at Los Banos, Jan. 28th. The Committee on Resolutions submitted the following, which were duly adopted:

Resolved, That our County Alliance and the Sub Alliances of Merced county, Cal., indorse the principles and demands of our State and National Alliance.

Resolved, That our State President Marion Cannon's circular on the Nicaragua canal be earnestly studied by the various Alliances of this county, and that we heartily agree with him that government ownership of the canal for the people be insisted upon and that we agree that a controlling interest in the canal by moneyed monopoly is detrimental to our very existence as a State and nation.

Resolved, That we urge upon the various Alliances of Merced county the imperative necessity of taking steps to revive the latent interest in our Order, and that we request our State President to send us a Lecturer and Organizer to devote his time and talents to increase the number of Alliances and to encourage existing ones.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

CROPS IN THE HILLS.—Haywards *Journal:* E. R. Jensen says: "The outlook this year was never more promising. We have had excellent weather to get the grain in, and the ground was never in such fine condition as this spring. About all the grain will be planted this week, and the acreage seeded is larger than former years. Common barley is the main crop, as the price the last few years has more than held its own. With ordinary rains the hills will make a good showing this year."

Butte.

FRUIT NOTES.—Oroville *Register:* From almost every quarter we hear of the planting of additional fruit trees and vines. It would seem that fruit-growing would some day be overdone, but there are no signs of halting at present. Peaches take the lead in the county, but apricots, early apples, oranges, figs and olives all come in for a good showing. It is probable that of olives alone there will be not less than 250 or 300 acres set out this year. We call to mind at this minute 154 acres that we know will be planted, and this is probably not one-half of the total acreage. We give below the list of the different fruits growing upon the 200-acre orchard of White, Cooley & Curtis and E. H. Hudson, with the number of trees of each variety: Red May peaches, 100; Hale's early, 500; Foster, 1700; Muir, 1000; Susquehanna, 1500; late Crawford, 900; Tuscan cling, 1500; orange cling, 1000; California cling, 1500; Golden State almonds, 650; IXL almonds, 650; paper shell almonds, 700; peach apricot, 1200; Hemskirk, 800; royal apricot, 1000; Bartlett pears, 1200; French prunes, 650; white Adriatic figs, 132; budded oranges, 72; vines, 50. This gives 115 acres in peaches; 35 of apricots, 30 of almonds, 15 of Bartlett pears, and the remainder of the orchard in French prunes and white Adriatic figs.

GROW LIQUORICE.—Biggs *Argus:* The man who will plant two acres to liquorice root on such soil as is found along the Feather river can harvest a good income every year. The root grows wonderfully fast, and, in running in every direction when planted in mellow soil, soon makes a solid mat of roots, which can be cut and prepared for market while the soil remains rooted right along. The root is used in many cough medicines, in manufacturing plug chewing tobacco, etc., and always brings a good price. The writer knows that it will do well here, owing to the fact that he planted about a dozen cuttings in his yard a few years ago, and now the yard is matted with roots for about 200 feet and in adobe soil.

Contra Costa.

CROP PROSPECTS.—R. G. Dean, Brentwood, writes Feb. 6th, as an item of interest: The season is generally accepted as propitious, though only about five inches of rain have fallen to date; but a sufficient downpour to wet the ground through would relieve much anxiety now existing as to the season's output of grain. The area sown to wheat and barley will be unusually large, owing to the remarkably favorable weather, and with the present and future promise, we confidently look forward to an abundant harvest.

Fresno.

A FOOTHILL OLIVE ORCHARD.—*Central Californian:* Last winter H. S. Williams set out quite a number of olive trees on a foothill ranch which he owns, near Raymond, in the northern part of this county. They thrived so well that Mr. Williams has decided to largely increase the size of the orchard this spring, and he expects to set out 6000 additional trees. He owns nearly a section of land, fully three-fourths of which, it is thought, will grow olives to perfection, and the whole body will eventually be turned into an olive plantation if success crowns the present venture. There is little doubt now but that olives can be grown almost anywhere in the foothill section of Fresno county, and we are glad to see such enterprising men as H. S. Williams turning their attention to olive culture.

PROMISING OUTLOOK FOR APRICOTS.—*Central Californian:* Never before have apricot trees of this section given brighter promise at this season of the year for a bountiful yield. The branches are as full of swelling fruit buds as it is possible for them to be, and unless frosty or freezing weather comes at the critical time, Fresno county orchardists will have a crop of apricots worth having this year.

Kern.

VINE AND TREE NOTES AT ROSEDALE.—Cor. Bakersfield *Echo:* The pruning of vineyards is progressing rapidly. The pruners from Fresno are surprised at the immense growth of the two year vines, saying they have never seen anything to equal it in their past experience. While the growth of vines has been marvelous, is it not possible that too large a portion of the vitality of the vines will be absorbed by the wood and leave a less proportion for fruiting? Another season will doubtless prove the matter and, it is to be hoped, satisfactorily. Quite a large acreage of Bartlett pears will be set this season, as it has been proven in other localities that ground too wet or charged too heavily with alkali to grow vines or other fruits successfully, is well adapted for pears. While alkali ground is not recommended for pears, pears, it seems, are recommended for alkali ground.

A MOVING BRUSH BURNER.—*Echo:* R. Frisselle, superintendent of the Rosedale vineyard, has a convenient way of disposing of the brush cut from grape vines. It is a big sheet-iron box, mounted on low wheels and drawn by a team. In this a fire is started, and as the team moves slowly across the field, two men pitch the brush into the box to be burned. The heat of the fire does no injury to the vines and much time and labor are saved.

PROMISING CROP PROSPECTS.—*Echo:* We have had a good rain during the past week and still the weather remains warm. Rain fell almost continuously from dark to dawn Saturday night, giving the ground a good wetting. Another storm took place Sunday night, and a light shower fell Monday night. The weather is unusually warm and feed is growing very rapidly. Grain that has been making a slow growth for a month past, will now just rush along, and the outlook for a good crop is very promising. Perhaps never before in the history of the county has there been as great an acreage of grain in the county as this year. Much of this is on irrigated land, and hence independent of rains, but the showers will not hurt it any. In the mountain valleys and on the plains above the ditches, the rain was needed and timely.

Los Angeles.

THE ORANGE MOVEMENT.—L. A. *Express:* The rains have interfered materially with the movement of oranges. The orchardists have not been able to pick the fruit and the probabilities are that they will not be able to pick and pack fruit for several weeks to come. All the fruit that was packed and waiting transportation was carried by the Santa Fe eastward.

EXTENSIVE PREPARATIONS FOR THE CITRUS FAIR.—L. A. *Express,* On Saturday, Feb. 6, the people of Santa Ana held a public meeting to decide upon their design for the Citrus Fair. Similar meetings will take place at Pasadena and Glendora. The Vernon horticulturists are already at work on their design. Secretary Willard, of the Chamber of Commerce, is sending out premium lists to prominent citrus growers. He is daily receiving applications for space, and according to present indications, the next fair may eclipse all previous citrus exhibitions. La Canada desires the same position as that assigned to her last year. The Santa Barbara Art Leather Company will make a fine display, and San Diego will send a large exhibit.

Monterey.

INCREASED LAND SEEDED.—Monrovia *Messenger:* A note from Salinas says that never in the history of Monterey county has there been so large an acreage sown to cereals, and never has the same been put in better condition. The ground, on account of the December rains, has been placed in a condition to enable farmers to plow and sow. The land being seeded under very favorable auspices, the soil being thoroughly pulverized, less moisture is needed than when the ground is broke up badly.

Orange.

FAVORABLE TO POTATO PLANTING.—Garden Grove cor. Santa Ana *Herald:* The late rains have made it possible for the ranchers to plant early potatoes for the Eastern markets, and a great many are intending to do so.

Sacramento.

STATE FAIR NOTES.—*Record-Union:* The adjourned annual meeting of the State Board of Agriculture was held February 4th, at which Hon. Frederick Cox was unanimously chosen as President for the ensuing year, G. W. Hancock reelected Superintendent of the Park, and Hon. Chris Green reelected Superintendent of the Pavilion. Director Green moved that all standing committees be named by the President by the next meeting of the Board, together with a committee of five on Premium List; also the same number as a Committee on Speed Programme. The State Fair for 1892 was set for the first Monday (the 5th) in September, to continue two weeks, the racing and stock exhibition to open on Thursday of the first week, and to continue nine days. It was ordered that the rental of stalls at Agricultural Park for the season of 1892, beginning March 1st, be fixed as follows (the new Cottage Stables to be reserved entirely until fair time): Stalls in the old Cottage Stables and new annex, $2 each per month, and all others at $1 per stall per month. Parties renting $2 stalls, and entering horses in races at the State Fair, to receive $1 rebate for every month paid for such horse or horses entered. Owing to the heavy repair expenses each season of stalls used (and abused) by occupants, it was deemed important to make these rates, and they will be strictly enforced. The Board agreed to give the usual two, three and four-year-old trotting purses, and two, three and four-year-old pacing purses. Entries for the 2:30 class to close March 15th. The Board adjourned to March 21st.

HOP FARMING NOTES.—*News:* Sacramento hop growers are plowing in some of the early yards, though trellising is what claims the attention of most of the ranchers. There is a marked improvement in the trellises, and in many fields the old poles are being hauled up to the farm house for fire wood, to give place to cedar posts and wire or twine. The Sacramento valley can now show some of the finest and most substantial trellises on the Coast.

San Benito.

PROFITS IN CHEESE.—Hollister *Advance:* The following is the annual report for 1891 of F. Vile's cheese factory at San Felipe: Total number pounds of milk received, 457,998; total number pounds of cheese made, 50,625; highest price received per pound, 16½ cents; lowest, 10 cents; average gross price per 100 pounds, $13.29; average net price per 100 pounds, $12.09; average number pounds of milk to one pound of cheese, 9.04; average net price to producer per 100 pounds of milk, $1.13 and 4-5ths; cost of making, per 100 pounds of cheese, $1.80; number of cows milked, 82; average net income per cow, $63.50.

San Bernardino.

TWENTY-EIGHTH DISTRICT AGRICULTURAL FAIR.—San Bernardino *Times-Index:* The 28th Agricultural District Fair, to be held at Colton on Monday, February 22d, and continuing five days, offers a splendid list of premiums. For best individual display of oranges, $100 premium is offered as first prize; $90 to the second, and so on up to the seventh prize, which is $40. Passing to the stock list we notice that the best trotting stallion is offered a prize of $10. Eight prizes are offered for best horses of all kinds or a total of $70. All of these prizes foot up to just the amount offered to the fourth best individual display of oranges. Twenty dollars is the total amount offered to neat foot animals; $15 to sheep; $10 to swine. It is not our intention to disparage the orange industry. It is the principal industry in the county, but we think that the time has come to pay more attention to the improvement of stock, especially of dairy cattle. If this county is lacking in any particular agricultural industry it is in the character of its dairy cows. There are hundreds of orchardists in this county who ought to keep one cow at least to supply the family with sweet butter and milk, and there are others who ought to keep chickens, ducks and turkeys to keep down the grasshoppers and insect pests that damage the fruit crops. Now, the Agricultural Association is intended to encourage all these industries and to awaken public sentiment to the importance of paying more attention to them. It is too late to modify the premium list offered this year, but if similar premiums were offered for the best milch cows to those being offered for the best oranges, $100, $90 and so on to $40 for the seventh prize, this county in a few years would have thousands of cattle where there are now only hundreds. A similar result would follow in the poultry yard. Let us build up some of these industries that are now neglected.

San Luis Obispo.

CROP PROSPECTS.—San Miguel *Courier:* The season so far has been one of the most promising we have had for several years. The first rain came early enough and in sufficient quantity to enable the farmers to do their plowing in good shape. The rain has come in showers in such a way as not to interfere with plowing. Many thousands of acres have been seeded, and hundreds of acres of new ground have been broken this winter. The acreage is greater than ever before, and with the usual spring showers, the yield will be equal to that of any previous year. The crop prospect considered from all points never was better than at present. Indications point to a most prosperous year for the upper Salinas valley.

Santa Barbara.

GLANDERED HORSES.—Santa Ynez *Argus:* Dr. A. E. Buzard, veterinary surgeon of San Francisco, is here in compliance with the request of the Board of Supervisors to investigate matters in regard to the existence of glanders or other contagious diseases among the horses of this section. It is reported that several parties have glandered stock in their possession which they refuse to destroy. If the report is found to be true, the law will be vigorously enforced, and the penalty for this offense is very severe. Dr. Buzard writes: "Had eight killed so far." EDS. PRESS.

Santa Clara.

FARM AND ORCHARD NOTES.—Campbell Cor. *Mercury:* Grain and pasture fields are looking well. Our timely showers are making the prospect for a large hay crop very bright. We have had no soaking rains yet and no water in our creek at this point, though it has been raining above and in some of the irrigating ditches. Prune trees are very full of fruit buds, as are also the young apricot trees. The peach and apricot trees, which bore so full last year, do not show indications for heavy fruitage this year.

Santa Cruz.

SUGAR BEET ACREAGE.—Watsonville *Pajaronian:* Over one thousand acres have been contracted for beets in this valley, and there are promises for much more land. Spuds had an off year last season, and beans were not a very profitable crop; and the sugar beet did pay and its returns were certain after the crop was gathered, and hence the beet is to the front again this year.

Solano.

WALNUT LOGS.—Winters *Express:* A carload of walnut logs was shipped from J. R. Wolfskill's farm to San Francisco to be used for the manufacture of furniture.

MOUNTAIN APPLE ORCHARDS.—Winters *Express:* Experiment has demonstrated that the climate of the mountains to the westward of Winters will produce good apples, and William Bolinger and W. G. Davis, who own places therein, will plant a number of acres to this fruit this winter. Mr. Bolinger has several trees already in bearing which yield well, and bear most excellent fruit. We are glad of this, as we have long thought that while it is too warm to raise apples successfully in this valley, they could be grown to perfection in the mountains.

Sonoma.

BENNETT VALLEY NOTES.—Cor. S. R. *Republican:* Cherry trees are in full bloom in this favored valley. Grain-sowing is about completed in this part of the county for the harvest of 1892. There are not so many acres sown as there were last year.

Petaluma *Imprint:* There are only about 96 bales of hops remaining unsold in Sonoma county. It is estimated that the hop acreage of Sonoma county will be greatly increased this season. Already, reports are coming in to that effect. H. Button will put in 20 acres on his farm one mile and a half from Santa Rosa. Mr. Finley, living near Mark West, will increase his acreage to the extent of about 15 acres. Losson Ross, the well-known hop raiser, will put in a few acres as an addition to his big fields. Sam Talmadge has made arrangements to plant 20 acres this spring. S. J. Clark of Mark West will cultivate 30 or 40 acres more than he did last year. Farmer & Peterson will increase their acreage, and Ed Hall will make his hop fields larger by about 20 acres. The high pole system has proved a great success thus far, and more growers will make use of it from year to year. Those who have tried it claim that the benefits more than pay for the extra expense.

Sutter.

LARGE ACREAGE SEEDED AT LIVE OAK.—Cor. *Farmer:* An immense crop of wheat, with the usual amount of barley, has been planted in this vicinity, and while a small portion is summer-fallow, yet the whole crop is in good condition.

FARM PROSPECTS.—Yuba City *Farmer:* The farmers can find no fault at present, as they have had it all their own way this winter, as far as the weather is concerned. The rains have been timely and given every opportunity for the planting of a large acreage in this county. While the grain is somewhat backward, it is now making a splendid growth, and the warm, pleasant days will bring it out wonderfully. Winter sowing is still going on, but to no very large extent, as most of the grain was put into the ground during the last month. Considerable barley will yet be sown. While the coming crop will undoubtedly be a large one, much depends on the spring rains to bring it to maturity with an abundant yield. Already summer-fallow plowing has commenced.

TREE-PLANTING IN DISTRICT NO. 70.—*Farmer:* Ira H. Wood is planting about 1500 trees, mostly peaches, on the old Sultzberger place in No. 70 along Butte slough. On the same farm John Wilkie is planting 30 acres to fruit, having rented the land for ten years at $20 per acre per year. With what has been planted, it makes an orchard of about 50 acres. This is the largest tract planted to trees in the district or in that part of the county, but it is expected that considerable more land will be planted to trees during the next few years.

RUSH IN THE NURSERIES.—The work of inspecting nursery stock continues to take the attention of the Horticultural Commissioners and their inspectors, and the large amount of tree stock is being thoroughly examined. All the nurseries have more orders than they can fill, and the demand for trees all over the State seems to be unlimited. Tree planting is active at present.

Stanislaus.

SUMMER-FALLOWING AT OAKDALE.—Cor. Modesto *Herald:* With few exceptions, the farmers in this vicinity have finished the work of seeding and are now engaged in summer-fallowing. The season has been a most favorable one for putting in the crop in a thorough manner, and early sown grain is presenting a healthy appearance.

Tulare.

PRUNUS SIMONI.—Selma *Enterprise:* One of the most promising fruits for profit is the Simoni prune (*prunus simoni*). It has a combination of fine qualities to recommend it. It is early, being ready for shipment about the middle of June. It is then a rich apricot yellow, but even in this immature state is sweet, aromatic and palatable. From this stage it ripens to a dark, rich red. Shipped in its yellow state, it ripens, like the Bartlett pear, in transit, and arrives in New York or Chicago in prime condition. It has been successfully shipped to the cities named and to Liverpool by a grower in Tulare county. The fruit is of a large size with very small pit. The flesh is a deep yellow and has a rich aromatic flavor peculiar to itself and suggestive of pineapple. Mr. Motheral, who happened in as we write, says: "I have seen it ripen here, and I consider it the most delicious of all the prune family." Prof. Wickson, author of "California Fruits," told the writer that he thinks it the best early prune we have. The prunes that reached Chicago last season brought almost fabulous prices.

Ventura.

RAPID GROWTH.—Staticoy Cor. *Free Press:* Last April C. C. Bryson, of Wheeler Canyon, planted a piece of ground ten feet wide and 40 feet long with seedling peach seeds, and now has about 250 trees in that bed. Last August, one of these trees apparently growing more rapidly than he desired, he cut off the top of it. Last Sunday we measured the tree and found it to be eight feet high. Several other trees in that bed are eight feet high.

Yolo.

OF INTEREST TO WOOL GROWERS.—*Democrat:* It may be of interest to the flock-masters of Yolo, who intend to exhibit sheep at the next State Fair, to know that the Board of Directors, at the last meeting, ordered that each exhibitor be required to file an affidavit, verified by two reputable citizens resident of the locality where the sheep came from, that lambs exhibited were born on or after January 1st of the year exhibited, and that all sheep were shorn on or after March 1st of same year they are exhibited.

GRAFTON FARM NOTES.—Cor. Woodland *Democrat:* The farmers are busy sowing their crops, and are jubilant over the prospects for a good crop. The river farmers are confident that there will be no overflow this year, as the river is very low, considering the lateness of the season.

The Home Circle.

Not in Vain.

She pinned some creamy fluffy thing
About her throat, and added there
A half-blown rose; and lingering
Awhile to make herself more fair,
I queried of her, half in jest,
The name of her expected guest.

"We dine alone to-night," said she.
"I linger at my toilet
Not for the eyes of company,
But for a dearer object yet—
Now for a husband's eyes attired,
The self of old my love admired.

"It would have grieved my heart of yore
Not to be comely in his eyes;
And now how infinitely more
Of moment to retain the prize!
And so I have a rosebud there
To brighten in my silvering hair.

"Not for my sister-woman's gaze,
To rouse her envy; not for this,
But for the sake of those sweet days
To save the honeymoon of bliss
From ever waning, succoring so
From waste the paradise below.

"Twere not enough to win him mine,
Nor yet enough so to be won,
But the sweet right of love divine
To keep the Eden so begun,
And when another decade dies
To still be lovesome in his eyes."

Oh, beautiful philosophy!
The key to riches manifold;
Its secret sovereign alchemy
Changing the dullest day to gold,
Leashing two hearts in love's sweet thrall,
A love that never wanes at all.

A holy lesson, sweet to con,
And sweet in daily life applied;
Youth's blithest idyl still lisped on,
The matron gentle as the bride,
The winning long ago was done,
But every day she keeps him won.

—ROSALINE E. JONES.

Mercy.

[*Annie Weld Edson in Portland Transcript.*]

On my way to school I passed two little boxes of houses exactly opposite each other. Their two small yards were neatly kept, and the vines that clad their shingled and unpainted sides gave them a bower-like effect that was very pleasant and picturesque.

Back and forth, to and fro between these two cottages constantly flitted a figure that had anything but a "queen-of-the-bower" look about it. A little, wiry shape, attired in a short, lanky gown of ugly calico, from which craned a thin neck and a small head surmounted by coarse iron-gray hair screwed into a neat bell-knob at the back. As you approached, great gray eyes turned on you in a half-frightened sort of way, and a kindly voice gave the regulation New England greeting, "Howdy-do." The face was long, narrow and sallow, the nose very large, and eyes, ears and mouth partook of this generosity of outline.

Not a very interesting picture, surely, yet this poor little soul is one of New England's heroines, whose names will never be graven on marbles storied with praise of their noble deeds; only on the simple white stone above the last resting place in the country church yard.

Mercy Scoville was never a pretty girl. She was born in the cottage on the left of the road as one comes from Woodville, and with her father and mother and two brothers lived an uneventful life, the principal gaieties being husking bees and singing schools, in both of which she was an unimportant factor, as she never by any chance got the red ear, and could not tell one tune from another.

One of the brothers married and moved West, and the other, a tall, goodlooking fellow, was casting loving eyes on a buxom damsel who had recently settled in those regions.

It seemed, indeed, as though Mercy would go on mending and dusting and dish-washing in the old home, and running on errands over to the little house across the road, where Uncle John Scoville and Aunt Mary lived all her days. But about this time something happened that changed Mercy's peaceful, dull life to one of romance.

Captain Westland, of the army, had business in Woodville, and pranced into the Scoville front yard one fine morning just as Mercy was putting out the shining milk-pans, each on its private and particular short post, to dry in the sun. Doffing his hat respectfully, he asked for her father. The result of his conference with Mr. Scoville was that he was given board in the house for a few weeks, while he transacted the business on which he came.

Captain Westland had sharp eyes, and he was not long in finding out that Mr. Scoville, from his earnings as a woodsawer, had laid by quite a snug sum yearly in case of a "rainy day." His captainship was handsome and popular, and fast living had drained his purse to such a degree that he felt it behooved him to refill it at the earliest opportunity. Not overscrupulous at best, he did not, in this hour of perplexity, shrink from utter baseness. He began to show attention to Mercy, and to say that she was flattered is to speak very mildly indeed.

Mercy lived in the clouds and forgot her dish-washing more than once, as, mop in hand, she stood gazing down into the ravine that skirted the back of their home, and dreaming dreams in which a tall, fine figure in uniform and her own little self in silk attire formed the principal dramatis personæ.

Poor Mercy!

One moonlight evening, when the Baltimore Belles were flinging their wealth of beauty and fragrance about the porch, Mercy flung the beauty and fragrance of her faithful love at his feet who had asked it with lips trembling, with seeming earnestness. Oh, why did not some guardian angel cry out, "Neither cast ye your pearls before swine, lest they trample them under their feet, and turn again and rend you." Ah, well! it might have been too late to convince the trusting country girl; how could any one who had such a sweet voice and such elegant clothes with brass buttons be like the swine?

Mr. Scoville gave Mercy a good dowry in money, and Mercy herself brought a generous one in bed and table linen all made up and marked with her own hand. How many prayers and hopes and ecstasies she stitched into her simple bridal outfit!

Captain Westland took his bride to New York City to live.

Mercy, with some quiet tears, took leave of father and mother and brother at one house, and Uncle John and Aunt Mary at the other; and she cast many glances back as the swiftly rolling carriage bore her from the two little homes where her life had centered.

For the first few weeks all went well. Captain Westland took his bride all about the great city to see the lions, and his devotion made her very happy. "Of course there's no wonder I love *him*," she would say to herself, "but I wonder how he loves me so much when I'm so little and plain."

After a time he seemed more pre-occupied and neglectful. Mercy saw the change with pained surprise, but thinking something had occurred to annoy him, wisely kept silence, and renewed her efforts to please him. One evening she waited his coming, in the pretty parlor of the suite he had taken on their arrival, but he did not come. She passed the night in an agony of suspense, and it was not till dusk the next day that the result of her inquiries led her to the terrible discovery that he had deserted her, and had taken with him every cent he could lay his hands on, not leaving even enough for her return fare home.

A horrible awakening, surely—and in this emergency Mercy showed the real force of her nature. She remembered the name of a noted clergyman of her denomination who resided in New York City, and finding his address in the directory, stumbled blindly about till she found the street, the house and the man.

In a faltering voice, and with a wretched face that gave him no doubt of her truth, she told him her pitiful story, and asked him to loan her the requisite money to return home. The good doctor was touched from the depths, and would gladly have done more for the poor woman in this her said strait; but a gentle, firm refusal met all his proffers of further assistance, and Mercy, with many thanks, turned away to go on her sad, homeward journey, broken-hearted.

Great was the surprise and consternation in the two households when Mercy appeared in their midst, and their anger knew no bounds when the cause was known to them. Old Mr. Scoville, with choked utterance and flashing eyes, swore revenge, but Mercy, with uplifted finger, checked him.

"Father, it's I has been wronged, and it's I will bear it. There can't nothing be done, and I've come home to care for ye all so long's I live!"

Something in the white, determined face overcame the old man as no words could have done; and from that day on, the family, by mutual consent, never discussed this grief and disgrace before Mercy.

Aunt Mary died very soon after; and since Uncle John was childless, and would not think of leaving his little home, Mercy slipped quietly into her aunt's place, humoring and caring for the querulous old man.

She saw, with sorrow never spoken, yet none the less keenly felt, the marks that grief had made upon her face, reflected in the faces of her aging parents. They had never been rich, but they had always been proud, and this had given their pride a terrible blow. The mother's temper, never very good, grew sharper and her strength less. So, back and forth, to and fro, flitted Mercy, uncomplaining and gentle, bearing the main work of the two households on her frail shoulders.

As if this were not enough, the erstwhile buxom damsel, now Brother John's wife, had frequent ill turns, and the tired feet would patter down the road to John's house, bearing quiet, order and comfort to the sick room and motherly care to the three little ones who loved Aunt Mercy dearly.

Our stock of fall and winter wood having been brought, I strolled down the hill to Mr. Scoville's one fine afternoon to engage him to saw it. Mrs. Scoville, who was now confined to her chair, was the only one in the house, Mercy having run over to the other house to catch an afternoon nap.

Mrs. Scoville was unusually talkative, and I very soon realized that her mind had failed somewhat. She spoke of Mercy. "She's an angel uv mercy to us," said she, the tears starting to her eyes. "And she's alwuz so cheerful. Ye'd never dream but what her life had ben all sunshine to see her round house. But it hain't ben; no, indeed, it hain't. There wuz a time when it didn't seem as ef we'd any uv us pull threw and stan' it; but I guess we'd a' ben ashamed to hev gone under."

Vainly I tried to soothe her and to change the subject. She was evidently bound to have her say, although I felt confident it had never been mentioned to a stranger before, and felt the more uncomfortable therefore.

"I s'pose folks is kinder curious ez ter whether Mercy keers fer him now or not. I never knew myself, until the other day, no, it must be about two years ago, she hed—would you believe it?—hed a letter from the vil-liun. The first and I guess the only one. He hed ben out in Colorady and got rich, and wuz kinder sick, and wanted her come on and 'furgive and furgit,' and so on. 'Twuz like a message from the dead, but I see threw the hull business, and it made me mad; he wa'nt well, and wanted her to come on and slave herself out for him, and he like ez not stumblin' home nights about how-fares-ye; howsoever, I made up my mind to keep still and see what Mercy'd do about it. Well, I went into the keepin' room to git my rags (I wuz making a rug, and 'twuz a beauty; took the prize ter cattle show thet year), and there set Mercy with thet pictur"—pointing to a framed likeness of a handsome man in military dress—"in her lap, and she a-bendin' over it, and takin' on ez ef her heart would break. I'd hed the pictur in the fire years ago, but she alwuz said no (he hung it there the day before they wuz married), so there it staid. I've sometimes thought ef the old man and I hedn't stood in the way, she'd a packed off to him, bag and baggage. Women is queer critters, if I do say it as am one!"

So the old woman rattled on. In vain it was to attempt to stem the tide of her eloquence. As the poor old mind began to waver, the iron bars of pride that had held back the knowledge of its sorest wrongs from the world so long, were broken.

Other changes came—Mother Scoville died; Brother John's wife fell down with a sudden gasp one day, and the doctor rendered the report "heart disease." It seemed as though Mercy was to be the only woman left of the Scoville race. Bravely she tugged through the following summer, caring for her aged father and uncle and "seein' to" Brother John's growing children.

As winter set in, one of the children came down with scarlet fever; the others caught it, and Aunt Mercy was kept on a constant ministry of care and love and patience. The little frame was wiry, but, alas! it was no longer young, and with a tired droop Mercy flung herself down on the bed one day, little dreaming for how long.

"Why, doctor, I aint sick, nuthin' of the kind! I can't be, nohow, fur how'd the folks and things get along without me?"

But all through the winter they *did* get along without her, and all through the spring. Neighbors ran in with delicacies; pretty bouquets graced the sick room; kindly if unskilled hands smoothed the pillows.

And one June morning, the sun rose bathed in blushing clouds, gleamed on the merrily nodding Baltimore Belles that ran riot over the little house, till each dewdrop seemed a flashing gem; and smiled in through the muslin curtains at an upturned face that wore the sweet triumphant smile of eternal rest.

It was the anniversary of Mercy's wedding day. Tenderly they clad her in the soft gray silk of that fated day, and all around and about her laid the Baltimore Belles.

The watchers said that at midnight she had waked and asked for "his" picture; and they said it was a sight to touch the stoniest heart to see the look of love and longing she fixed on the faded likeness of him who had blighted her life.

Yes, old Mother Scoville, "women *is queer*." Yet, unaccountable as it often is, a woman's capacity for deathless deep love is, to my mind, the most nearly divine of any earthly love.

It will bear coldness, repulse, utter lack of requital; will hug to its throbbing breast the slightest boon, and call it great; will be dragged in the dust, yet shine as brightly as a diamond among rubbish; will live and grow, even when the object of its devotion is totally ignorant of the passion it has roused. Such is woman's love! And is not that courage with which she turns from disappointment and loss of her own happiness to share others' hopes, others' cares, others' sorrows, sublime—*heroic?*

The headstone in the little churchyard says only this:

MERCY,
Wife of Captain J. F. Westland,
Aged 38 years, 6 mos.

Women as Nail-Drivers.

Ever since I can remember, and probably a few years before, it has been said: "A woman can't drive a nail." Her assumed inability to "hit the nail on the head" has furnished innumerable newspaper paragraphs. As a sample, read what the Detroit *News* says anent Mrs. Palmer's driving the last nail in the women's building of the World's Fair:

"Now what is offered on the speed with which Mrs. Palmer drives the nail? Two to one on the nail. Ten to two that Mrs. Palmer hits the building five times for once she hits the nail. One hundred to twenty-five that she hits her fingers if the nail isn't started for her. Even money that she gets the hammer tangled in the ribbons of her bonnet. Eight to ten that she shuts her eyes for the first blow. Five to four that she wrinkles her nose after the first 25 blows with the hammer. Even money that the world will have to take a recess for lunch before the nail is driven, providing Mrs. Palmer doesn't begin to hammer at it before 10 o'clock. Even money that after Mrs. Palmer works eight hours the nail will have to be turned over to a carpenter. Ten to one that the nail is leaning to the southwest when Mrs. Palmer quits."

The above seems to be quite a complete collection of the kinds of joke that spring up in the masculine mind whenever one of the other sex is mentioned in connection with a hammer and nail. But "Lo, and behold you!" the Savannah *Morning News* prints all that the Detroit *News* man has said, and adds the following:

"But in all due solemnity, the enterprise would be placed in a very embarrassing position if she should merely waste her energies in waltzing around the nail all day and fail to hit it at all. An erect position is the safest one for that nail. Unless it wobbles it is in no immediate danger. Yet there is no visible good reason why the building should be all battered up in that way."

I never had a full realization before of how very important women are, especially to the makers of newspapers. Just think of it. If that nail were to be driven by a man, even the most renowned man in the world, it would only furnish a line or two for the papers. Mrs. Palmer, do you realize your consequence as a woman? It is enough to make men weep for envy. They drive nails, year in and year out, and who says anything about it?

But isn't it strange that when a woman has held the

championship as a nail driver for three or four thousand years, all this little side talk and ridicule should have been allowed to go on? Has any man a record to compare with that of "Jael, the wife of Heber the Kenite?"

The particulars of this remarkable case are to be found in the Bible, in the fourth chapter of the book of Judges, as follows:

"Howbeit Sisera fled away on his feet to the tent of Jael, the wife of Heber, the Kenite. * * * And when he had turned in unto her into the tent, she covered him with a mantle. * * * Then Jael, Heber's wife, took a nail of the tent, and took an hammer in her hand, and went softly unto him, and smote the nail into his temples, and fastened it into the ground; for he was fast asleep and weary. So he died.

"And, behold, as Barak pursued Sisera, Jael came out to meet him, and said unto him: 'Come and I will show thee the man whom thou seekest.' And when he came into her tent, behold, Sisera lay dead, and the nail was in his temples."

May we not hope that men will hereafter no more put forth their funny paragraphs relating to woman, hammer and nail, until one of their own sex has beaten the record made by the wife of Heber, the Kenite. Considering the history bearing on this subject I do no hesitate to prophesy that Mrs. Palmer's nail-driving on the Fair building will be a striking success. — Celia B. Whitehead in Woman's Journal.

Exposition Day.

[Written for the RURAL PRESS by MAUDE M. S. PEASLEE.]

Indiana seems to be booming her interests in the World's Fair to be held in Chicago in 1893.

The Committee on Education of the Board of World's Fair Managers of that State have recommended certain days in the school year to be set aside and called Exposition Days.

The object is two-fold: First—It is hoped that by soliciting contributions of one penny each from the pupils and ten cents each from the teachers, a "penny fund" may be started which will do much toward making an educational exhibit. Second—It is greatly desired that the interest of the young people may be stimulated in this matter.

It is very important that the children should be educated in the history of their own country, and that patriotism should be roused in their hearts.

Probably this generation will learn more of the history of their own country in the time that intervenes between now and the opening of "The Columbian Exposition," which is set for May 1st, 1893, than they would be likely to acquire during the rest of their lives.

From now on the commissioners of each State will be busy; the papers will contain frequent items concerning this work, and the interest of the people will be roused.

Much good work can be done in the schools of each county. A large proportion of the information must be sought outside the usual school histories, and the proper books should be added to libraries where they are wanting.

Beginning with the lives of Christopher Columbus and his contemporaries, together with the map of the world as it was then known, there is much ground to be covered, many points to be taken up, and great possibilities involved.

Teachers should post themselves at once on such subjects as other international expositions, purpose, place, date, measure of success and apparent effect on commerce and emigration.

The general intelligence and enthusiastic patriotism of the children should be daily stimulated.

Perhaps no one better realizes than the school teacher, the superficial knowledge of his own country, past and present, that is shown by the average pupil.

Mere book knowledge availeth little.

Now is the time to arouse each pupil, and through him, his family, to an active interest in the present condition of his own country, its products and its manufactures, and the causes that have led to its present development.

Let not Indiana be alone in this active work, while California and her schools hesitate and so fall behind.

Begin this work at once, O California teachers, that you may have ample time.

Spice of Life.

—He: They married in haste. She: And repented at leisure, I suppose? He: No; their repentance was quite as hasty as their marriage.

—She: Promise me that if I die you will never marry again. He: What? And let people think my dear little first wifie was such a terror that I didn't dare to? Never!

—"Who drove this poor man insane, doctor?" "He tried to figure out his wife's reasons for setting the clock ahead whenever she wished to get up early."

—The Czar: A horrible thought strikes me! The Lord High Executioner: What is that, your majesty? The Czar: If that dentist was a nihilist, he may have filled my teeth with dynamite. Then, the first time I bite hard, I shall blow the top of my head off!

—In Chicago—Miss Finehout: I see that Mrs. Porker seems to have an increasing affection for the memory of her late husband. Mr. Dunn: What, is he dead? I've been away, you know. Mrs. Finehout: No; but he's made a heap of money since their divorce.

—Tomson: Billson is a man who never keeps his word. Johnson: Indeed? Tomson: Yes, confound him. I owe him a trifle, and he said he intended to call round after it. I stayed out of the house on three occasions when I expected a visit from him, and he didn't come. You can't depend upon him.

—Old gent (who knows the young man's salary): If you and my daughter could live respectably and comfortably on twenty dollars a week, I should not object to the match. But you can't. Young man: N-o; but my salary is twenty dollars a week, and that added to the twenty dollars a week you are talking about would make forty.

YOUNG FOLKS' COLUMN.

Ben Barlow's Disinclination.

[Written for the RURAL PRESS by DUANE MORLEY.]

Everywhere that Ben Barlow went, his disinclination went with him. Not always was it uppermost, but it was always ready to spring up at the least provocation. When a boy at school, the fractions called vulgar, and even those called decimal, provoked it. In fact, the whole arithmetic was a standing provocation to Ben's native disinclination. Not so with the reader, the speller, the geography, the astronomy, nor but little so with the grammar.

Toward all mathematics though, Ben's disinclination was a giant; but he got along with them, to a degree, by the indulgence of teachers and the help of kind classmates. I do not wish to say that Ben was lazy; that is too severe a term to use; but he hated to grub, hated to dig, hated it more than tongue can tell. But yet, there was hardly a word in the reader that he did not have by heart, especially the poetry and mellifluous prose; and on occasions, though short the notice, could memorize any ordinary production in order to fit out a literary entertainment with a new or pleasing feature. He was brilliant Ben Barlow, but with a weakness, a disinclination to dig. When he started out for himself, his disinclination went with him. Had his parents been keen enough to have seen his defect, and skillfully chosen a pursuit in which the distasteful would not arise, his career might have been different. But such a pursuit would have been difficult, if not impossible, to find, since in all, or any one of the pursuits a vast deal of severe labor is required to achieve success.

Studying medicine with Dr. Brown, a most patient, helpful man, did not suit Ben. He would sooner read Goldsmith's poems, Addison's silvery prose, or old Sam Johnson's sonorous phrases, than to read the medical works.

And set up at storekeeping by a faithful, loving father, the accounts in Ben's hands soon became a maze of contradictions, through his disinclination to keep instant and exact entries. Then, naturally enough, a little cloud appeared in the sky; the store was put into other hands, and the erstwhile storekeeper relegated to a tract of land and farm tools and team given him, along with the free advice to dig the soil and earn bread. Ben did well enough in the cool of the springtime; plowed, harrowed, planted and sowed; but when the days grew hot and cultivating time came, Ben was often to be found in the shade of an apple tree with a book in his hand, while the weeds grew gigantic in the midst of the corn. Reading is all right; nothing more necessary, healthful or stimulating; but all that Ben the boy, all that Ben the young man seemed to care for, was a chance to read, and when his eyes got tired, to dream.

He had read every book in the district library, and many a volume imported from the city; and so, as he would read, the farming too proved a failure. The business idea, the stern necessity of doing something, seemed not to have dawned upon him. And, had Ben been a college graduate, with a professorship tendered him, he could not have accepted it with any possible chance of successfully holding it, simply because a vast amount of application and attention to it would have been necessary.

Time was passing, and Ben's schoolmates were becoming successful in life; one a merchant, another a bank clerk, another cashier, another a lawyer, and so on, while poor Ben's name was bandied about with the word failure and its every synonym. Finally Ben said to himself, and to his parents: "This is no place for me; things are too close, they do not fit me. I'll go out west where I can do something. The west must be the place for me."

The tears rained from his mother's eyes when he left her to take the Overland, and said she: "Ben, dear; do your best to get ahead; your father is so anxious for you to succeed." Ben promised, and all the way across the continent, steaming over the plains and through the mountains, he had visions of the heroic things he would do. Without practical talent, or apt readiness to embrace offered opportunities, the little lump of money Ben brought with him out of his father's hard earnings, soon melted away, and the heroic things he thought he would do did not materialize; they rarely do. New countries and strange scenes demand strong souls, and Ben was not strong-souled. When almost a tramp, for such he nearly became, shifting from one pursuit to another, he took a position as sheep-herder. Ben deemed the employment a poetic one, one furnishing a legitimate opportunity to muse. While his conclusions respecting it were correct, he was as yet unaware of the fact that the business was dolefully monotonous. It proved to be pernicious to him, wearing away his buoyancy of spirits, and utterly unfitting him for the discharge of its simple duties. Eventually the sheep wandered; some of them became lost, whilst others were a prey to wild animals, so bringing him under the condemnation of the owners. That, the fruit of carelessness, scored another failure against him. When fortune frowns it sets a man thinking—come to think about it, that is all a frown is good for—and when Ben was out on the white, glaring California highway again, almost moneyless and consequently despairing, he began to think, began to take an inventory, so to speak; began to note his feelings and arrive at the cause. In every man's life, young or old, that hour is a trying one, and that hour came to Ben. The highway Ben was footing it over was long, and Ben's thoughts were long, deep, anxious, miserable, At last he said, and his soul was in it: "If ever I have another chance I'll improve it, or die trying."

At one time, California was divided into immense ranches or ranchos. Some of them still remain, and it was on a road winding through the great San Miguel rancho, or ranch, that Ben was that moment traveling. And he was nobly making a stake or pledge of his last atom of courage, in the event of his ever securing another opportunity to retrieve his mistaken past. One man's fate (if there be such a thing as fate) sometimes becomes another man's fortune. It was so in Ben's case. Nearing an immense irrigating ditch, a ditch nearly as wide as the Erie canal, Ben's attention was drawn to a clatter on the hard road behind him. As he turned about, he saw a large, unmanageable, riderless horse coming directly toward him at a most frantic rate. Riderless, I say, though its rider was there, dislodged from the saddle, his foot caught in the stirrup, his head mopping the ground and endangered by the horse's hoofs.

Without a thought of self-preservation, Ben made a dash for the bridle reins, happily catching one of them and pluckily holding on. The horse, great as he was, encumbered by the double load, soon came to a halt, but not before he had dragged both Ben and his rider midcurrent of the waters of the canal. The insensible fallen man, revived by the touch of the water, would yet have perished, had not Ben or some one else been there to release his foot from the stirrup. Holding to the bridle with one hand, he extricated the man's foot with the other, the man proving to be the owner of the ranch, the buildings of which were but a short distance beyond.

After having helped the man to remount, it was necessary for Ben to support him upon the horse, as best he could, along the way.

That adventure was the turning point in Ben Barlow's life.

Saxby, the owner of the ranch, had that day, prior to his mishap, been writing and mailing letters to different points to find a good, reliable man to oversee his place, during his own prospective long absence upon an Eastern and European trip. And next day, mindful of the obligation he was under to Barlow, he tendered him the place; yes, thrust it upon him, at a salary much greater than is usually paid for such services. And he fully installed him in the position, making him acquainted with every detail of the general management, and putting him on good terms with the half dozen sub-overseers, besides driving him to town and introducing him to his bankers and farm furnishers. It was a general turn over; the remainder of the Saxby family left behind, being in Barlow's care, and all things under his control. Barlow had the requisite ability, though dormant, and this time he made use of his opportunity. He spent the half of many a night in the ranch office, reducing the management to a system, and keeping close watch of the accounts and books, the days being usually spent in money transactions, the ordering of supplies, and advising with sub-overseers. There were times, of course, when Ben's disinclination would spring up, but no sooner was it apparent than down it would go again beneath his sturdy resolve. His keen eye was upon every part of the farm management, and wherever economy could be, he practiced it. Finally, business became a pleasure, a delight, and when Saxby returned from his prolonged European trip, he found his ranch under excellent control and Barlow popular with his men. And Saxby not only kept his new overseer, but put him in the way of certain investments which yielded him large returns, so that, years afterward, when Barlow returned to the East to revisit old scenes and revive old associations, clasp the father's palsied hand and kiss the mother's trembling lips, success clothed about him like a garment. And so it was that, after many a failure, he overcame his disinclination, and schooled his faculties into a business channel.

DOMESTIC ECONOMY.

Random Rules for the Cook.

[Written for the RURAL PRES by MAID-OF-ALL-WORK.]

Put a ltttle bicarbonate of soda in your pie-crust. It will be tender and much more healthful.

Do you always parboil your beans with bicarbonate of soda? A great many young housekeepers do not know of this simple and necessary precaution.

Keep a second grade of California olive oil on your cooking table. Use it everywhere in preference to lard. The family will get well of dyspepsia and the doctor will go elsewhere.

In yeast powder biscuits, use rich milk and olive oil, and your stomachs will not suffer if you have hot biscuits every morning.

In all puddings containing flour, use the olive oil in place of butter.

Save all your left-over fruit juice to add to pudding dips.

You can also use olive oil in beans in place of pork.

Most of the lard we use is put up outside of California. Much of it is a compound of mutton-tallow, cotton-seed oil and other things. The constant use of it will surely shorten our lives, while the use of our pure olive oil will lengthen them.

If you will heat your milk hot in the pans before setting them away, you will have no trouble with your butter by its tainting either in the cream or after it is made up. This is the best way to make home-made butter. You will get more cream and better butter.

Do not warm over your potatoes in lard. Slice them fine, pour milk over them, and let them simmer.

If you will insist on frying everything, drink plenty of hot water in the morning before breakfast to wash the grease out of your stomach.

Canned lobsters make a delicious soup. Use half a can for six persons. Pick it up fine and put into the milk with the usual seasoning for oysters. Heat slowly. But the best soup in the world is made of the coast abalone, pounded fine and boiled in rich milk.

Avoid making pie if you can. Make any kind of layer cake or pudding where cream or olive oil can be used in place of lard or butter.

Melted butter is indigestible and should not be used at all in cooking, Try the olive oil.

Very nice puddings are made by stirring berries or minced fruit into a batter made with cream, flour and yeast powder; bake. Having first strained the fruit, the juice seasoned and thickened makes the dressing. Canned blackberries are especially nice this way.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 13, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Lands for Sale—Kern County Land Co.
Water Lilies—E. D. Sturtevant, Los Angeles
Nursery Stock—Alexander & Hammon, Oakland.
Sawing Machines, etc.—Jas Linforth.
Plows—Baker & Hamilton.
Stock Food—International Food Co.
Trees—W. A. T. Stratton, Petaluma.
Nursery Stock—Pacific Heights Nursery.
Wire Stretcher—Harper & Reynolds, Los Angeles.
Sheep Wash—Chas. Duisenberg.
Poultry—C. Blow, St. Helena.
Nursery Stock—Peter Henderson & Co., New York.
Stump Puller—Geo. Harvey.

The Week.

Another good contribution has been made to the rain record of the season and there follows a splendid chance for work. Push along the pruning and spraying while the weather favors, for growth is starting. The almond has broken bloom in some localities, and the peach and apricot buds are growing restless under their covers. Another short morning nap and they too will awake to a new season's responsibilities.

The weather also favors late plowing and sowing, and it is time for speeding along with garden operations. If you have not yet grown your own garden stuff, try it this year. Write for all the seed catalogues which are offered by our advertisers. The descriptions will make your mouth water, and you will thus make sure at least of the pleasures of anticipation, which the philosophers say are superior to those of realization. Then if you garden well you will secure both blessings. Try it this year. Of course it is still too early to sow many things in many places, but it is just the time to plan for the garden, and give it deep cultivation if you have not already done so. Write us how you do it and others may profit by your example.

IRRIGATION EXTENSION.—It is telegraphed from Riverside that the Directors of the San Jacinto and Winchester irrigation district, who have for the past two months held options on the best water sources in the San Jacinto mountains, decided yesterday to purchase for the district the rights of the Florida Water Company and the San Jacinto Flume Company. This will add to the irrigated lands of Southern California 18,000 acres of the finest fruit land, at a cost of about $20 per acre.

CALIFORNIA FRUITS IN ENGLAND.—United States Consul Lathrop, in a letter from Bristol, England, to the State Board of Trade, says that California pears in limited supply are reaching that country in good condition, and readily retail at from 16 to 24 cents each. He notes a steady growth of popularity for our canned fruits, and offers his aid in establishing a larger market for these goods and California wines than at present exists.

LATE REPORTS from the Argentine Republic say that the wheat and wool crops in the Republic are the largest ever known in the country's history. The railroad companies are preparing for a very busy season.

Sound Morals and Good Policy.

We publish upon another page an article written by a California Congressman, whose name is there given, expressing his views upon several matters connected with the marketing of California products. We are compelled by our convictions to dissent from some of the conclusions at which the writer arrives, but we do not publish his article merely for the purpose of dissenting from views expressed by a distinguished citizen of the State. It is rather because the views are frequently held, though less prominently urged and less honorably fathered, and we oppose them at this time because we conceive them to be the more dangerous the more distinguished the name written beneath them.

As for the interesting descriptions of personal observation as to how much the Eastern consumer pays for California products and how little the producer obtains of the expenditure, we have only to remark that the case is hardly adequately described. In the special illustration given of the actual receipts of the raisin grower, the writer should reduce the amount 25 to 50 per cent to meet recent experience of raisin producers. If they obtained 7½ cents per pound for their share they would be very happy. But it is not with that subject that we have to deal. We desire to remark upon the means and policies which the writer proposes by which the California producer is to secure his share of the money which the consumer expends.

The proposition is to pander to the fashion for imported products by discarding California names and adopting the style and title of the foreign products which we aim to displace, and in the argument to uphold this policy the writer proceeds at considerable length. We dissent for several reasons: (*a*) It is bad morals; (*b*) it is bad policy (*c*) experience in several important products has proved the opposite course satisfactory; (*d*) even if it should temporarily serve a purpose, it is a cowardly evasion of an issue which this generation should meet, and of which it should make final disposition.

The writer is apparently aware of the moral turpitude of putting foreign labels upon California products, but he dismisses the thought with a word. We do not believe it can be so easily disposed of. The whole recent course of commercial affairs is in the direction of fairer trade, which is a recognition of the fact that a great business must have a sound moral basis. Of course there is petty business which proceeds upon the measure of gullibility in humanity and thrives by lies, deception and fraud, but no great private business, which has a history and a future, is resting upon such a basis. And with this teaching of experience, which we believe cannot be successfully disputed, is it not an unwise as well as an unworthy suggestion that a great industry of a great State should be placed upon such a foundation? Even if we grant the writer's unwarranted claim that the subject should not be discussed upon a basis of morals, it does not help his position, for it at once becomes apparent as a conspicuously bad policy, as further consideration will show.

We have already won too many notable successes in marketing California products as such, to abandon the hope and purpose of making a California brand in every thing superior to a foreign mark. Should not the success of the California prune alone answer those who claim that a foreign brand is the only key to public favor and patronage? Should the California canned fruits, jams and jellies be labeled "Crosse & Blackwell?" Is there any label under the sun which will fit our evaporated apricots, peaches and nectarines, except one bearing the legend; "Californica?" And more than that, we are under the impression that even in raisins, on which the writer makes a special point, the California names are even now better in in the trade than those which he commends. Certainly, the foreign olive oil label is a byword for adulteration and fraud. If we mistake not, our Congressman has trusted too much to his own cogitations and to the testimony of the retail grocer, and, proceeding to generalizations upon defective information, seriously errs therein. In his diagnosis of the condition of the wine trade we presume he is nearer right, but we do not believe his remedy is the proper one. We do not see why California wines will not ultimately win upon the basis of purity, genuineness and wholesomeness, for all of which qualities they are already conspicuous among those who think more of what is in the bottle than upon it.

Finally, even if there should be more immediate profit in fraudulent sale of California products, what of the future? There must come a time when the truth must come out. We shall soon be contending in foreign markets with those products from which we are now advised to steal livery for Eastern parade. Then we shall appear in the eyes of the world as a country without a name, for our products will bear marks of every land except our own. Shall we bestow such a legacy upon our children? Shall they say of us: "Our fathers, in hope of gain, expatriated their products; by our effort this State shall win a name?"

It shall not be. Before the century closes, and while there still live men who established the crowning and distinctive industries of the commonwealth, California products by California names shall ask no favors of the world except the rewards which peerless excellence commands.

Warning to the Unwary.

RURAL subscribers are not so verdant as to be caught by snares which the blacklegs of the metropolis are continually laying for the feet of the unwary, but they have it in their power to guard others against the chagrin and loss which awaits all those who, unused to city ways, fall a prey to the swindlers. It is not the men who are endowed with good common sense and morality, even if they are inexperienced in city devices, who are the game of the impostor. It is rather the "smart aleck" or the out and out "noodle" from the rural districts, who is taken in. As we have said, such are not found in families where the RURAL is welcomed, and yet there are such probably among the farmhands and others to whom our readers may be able perhaps to extend timely warning.

The robbery of ruralists has become so large a business in this city that a special circular has been issued by those in authority. We shall publish it prominently below and we advise all our readers to cut it out and tack it up in their laborers' quarters, or in the stable, or the fruit house, or elsewhere, where it will not escape the attention of those to whom money is paid and who come to the city to spend it. It is as follows:

OFFICE CHIEF OF POLICE.—Strangers are hereby notified to beware of bunco steerers, short-card players and confidence men.

These men infest the corridors of hotels, the vicinity of railroad ticket offices and hotel wine rooms. They obtain from the hotel registers the names of guests and places from which they come, meet them on the street with a cordial good morning or good evening, and calling them by name, I knew you at (mentioning the place where they are from). The man, being in a strange place and unused to the ways of these vermin, is only too ready to greet a person who may claim that he knew him at his home. Then follows a friendly drink and an invitation to take a walk, and finally he is ushered into the back room of a saloon where a game of cards or dice is in progress, on the pretense to pass the time. The steerer takes a hand, be it cards or dice, and wins some money. He then asks the stranger to play, often dividing his winnings with him as an inducement. This invitation is rarely refused. After a little time he is dealt a hand at cards, and if it should be a dice game he is also invited to participate, which he does, resulting in losing his money, probably all he has in the world. He then finds his opponent has a hand that beats him.

The bunco steerer invariably extends to the victim sympathy and wishes him better luck next time. They leave the place together, but the victim is soon shaken off, when the steerer returns to the saloon to get his percentage of the winnings so obtained by fraud. P. CROWLEY, Chief of Police.

It would seen that no one but a knave or a fool could be caught by such a coarse game as this, but such material must be plenty, for victims are plenty. There are, however, finer games which should be also guarded against. All kinds of plans for investment, with promise of unusual profits, are being worked. Our advice to all is, invest in nothing until you assure yourself of three things at least: first, that the claims commend themselves as fair business propositions; second, that those who urge them are men who can give good references as to business history and moral standing in the community; third, that they, or those associated with them, are financially responsible. All these points can be met by legitimate dealers or operators in any legitimate enterprise. Anything short of this is, to say the least, dangerous.

THIS FALL'S FAIRS.—The State Board of Agriculture, at its annual meeting last week in Sacramento, reelected Fred Cox President, G. W. Hancock Superintendent of the Park and Chris. Green Superintendent of the Pavilion. The opening of the next State Fair was fixed for the first Monday in September, racing and stock displays to commence the following Thursday. The Board made the following suggestions for district fair dates: San Jose, August 1st to 6th; Oakland, August 8th to 13th; Napa, August 15th to 20th; Petaluma, August 29th to September 2d; the State Fair, September 5th to 17th; Stockton, September 19th to 24th; Fresno, Sept. 16th to Oct. 1st. In the matter of the exhibitions of sheep, it was decided to require affidavits from the owners as to the dates of lambing. The usual stakes for trotting and pacing colts will be given. The Board will meet again March 21st.

AT Dresden they are baking an American corn bread that is finding much favor and is much cheaper than their ordinary bread. A pound costs a trifle over three cents.

A FRENCH SURGEON has invented a medicinal remedy which, he claims, will cure any snake bite. It is applied subcutaneously.

THE estimated cost to Russia of the famine and its consequences is $500,000,000.

IN India one of the leading forms of gambling is to bet on the weather.

The State Press.

Sacramento *Record-Union:* "Congress should now go one step further and forbid the express companies carrying mail matter in the interest of the lottery swindlers."

Woodland *Democrat:* "The law ought to be amended so as to require that all sessions of the Supreme Court of the State shall be held in Sacramento."

Woodland *Democrat:* "If there has ever been offered any plausible argument why any public official should be elected by a direct vote of the people, that could not be urged with equal force in favor of the proposition to elect postmasters, we have never heard of it."

Lassen *Mail:* "The forests are the preservers of water. Without them the mountain streams will be torrents during the winter rains and dry at other times. The land that now depends on irrigation for its fertility will have to be abandoned if the forests that protect the water are cleared away."

Chico *Chronicle-Record:* "Too much cannot be said in praise of the new ballot system. It successfully precludes the great amount of electioneering and wire-pulling which has been so much indulged in heretofore. There is now a good chance of electing the choice of the people, and the professional politicians cannot carry the controlling vote about in their vest pockets."

Riverside *Enterprise:* "According to the Oakland *Tribune*, Bill Higgins once said that the only way to get the Legislature to pass good bills for the general benefit of the people is 'to appoint a State briber, with unlimited funds to his back to raise the boodlers out of their boots.' The San Jose *Mercury* thinks that a better plan would be to appoint a people's committee, with unlimited hemp at their back, to raise the boodlers with their boots on them."

Paso Robles *Moon:* "One thing which has heretofore retarded the growth of our section is the large land holdings. There are in this State over 100 private land grants. As soon as these large sections of country are cut into smaller tracts more prosperity will come without solicitation. The reformation of cutting these large holdings into smaller tracts is now at hand. One notable instance is seen in the act of Mr. Huntington, owner of 5000 acres near this city. This will give hundreds of home-seekers a chance to secure good farms in a new section of California."

San Jose *Mercury:* "The purchase of the San Martin Rancho from Daniel M. Murphy by C. H. Phillips, with the intention of subdividing its 8000 acres into small farms, is one of the most important industrial events that are likely to occur in Santa Clara during the current year. In fact, no enterprise equal to it is even so much as projected at the present time, with the sole exception of the proposed railroad to Alviso. It cannot be doubted that the cutting up of this large estate means the almost immediate transferring of its fertile acres from the growing of grain to the cultivation of fruits and grapes."

Kern County *Gazette:* "The carp are said to be doing damage to the irrigating canals in Fresno county, and the matter of introducing alligators into the waters for the purpose of destroying the fish is being agitated. This may be a good idea, but after the fish are destroyed, what will be imported to rid the country of the alligators? And, besides, is it an established fact that the alligator will thrive in Fresno? Are there a sufficient number of colored juveniles there to keep him looking handsome? If the alligator is to be imported into Fresno, the condition of things should be as near like Florida as possible."

Santa Maria *Graphic:* To one who has watched the rise and progress of the Farmers' Alliance, it looks as though there are too many discordant elements within its ranks in different localities for it ever to become a harmonious and solid organization. The foundation principle of the organization, that of the amelioration of the condition of the farmer and the laboring classes, is a good one. It is in the endeavor to apply this principle that all the trouble comes. It seems to us that the great mistake made by the organization is that of condemning everything that does not exactly square with their ideas of how things ought to be done."

Los Angeles *Express:* "It is to be hoped that the copious rains will not unfavorably affect the movements for the formation of irrigation districts in various parts of the State. It is far better to rely upon irrigation than upon rainfall. Irrigation works mean control of the water supply, and it is of the utmost importance to have the ground wet just when moisture is wanted. In the Cahuenga valley, there has of late been agitation for the formation of an irrigation district under the Wright act, as during the first months of the winter the growers of early vegetables and small fruits found themselves seriously hampered by the lack of water for irrigation and the absence of the usual rains."

Sacramento *Record-Union:* "Since 1885, $11,900,000 have been expended on public works in Illinois, as against $2,100,000 in California; that two buildings alone in New York cost the General Government $19,311,000, and that in Louisiana $4,800,000 were expended, while nearly $6,000,000 were spent upon a single public building in Massachusetts. In the matter of river and harbor appropriations, there are nine States with less coast mileage in the aggregate than California, which from 1789 to 1892 received for harbor work over $42,000,000, while up to 1882, California waters received but $1,493,000, and since then but $2,300,000. For the Mississippi river alone since 1881, $24,000,000 have been expended, whereas California rivers have received but $726,000, and that only for current work, such as snagging, etc., no rectification and protective work having been done. Yet for the decade from 1881 to 1891, California paid into the National Treasury the sum of $118,000,000. Herein no account has been taken of the enormous addition the mines of California have made to the national wealth and strength, nor any account of the beneficence to the whole Union of the building of this State upon the Pacific shores of the Nation."

Santa Ana *Blade:* "It would be an interesting thing to look up the growth of the horse-breeding industry of California and ascertain how much money it has made for the State since it became thoroughly systematized. We know, in a general way, that California has become the peer, if not the superior, of Kentucky in raising fine horses, but we believe no effort has been made to study the subject thoroughly or to collate the complete statistics of this great and constantly increasing industry. There would be no objection, we imagine, on the part of the owners of the great breeding farms to giving enough information to make such an article substantially accurate, for it would only extend the reputation of California horses and increase the breeders' profit in the future."

Antioch *Ledger:* "The trouble with the Californian is, that he is like the turkey in the coop—he is looking too high for a remedy. Instead of figuring on building transcontinental railroads we ought to bend our turkey heads down. We should devote some attention to reforming the condition of things at our very feet before we look across the continent. We should devote our energies to building local roads — competing railroads, connecting one portion of the State with another. There is something radically wrong when it costs as much to ship a carload of machinery from San Francisco to Fresno as it does from Philadelphia to Fresno. What we want is cheaper local freights, not cheaper overland freights. We want to build local lines of competing roads before we begin to trudge across the continent."

Stockton *Independent:* "The Government of the United States aided the construction of the Illinois and Michigan canal, which connects Lake Michigan with the Illinois river, and built the canal which connects the lakes of Superior and Huron. The Government is now being asked to construct a canal around the falls of Niagara on the American side, and great popular pressure is being brought upon Congress to appropriate a vast sum for that and like purposes. It is right that this work should be done by Government aid, and it is likewise right that all similar enterprises should receive like aid. The projected San Joaquin canal is as important to California as are the Eastern enterprises to the States through which they pass. It will greatly increase the commerce on the San Joaquin, and consequently benefit the whole country."

Woodland *Democrat:* "The necessity for retrenchment in the expense of maintaining the Supreme Court will be more apparent after an examination of the expense in each State. California ranks twenty-second in population and the total expense of the Supreme Court is $264,166. New Jersey ranks eighteenth in population, but the total cost of maintaining her Supreme Court is only $151,500. The population of Illinois is nearly four times that of California, but the expense of the Supreme Court is less by more than $25,000 per annum. New York's population is nearly eight times that of California, but the Supreme Court expense is only about twice as large as that of California. And so the comparison might be continued through the entire list, and always to the disadvantage of California. This is a serious matter and well worthy of the serious consideration of every taxpayer."

Presidential Chances.

The most important political incident of the week is the declaration by Mr. Blaine that he is not a candidate for the presidency. He makes this statement in a brief note to Mr. Clarkson, Chairman of the Republican National Committee, who gave it to the public on Tuesday. Mr. Blaine does not say that he will not, under any circumstances, accept the nomination—simply that he is not a candidate and that his name will not go before the convention. The political newspapers and the public generally appear to have accepted this declaration as final, though we imagine that Mr. Blaine's more enthusiastic friends—and there are many of them in California—will still hope that in certain contingencies he may be induced to alter his determination. For example, if at the time of the convention Mr. Blaine should be in good health, and if the nomination should be tendered him with practical unanimity, it would scarcely be possible for him to decline it. There is nothing in his letter to Clarkson that would prevent his doing so; and it is not at all unlikely that such an offer will be made. Looking at the situation broadly and accepting Mr. Blaine's declaration for just what it says and no more, we are of the opinion that the ultimate of the matter will be Mr. Blaine's nomination, if he is in good state of health when the convention meets.

However, popular judgment in the East seems to regard Mr. Blaine as disposed of by this letter, and the prevailing opinion is that the road is now fairly clear for the renomination of Mr. Harrison. It is admitted that as against Blaine, Harrison would not be in the race, but with Blaine out of the way, and presumably favorable to his renomination, his chances are exceedingly good. The office holders, who constitute a powerful political force, will of course support him; conservative citizenship generally, which always wants the fewest possible changes, will be with him; the record of an efficient, though not brilliant, administration will lend its powerful aid. In short, unless Mr. Blaine can be induced to change his mind, Mr Harrison is almost certain to be again put forth by hi party.

The Democratic situation is not nearly so clear. Mr. Cleveland has unquestionably the strongest hold upon the personal favor of his party, but he is frankly not in sympathy with a large element in it upon the currency and upon other vital questions of party doctrine. It has been declared for Mr. Cleveland by his closest friends, and not disputed by him, that he would not stand upon a platform representing policies from which he has publicly dissented. There seems small prospect that the party as a whole will come to Mr. Cleveland's views, and in the opinion of many of his warmest admirers and friends, this fact disposes of him as a candidate. But in addition to this situation, it has recently become manifest that Mr. Cleveland will not secure the endorsement of his own State, without which his nomination would be an impossibility. In view of all these facts, it seems extremely unlikely that Mr. Cleveland will be the candidate of his party. What is known as the Hill and Gorman faction of the democracy is now clearly in the ascendant, headed by the powerful Tammany organization of New York and by the general strength which elected Mr. Crisp of Georgia speaker of the House over Mr. Mills of Texas, the especial friend of Cleveland. Against Hill's chances there is an unquestionable element of personal distrust in his party, though his command of practical political forces might overcome this and secure the nomination for him. At the least, it looks as if Hill would have the loudest voice in naming the candidate, and it is interesting to know that his first choice after himself is his friend Gorman. With the situation thus mixed, speculation becomes mere guess work.

The Late Mr. Spurgeon.

The great English preacher, Spurgeon, who died last week, stood to the English world of Christianity very much as Beecher stood in America. He was nominally a Baptist, but no sectarian bounds were wide enough for a man so big and broad as Spurgeon, and he became a preacher outside of sectarian lines to all earnest Christian people. For 36 years he preached in London and never during that whole time was able to find a hall big enough for the crowds who came to hear him. His great temple in London was capable of seating 15,000 people, with standing room for many more, but it is said that he never preached a sermon in it when every foot of space was not occupied and hundreds came who could get no farther than the door.

Mr. Spurgeon's power did not proceed from great scholarship, for he did not have it. It did not proceed from noble eloquence, for he had not what the critical would call eloquence. His power rested not upon these qualities, but upon the spiritual force of a profoundly earnest common man addressed in plain terms to common people. He talked not to the learned, although the learned flocked in crowds to hear him. But he talked to Peter, John and William in the plain phrases they could understand, and with that eloquence past all art—the eloquence of profound conviction and of intense spiritual fervor.

Spurgeon's career showed that the strength of a pulpit rests less upon scholarship, eloquence, lofty music and noble surroundings than upon a profound spirituality. There never was a great church without a strong pulpit, and there never was a strong pulpit without profound spirituality in the man behind it. This is a fact very often disregarded in the organization of churches, and one which explains why it is that many churches do not prosper. Mr. Spurgeon was a man of tireless intellectual energy.

His sermons, pamphlets, lectures and essays number into the tens of thousands, and have been reprinted and widely read in every civilized country. There is scarcely a subject related to practical Christianity upon which he has not written exhaustively. In addition to all this labor, he has been active in works of practical philanthropy and has performed prodigious labor as an educator. No other man of his time and country save Mr. Gladstone has led a life of such unceasing intellectual activity, and perhaps none other has carried to such multitudes that which has given light and comfort to their lives.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press,' and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

The Fruit Industry.

Market Review for the year 1891.

[Written for the RURAL PRESS by J. R. FARISH.]

The fruit industry of California continues to forge ahead, and at no very distant day will fetch in more money to the State at large than will that of wheat. The number of fruit trees given below, although showing an increase of fully 1,500,000 trees over County Assessors' returns in 1890, does not give the correct number of growing trees in this State. By those in position to know, it is claimed that there are at least 19,000,000 trees planted. To this number, large additions will be made in 1892, which will bring the aggregate up to about 20,000,000 trees. Of course, this includes decidous and citrus. With these trees in full bearing, the fruit crop of this State will be simply "enormous." In view of the growing importance of the industry, and the products coming more strongly into competition with Eastern cultivated fruit, horticulturists are not only paying more attention to the growing of the better varieties, but are experimenting with a view of greater perfection. This desire to excel has added several improved kinds to our already large list of choice fruits. Not only is greater attention given to growing choice varieties of fruits, but more attention is given to cultivating the trees and vines by the most approved modern systems, the result of which is better fruit.

One of the greatest drawbacks to the industry is the high freight rates charged by railroad companies on both local and overland shipments. In view of the large output of the orchards, and its being added to yearly by largely increased numbers of trees coming into bearing, it would seem that the railroad companies could of their own accord reduce their freight tariffs, and at the same time add largely to the rolling stock, which should be made to transport fruit without injury. While a decided improvement has been made in the latter direction, yet there is room for more. With competing transcontinental railways all desired requirements will undoubtedly follow.

By consulting the tables of overland shipments given below, a few very striking changes will be observed. Every branch of the industry shows an increased shipment in 1891 over those of 1890, except canned goods. The most decided increase was in citrus fruits. In dried fruits, every point shows an increase, except Oakland, Colton and Los Angeles. While Oakland fell off about five per cent., that of Colton fell off fully 50 per cent. and Los Angeles about 70 per cent. The falling off in the shipments of dried fruits from the southern part of the State is accepted as evidence of a larger marketing of the green fruit.

The following are the County Assessors' returns of the number of fruit trees growing on March 1, 1891 (oranges and lemons are included with deciduous in the first table of trees):

Counties.	Fruit Trees.	Oranges.	Lemons.
Alameda	58,510	2,599	1,147
Alpine	1,500	.....	.....
Amador	120,250	116	52
Butte	770,000	119,012	1,762
Calaveras	.....	230	218
Colusa	171,065	6,923	99
Contra Costa	264,770	398	258
Del Norte	1,821	.....	.....
El Dorado	148,958	284	295
Fresno	265,141	5,941	1,380
Humboldt	109,705	.....	.....
Inyo	40,308	.....	.....
Kern	215,000	1,277	640
Lake	61,008	361	.....
Los Angeles	1,746,530	987,102	76,927
Marin	57,600	248	16
Mariposa	45,050	173	132
Merced	163 700	950	635
Mo oc	150,460	.....	.....
Monterey	30,500	221	14
Napa	675,845	1,375	65
Nevada	213,870	300	.....
Orange	351,696	141,029	25,066
Placer	684,715	11,535	1,895
Sacramento	581,370	13,610	1,142
San Bernardino	2,319,847	2,286,200	18,000
San Diego	1,062,745	204,026	65 92
San Joaquin	305,711	2,752	87
San Luis Obispo	83,720	5,800	2,550
San Mateo	40,000	470	50
Santa Barbara	41,260	44,200	13,150
Santa Clara	2,024,008	1,305	331
Santa Cruz	307,195	216	128
Shasta	169,300	.....	.....
Sierra	8,591	199	44
Siskiyou	45,290	.....	.....
Solano	1,032,565	3,417	404
Sonoma	1,846,345	3,185	1,095
Stanislaus	51,098	17,796	508
Sutter	239 240	3,497	152
Tehama	413,495	1,246	218
Trinity	10,000	.....	.....
Tulare	461,051	3,330	1,885
Tuolumne	16,350	.....	.....
Ventura	347,573	63 700	36,727
Yolo	275,000	1,341	523
Yuba	120,000	21,159	327
Totals	17,649,765	3,958,350	416,467

The acreage set to grape vines by counties is as follows:

Counties.	Wine.	Table.	Raisin.
Alameda	6,396	236	194
Amador	.....	.....	.....
Butte	111	65½	604½
Calaveras	404	†	.....
Colusa	24	28	370½
Contra Costa	2,085	975	81½
El Dorado	1,019	370	123
Fresno	5,574	.....	43,936
Inyo	12½	21	9
Kern	.....	.....	1,200
Lake	1,046	15	.....
Los Angeles	4,632	40	23
Marin	477	25	.....
Mendocino	190	14	.....
Merced	425	.....	1,421
Monterey	.....	.....	.....
Napa	18,177	52	.....
Nevada	190	30	.....
Orange	140	.....	4
Placer	354	1,431	500
Sacramento	3 131	1,164	335
San Benito	140	35	.....
San Bernardino	1,024	....	2,591
San Diego	132	40	4,455
San Joaquin	900	346	.
San Luis Obispo	437	33	1
San Mateo	747½	26	15
Santa Barbara	160	10	.....
Santa Clara	10,294	1,126	103
Santa Cruz	1,365	319	.....
Shasta	122	104	242
Solano	† 1,928	1,167	432
Sonoma	22 351	332	.....
Stanislaus	82	13	524
Sutter	38	47	285
Tehama	3,705	80	227
Tulare	70	.....	9,849
Tuolumne	.....	.....	.....
Ventura	100	23	197
Yolo	1,575	1,000	1,125
Yuba	570	123	.....
Totals	90,228	9,300½	68,837½

*Partial.
†Reported as wine grapes.

Eastern Fruit Shipments.

The following table of the Eastern shipments of California fruits, in pounds, by the Southern Pacific and the Santa Fe lines during the year 1891 in comparison with 1890:

SHIPPED OVERLAND BY S. P. R. R. CO.

Stations.	Dried Fruit. 1891	Dried Fruit. 1890	Deciduous Fruit. 1891	Deciduous Fruit. 1890	Citrus Fruit. 1891	Citrus Fruit. 1890	Nuts. 1891	Nuts. 1890	Raisins. 1891	Raisins. 1890	Canned Goods. 1891	Canned Goods. 1890
San Francisco	4,768,690	6,681	75,620	...	.....	.....	.....	.....	.....	.....	.....	.....
Oakland	566,020	...	1,871,930	...	.....	.....	.....	.....	.....	.....	.....	.....
Sacramento	5,375,920	...	46,865,220	...	.....	.....	.....	.....	.....	.....	.....	.....
San Jose	13,962,210	...	12,156,030	...	.....	.....	.....	.....	.....	.....	.....	.....
Stockton	8,534,350	...	5,040,630	...	.....	.....	.....	.....	.....	.....	.....	.....
Marysville	2,331,720	...	992,510	...	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles	2,958,660	...	1,063,200	...	.....	.....	.....	.....	.....	.....	.....	.....
Colton	2,202,960	...	.....	...	.....	.....	.....	.....	.....	.....	.....	.....
Totals	48,377,910	...	68,084,120	...	77,561,310	...	18,441,320	...	30,769,560	...	1,574,230	...
All places	.....	...	.....	...	.....	...	.....	...	.....	...	.....	...
Los Angeles Co.	10,836,360	...	.....	...	.....	...	.....	...	.....	...	.....	...
Orange Co.	2,400,000	...	.....	...	.....	...	.....	...	.....	...	.....	...
San Bernardino Co.	4,200,000	...	.....	...	.....	...	.....	...	.....	...	.....	...
San Diego Co.	490,911	...	.....	...	.....	...	.....	...	.....	...	.....	...
Totals	21,917,271	...	.....	...	49,975,000	...	57,435,000	...	.....	...	.....	...
SHIPPED OVERLAND BY THE SANTA FE SYSTEM.	11,744,000	...	.....	...	.....	...	.....	...	13,760,000	...	1,574,230	...
Totals	58,417,380	...	68,084,120	...	77,561,310	...	18,441,320	...	30,769,560	...	1,574,230	...
Deciduous Fruit.	6,432,410	...	75,620	...	.....	...	.....	...	.....	...	.....	...
Citrus Fruit.	802,040	...	1,871,930	...	116,570	...	.....	...	.....	...	.....	...
Nuts.	14,073,770	...	46,865,220	...	1,980,260	...	.....	...	.....	...	.....	...
Raisins.	25,490,020	...	12,156,030	...	58,870,040	...	.....	...	.....	...	.....	...
Canned Goods.	5,934,650	...	5,040,630	...	12,750,840	...	.....	...	.....	...	.....	...
Total	58,417,380	...	68,084,120	...	77,561,310	...	18,441,320	...	30,769,560	...	1,574,230	...

Deciduous Fruits.

The fruit market in 1891 was a series of disappointments, resulting in losses to handlers of both green and dried. Early in the season, canners and driers entered the market and contracted at the following prices: Apricots $20 to $35, cherries 3c to 6c per lb. according to quality, Bartlett pears $35 to $45, prunes $35 to $45, peaches $30 to $50, plums $30 to $45, nectarines $30 to $45. As the season advanced and reports of large peach crops at the East became a certainty, buyers bid lower for peaches. Fruit averaged smaller, which caused a wide range in prices. Choice selected, for special purposes, were readily placed at good figures, while small sized sold slowly at low prices. Taken as a whole, last year's fruits were poor keepers, which necessitated forced sales of the poor to fair at very low prices, and even then, large quantities had to be dumped. Never, within the writer's recollection, was there ever before a season wherein green fruits made such rapid decay. Consignments received in good order would within two or three days, show more or less rotting. This was not the case in all consignments, but the remarks apply to from 50 to 70 per cent. In the PRESS of August 15, we wrote as follows: "It is seldom, if ever, that the market presents so demoralized an appearance as at present. Fruit in this State ripened from one to three weeks late, while at the East it was generally earlier. These two events caused a short selling season at the East for our fruits, and the result is that it does not now pay to forward fruits, consequently this market is the dumping ground. This (Wednesday) morning the writer's tour among commission merchants showed heavy stocks and few buyers, with canners not showing up. Under such a condition, the market is hard to quote. Poor, trashy fruits are given the go-by, and being neglected, considerable are rotting."

On August 22d (one week later) we reported the market as follows: "Never within the history of the fruit trade of this city has there been so demoralized a market as now obtains. Combined with unprecedented heavy receipts are two unfavorable conditions, viz., the generally poor-keeping quality of fruit and an absence in the bulk of the receipts of that juicy, fruity flavor so highly esteemed by consumers, and in its stead is to be found a watery, unfruity taste. The poor-keeping quality is due largely to climatic changes—hot days, cool days, warm days, etc., alternating. Fully one-half of the peaches received have their pits cracked open, and the fruit itself is partly sour. Peaches grown on the higher altitudes, or where the climate is more uniform, are of excellent quality, but the oversupply of the poor kinds are against them. Pears are generally overripe. Large quantities of fruit are being dumped daily. Merchants are advising orchardists not to ship for a short time, or until the market cleans up."

Apples sold considerably lower last year than they did in 1890. The price averaged from 40 to 50 per cent less. There was an unusually large quantity of poor, wormy and defective.

Berries in 1891 did well, holding to fairly good prices throughout the year.

Grapes, like tree fruits, held to low prices throughout the year. The crop was large. The shipments overland were heavy. Wine grapes had a wide range. Many grapes had to be sold for making brandy owing to damage by climatic changes.

Citrus Fruits.

In 1890–91 the orange crop was as follows in boxes:

Riverside	340,000
Los Angeles, outside of Pasadena and Pomona	450,000
San Diego	30,000
Anaheim	35 000
Pomona	22,000
Pasadena	30 000
San Bernardino, Colton and Highland	20,000
Ontario and vicinity	2,000
Santa Ana, Orange and Tustin	86,000
Redlands and Old San Bernardino	25,125
Ventura	15,000
Santa Barbara	2,000
Oroville	2,860
Yuba	5,000
Placer	2,500
Santa Clara	1,000
Fresno	500
Sutter	300
Solano	150
Total boxes	1,069,435

For the first two months in 1891, the orange market ruled generally in buyers' favor, with San Francisco made the dumping ground, owing to Florida's product monopolizing the Eastern markets. Toward the middle of February we wrote in the PRESS: "The crop of oranges in this State is larger than heretofore estimated, and as Florida oranges, owing to relative cheapness, have the run of the Eastern markets, our product is forced on the coast markets at low prices. The weather has been and still is in favor of growers, for the fruit is ripening slowly. Had oranges ripened as rapidly as they did last season, forced shipments to all distributive points would have been in order, and with forced sales, much lower ranges in prices would have followed than is now witnessed." This condition held up to about the middle of March, when a better market set in, which was quite marked by the last of the month, as the following advices from Los Angeles, published in the PRESS of March 28, shows: "Thus far this season's shipments of oranges to the Eastern market have been remarkably light. Growers have been holding off waiting for better prices. In order not to be at the mercy of the combination of buyers, many of them arranged to ship their own crops. The effect of the growers holding back and not selling their fruit will be greatly to their advantage, as within the past ten days prices have gone from 75 cents to $1.10 per box for seedlings on the tree. The cause of the increase in price is the reported failure of the Italian crop and also a story to the effect that the rest of the Florida crop has been badly injured. Orchards are being sold every day now to packers, and the orange industry is at its height for the season."

The result of free shipments to the East began to make itself felt on our market by steadying prices and causing a gradual appreciation until quotations ranged at an advance of from 40 to 50 per cent over January quotations.

The crop season of 1891–92 opened as usual with Butte county sending in the first consignment, which was soon followed by Solano county, with the southern part of the State not far behind.

Referring to the present situation, the Los Angeles *Express* of a recent date says: A few weeks ago the orchardists were in the slough of despondency and could see nothing ahead to cheer their drooping spirits, but now they feel their drooping spirits being invigorated by the tonic of the events of the last few days. First came the prompt and salutary reduction of rate on citrus fruit on the part of the Santa Fe, and the like reduction to take place on February 1st; then the salubrious rains and the assurance that the rains bring with them that the frost is gone. The orange growers are, as a rule, very optimistic people, and are made so by the trend of fortunate events in the past few years. Last year (1891) there was great competition among the middlemen and buyers to secure the crop, and the orchardists realized handsome profits on their crop. * * * This year (1892) the buyers are very conservative; in fact, they may be said to be extraordinarily cautious. This was one of the causes of the orchardists' gloom. They expected the middlemen and purchasers to fall over each other in their zeal to buy their fruit. The windstorms and the frost added to their gloom. There is, however, a slight reaction. Buyers show a little more activity, and though they are not offering such large prices as last year, the prices are such as to give the raisers a little profit and a little comfort. The fruit injured by the winds and frost, under the new 90-cent rate, can be shipped to near Eastern and Northern points for the huckster trade. In this way even the inferior grades of oranges can be disposed of with some little profit to the producers. One prominent middleman said: "After sorting the abraded and frosted fruit it was found that a large proportion of it was in very fair condition and available for shipment. If the demand in the East was as great this year as it was last year, there would be no difficulty in disposing of the crop, even the inferior grades slightly damaged by the winds and frost. Southern California oranges, even in view of the calamities they have sustained, are reported to be superior in quality to the Florida product, which has been seriously injured by the blighting frosts that have visited that section this season. This affords great solace to the orchardists, as they realize that in case of an active market in the East the California product will be given the preference. Another favorable aspect of the orange crop is that the budded varieties, such as the Navels and the Mediterranean Sweets, have suffered less from the winds and the frosts than the common variety. All the middlemen and speculative buyers say that the late crops will be of good quality and will find a good market. The excessive cold weather in the East has had a great deal to do with the sluggishness of the market.

In 1891 was inaugurated a fairly free shipment of lemons to the East, where they met with a good market, owing to growers having a better knowledge of how to pick, cure and pack. This industry promises to assume large proportions in the near future.

Olive culture is attracting renewed attention. It is found that from California olives, a very superior oil is manufactured, and wherever introduced, it has met with unqualified success.

Figs are forcing themselves rapidly to the front. California figs, when properly cured and packed, meet with a quick market and at good prices.

Dried Fruits.

From a private circular issued at the close of 1891, we obtain the following, which is a condensed but faithful review of the market:

(*Concluded on page* 144.)

PACIFIC RURAL PRESS PREMIUM.

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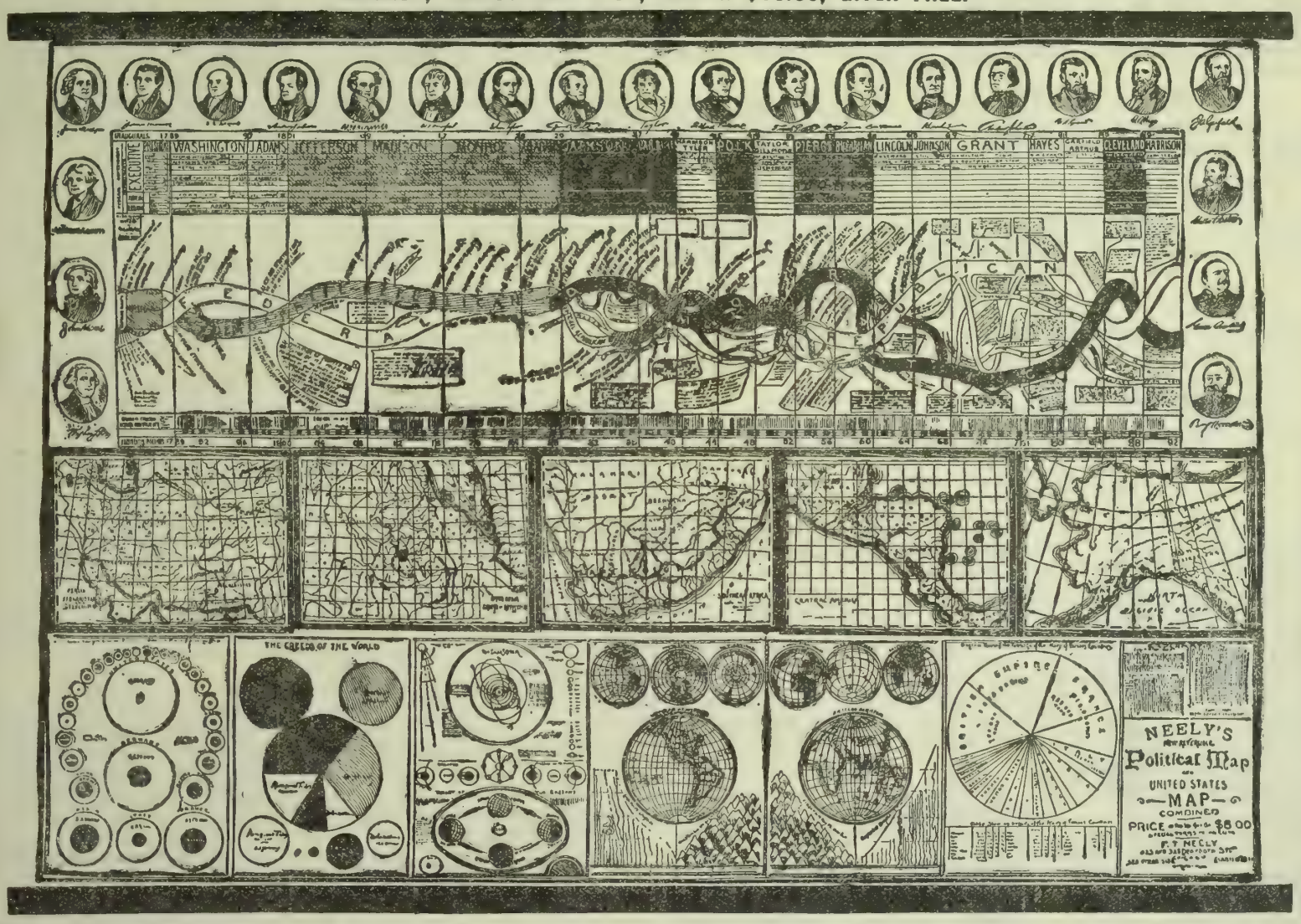
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The Fruit Industry.

(*Continued from page* 142.)

The year just closed has not been so satisfactory to the dried fruit producing interest as the one preceding, which is not surprising, as the season of 1890 was a phenomenal one for the dried fruit trade of this coast, and that there will be many such in the future is altogether improbable. With a failure of the fruit crop East in 1890, and no extra heavy yield in this State, the shipping demand for fresh and canned fruit was unprecedented, and it was thought in the early part of that season that there would be little dried fruit of 1890 curing obtainable. Speculative inquiry sent prices for some descriptions to unwarranted levels. More particularly was this the case with peaches, plums pitted and apricots, although values along the entire line were on a comparatively high plane. There was more dried fruit that season than was anticipated, and heavy losses were incurred by speculators and dealers, especially on late holdings. The lack of confidence thus created has in no small degree acted against the selling interest the past season. The very low prices that obtained for green fruit caused increased quantities to be dried, and with small holdings coming on the market, it was found impossible to control the markets either on this coast or at the East.

Prunes.

Prunes met with better favor than any other variety this season. The yield was never so large, as the acreage has been greatly increased during the past few years and many new trees have just commenced bearing. The San Jose section continues to lead in the growing of this fruit, from 60 to 70 per cent of the entire crop being produced in that locality, but in Sonoma, Solano and some of the other northern counties, more particularly in Sonoma county, prune culture is making satisfactory progress and is now of no small proportions. The increase in prune orchards in Sonoma county the past few years has been exceedingly large, and this section bids fair to soon come into decided prominence as a prune growing district. The California prune crop of 1891 may be stated in round numbers at 24 000,000 pounds, or about 1200 carloads of ten tons each. The graded stock has been nearly all marketed, and it would be difficult at this date to get orders filled for carload lots of the four sizes. Most of the prunes now remaining unplaced are 90 100s and smaller, with no evidence of there being any large amount of this class of stock still awaiting a market. The range of prices, exclusive of extra large sizes and fancy qualities, or very small and inferior stock, has been, in wholesale circles, from 4½@6½ in sacks, as to size and other conditions, with most of the business within 5@6c. The four sizes have sold mostly at 5½@5¾c, but have been quoted lately at 5¾@6c, with the market tolerably firm under slim offerings, and prospects more favorable for values to harden than to recede as the season advances. Boxed prunes commanded only about half a cent advance over stock in sacks, the preference being given to sacks by nearly all large buyers.

Peaches.

Owing to large crops at the East and liberal drying reported, our market for peaches of other than select quality has dragged most of the season at generally low and irregular prices, and the more ordinary descriptions do not give promise of cleaning up speedily at the low figures now ruling. Comparatively few peeled peaches came on the market from last crop, neither was there any decidedly active inquiry for this style. Peeled and bleached found moderate custom within range of 9@13c, but for peeled unbleached, there were few buyers, values for this description being nominal most of the time at 6@8c. Peaches unpeeled ranged at 3½@7½c for bleached from first hands, and 2@3½c for ordinary sun-dried, although sales as low as 2c were the exception, and mainly of undesirable quality, accompanied with decided selling pressure. Bleached peaches of first quality, obtainable at 6@7c, were sought after early in the season, and most of this class of stock had two months ago passed into the hands of jobbers. The bleached unpeeled which are now offering are dragging at 3 1-2@6c, and common sun-dried are not being sought after at 2 1-2@3.

Apples.

Apples were turned out in fair quantity, but the quality of a large portion of the product was not all that could be desired, and considerable was decidedly inferior, especially sliced and evaporated of Chinese packing. Early sales of evaporated in boxes were at 7 1-2@8 1-2 cts., with sliced in sacks 3 1-2@5 1-2 cts., and quartered 3 1-2@4 1-2 cts. In September, prices receded fully half a cent, and in October there was further shading, especially on inferior stock, some poor evaporated in boxes going at 4 1-2 cts. During the past two months wholesale trade has been dragging on a basis of 6@7 cts. for evaporated and sliced in boxes and 2 1-2@3 1-2 cts. for sun-dried in sacks.

Pears.

Pears have not been offered freely this season, and there was a fair demand for desirable curings, such commanding moderately good figures. Peeled and sliced, evaporated, in boxes, sold mainly within 6@8 cts, as to quantity and quality, with sun-dried sliced in sacks at 3 1-2 to 5 cts., and quatered 2 1-2 to 4 cts., little of really choice quality being obtainable lately at any figure.

Apricots.

The crop was disappointing both in quantity and quality. The fruit did not mature well in some of the more important localities, and it was in these sections where most of the drying was done. Royal apricots, bleached and in sacks, have sold mainly at 5@7½ cts. for fair to prime, and at 3½@5 cts. for common grades of sun-dried. Moorpark apricots of choice to select quality have been quotable at 7½@9 cts., with no large offerings of this description at any date from last crop.

Plums.

Plums were not cured as extensively, perhaps, as in some former seasons, but there were enough to accomodate the demand and at the same time keep prices at very much lower levels than in 1890. Pitted stock constituted the bulk of offerings, and was the kind most salable. The market for pitted plums opened this season at 5½@6 1-2 cts., with a few early sales at a little higher range. Prices were soon on a decline, however, with 5 1-2 cts. a full wholesale figure during the greater part of September and October, and later on 4 1-2@5 cts. was about all that was justified as a wholesale quotation.

Dried Grapes.

Dried grapes, in common with other fruits, did not fare so well from a producer's standpoint, as in 1890. The output the past season was of fair proportions, certainly not less than 5000 tons. Most of the yield has passed into second hands, and all things considered, at fairly good figures. Efforts were made early in the season to purchase in wholesale fashion at 2 1-2 to 2¾ cts. but the attempt was not attended with noteworthy success. September and October business, and the bulk of the wholesale trading was transacted in these two months, was at 2¾ to 3 cts. Later on, with less inquiry, and that not very urgent, the market receded fully a quarter of a cent, with the range of values little more than nominal at 2¼ to 2 3-4 cts. at the close of the year.

Raisins.

By reference to the tabular statement of overl nd shipments, it will be seen that the shipments of raisins in 1891 show large gains over those of 1890. The exports by water to foreign ports in the Pacific show a steady and gratifying increase. The general run of 1891 raisins shows a slight improvement over that of 1890, yet there is still room for further improvement. Well-known and established brands found a ready market, but unknown brands had to run the gantlet of thorough inspection, and with low, demoralized markets, every excuse was offered by buyers either for rejection or else to secure lower prices.

In its review of the raisin market, the *Grocer and Country Merchant* says that the season could not well have been more favorable for the curing of raisins, as there were no rains of sufficient volume to do any damage to the crop until after there had been abundant time to get the entire product cured and housed. A large proportion of this season's crop was marketed in bulk or in sacks, this style being in favor with many large handlers in Eastern centers, and has this in addition to recommend it—that it reduces cost of transportation and enables forwarding earlier than where the fruit is boxed before shipment. While the yield and the opportunity of taking care of the crop were in the main satisfactory, the marketing of California's raisins for 1891 has not been attended with success in many instances, and it is evident that there has been some very poor management or total lack of management in some quarters. Such an irregular and unstable market as regards values was never before experienced. That this was due to, or unavoidable on account of, the large size of the crop, cannot reasonably be admitted, for it should be possible to place in the United States alone, at much more satisfactory and uniform figures than have prevailed this season, a decidedly larger quantity than has been urged to sale during the past few months. The demoralization which has attended a great portion of the raisin trade of 1891 appears to be mainly attributable to consigning to parties who had not the necessary qualifications or facilities to handle the goods in a proper manner, in addition to which there were bad results through contracts which were only such in name, and afforded no protection to the seller or producer. Quite recently there have been forced sales of three crown Muscatel raisins on the Atlantic side at $1 per box, while in a regular jobbing way $1.50 to $1.75 per box was being demanded and obtained in same section, the latter being on a parity with values nominally current here. One dollar per box for prime raisins in New York, freight and commissions deducted, would not net the packer three cents per pound, and this is a lower figure than the most common raisins loose have been offered for in this center. Loose Muscatels in boxes have been difficult to obtain here as low as $1 per box for ordinary quality. Most of the local wholesale business in loose raisins has been within range of 3 1-2 to 4 1-2 cents per pound. There has been little deviation in quotable rates throughout the season, but weakness has been a pronounced feature of the market during the greater part of the time, and especially so during the past month, with offerings tolerably large, and little opportunity to effect transfers of noteworthy magnitude, even at decided concessions in buyers' favor.

The low prices at which California raisins have been marketed is being accepted as a blessing in disguise, for it is driving out foreign competition. Bearing on this and other points of interest, we excerpt the following from a fruit circular issued on Jan. 5, 1892, by a leading jobbing house in New York: * * * Those who have waited until the goods arrived have been enabled to buy California raisins at phenomenally low prices that are not only safe, but will show them a large percentage of profit, which will continue to increase as the season advances. It should not be forgotten that we have had only three months' consumption of this crop, and have nine months more to consume the present stock before the next crop comes to market. Furthermore, the next crop of raisins in California is likely to be restricted as to quantity, and there is even now talk of combinations being formed by the raisin growers to keep prices up and not let them be sacrificed as they have been the past season; therefore we think it is quite improbable that the next crop of raisins will open, except at much higher than present prices, and as loose. Muscatel raisins in bags will be just as good then as they are now; there is not the least danger in having some left over. But we have not the remotest idea that any one will have any to carry over, because we estimate the present stock of all kinds of raisins in this country at fully 500,000 boxes less than it was last year at this date; besides, prices are about 50 per cent lower, which increases consumption. *Present prices of California raisins practically shut off importation of foreign raisins, as they cannot successfully compete, and though we were formerly large importers and dealers of Valencias, we are forced to the conclusion that they are "not in it" with Californias.* Since California raisins dropped to panic prices about three weeks ago, we have never had the least doubt that they were good property, and we believe now, as we said then, they are better to have than gold dollars at 90 cents. We have been astonished at the large and continued demand for California raisins in bags, and though we have bought all of the very cheap ones that have arrived, we have not been able to increase our stock owing to our large sales.

But it is not at home alone that California raisins are making a name, as the following extracts from foreign letters show: Henry Berry, writing from Melbourne, Australia, Dec. 23, to the Secretary of the Producers' Raisin Packing Co., Fresno, says: "Yours of November 10 came duly to hand, since which, the raisins referred to therein have duly reached us in good order and condition. Having carefully examined some and compared them with the Spanish, we have to report that the Muscatels in layers, in all size packages, are salable here, and that the loose muscatels would doubtless also be salable to some extent, though they have never been put on the market in this form before. As regards the style of package, we would say that this is in every way satisfactory and compares favorably with the Spanish method. The seedless Sultanas are not a line that would find ready sale, they being totally different to the Smyrna fruit and appear to us to be nothing more than large currants."

The following is taken from the New York *Herald:*

"In view of the present agitation concerning the desirability of developing the English home market for California dried fruits and raisins, the following letter is of interest. It is written to George Bishop, of Fresno, one of the British syndicate now managing the Barton Vineyard Company, by James F. Wright, of Hanson Sons & Barter, one of the largest firms in the foreign fruit trade in the great city:

"'Referring to your inquiries, through Mr. Ivey, respecting California raisins, we believe there is a great future for these goods, but at present the Californians have a great deal to learn as to the mode and style of packing, and also considerable improvement to make in the growing of the raisins themselves. * * * You appear to confuse Muscatels with Valencia raisins. Permit me to point out that what the Californians are aiming at is to produce Muscatels or dessert raisins, whereas Valencias are simply pudding raisins, the former being treble the price of the latter. We have had a great number of inquiries respecting California fruit, and have seen and tasted a great variety of samples. There are only three fruits that seem likely to succeed here, viz: Muscatel raisins, evaporated apricots and black prunes, similar to French plums. The only practical way to make a trade in any of these goods is through the old beaten path—namely, to send consignments and list the market for the goods on their merit. The first lot may leave a loss, and probably will, but if the goods are really superior they will soon make their mark beyond a question. We may be a little more explicit in what we mean about packing fruit and rasins. While it is most important that the fruit should be uniformly and fairly packed, it is yet possible to make the face of the layers more sightly than has been the case with the California fruit heretofore. Spanish raisins are of two classes—faced, or Dehesa fruit, and unfaced, or cluster fruit. If the fruit be exceptionally fine, the latter is of course the better style, as it is impossible to "paint the lily" and thereby improve on nature; but with the other class of goods, the fruit hitherto sent from the Far West leaves much to be desired in the facing of the layers. The Spanish are adepts at this, and in order to render the fruit salable in England, a showy face of raisins, so laid as to show the raisins in the way that exposes their largest flat surface to the eye of a beholder, is indispensable. The papers should also be tasty and elegant, not vulgar, and lined with another thickness of clean white paper.'"

The above suggestions regarding packing may possibly hold good in controlling other markets where foreign fruits are competitors.

Nut Review.

While the fruit industry is making fast strides, that of nuts comes in a good second. The rapidity with which it is coming to the front causes close observers to predict that before many years pass California-grown tree nuts will drive foreign nuts from the markets in the East. The quality, under more thorough and systematic cultivation, shows a steady improvement. Peanuts are being given more attention, owing to their proving to be a good crop to grow between vines and trees.

The almond crop of this State for 1891 was only of moderate proportions, with the quality of fairly good average. The Eastern demand was never better, and not much time was consumed in relieving the market of the surplus of soft and paper shell. Most of the wholesale transactions in soft shell were at 10 to 11c for fairly good to choice, and at 12 to 14c for prime to select paper shell. For a month or more past little other than a small jobbing trade has been possible, with market firm at 13 to 15c for paper and 11 to 12c for soft shell. Hard shell have been offered very sparingly, hardly sufficient for local requirements, and have commanded 6 to 7c from first hands. The walnut crop did not mature so well as previous season, but the yield appears to be fully as large as that of 1890. Some were carried over from previous crop, in addition to which the equivalent of over 5000 sacks Chile walnuts arrived here in October, and these stocks of old domestic and imported had a depressing effect on values for current crop. Transfers of white walnuts of 1891 crop were at 7½ to 9c for fair to select of the ordinary variety, and at 9 to 11c for paper shell. Peanuts show the heaviest crop, according to arrivals, that has ever been grown in the State. Receipts for the season to date aggregate nearly 15,000 sacks, or more than double the quantity for corresponding period in 1890. Peanut market this season opened at 4½ to 5½c, but soon declined to 4 to 5c, and has been lately dull and weak at 3 to 4c, carload lots of prime nuts failing to move at lower figure.

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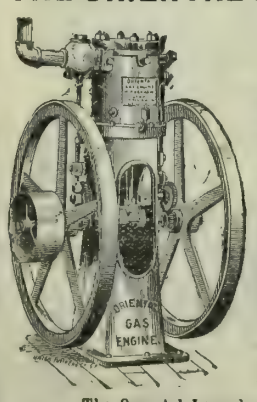
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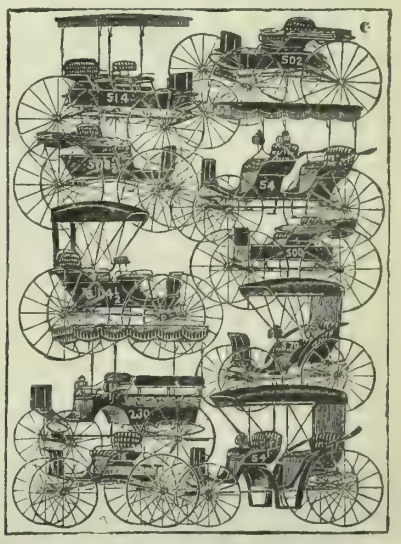


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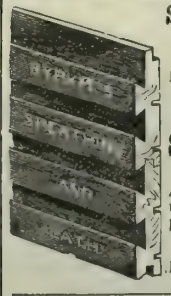


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GOOD HEALTH.

INDIAN SURGERY.—It is a mistake to suppose that the Digger Indian is entirely ignorant of how to proceed in cases of broken bones. A correspondent of the *Scientific American*, who once had some experience in sawmills in California, writes that journal as follows: On one occasion, while a number of Indians were curiously watching the operations of the mill, and standing near the double-flue boiler to keep warm, one of the flues suddenly collapsed in such a manner as to fatally scald one of the owners and hurl a poor old Indian woman some 20 feet away, breaking one of her legs below the knee. In the excitement of the occasion and the necessary care of the injured owner, the injury sustained by the woman was not observed and she was taken quietly away by the other Indians. Three or four days later quite a large number of Indians appeared in a hostile attitude on a near-by elevation which overlooked the mill. After taking their station, a tall chief approached and inquired for the "sawmill man," complaining that he had "shot off his sawmill" and broke the leg of a *mahale*, and he, the chief, was ready for a fight. The foreman took in the situation at once, invited the chief into the house adjoining, and showed him the stricken owner in the agonies of death. The chief then, in his turn, took in the situation from the opposite standpoint, and immediately exclaimed: "No intendi, accidenti. Me safe, no fite, all wano." We now append the interesting and surgical part of the story as given in the *Scientific American:* In a day or so after Mr. Hoxey's burial, the surgeon went to the *campudia*, and there sat the poor broken-legged *mahale*. The physician told me that the Diggers measured around the leg in several places, then cut a piece out of a slippery elm tree, near the size and shape of the leg, took the bark off, shaved off the outside and made as fine a splint as he ever saw, and fitted it around the broken limb, leaving the space open about one-quarter of an inch on the top, and were pouring in a little water to keep down the fever heat, and that in a few weeks the squaw was limping around town again.

WOMEN AS DOCTORS.—The increase of women doctors in the city has been very marked lately, and several of them are now admitted as staff physicians at the hospitals and dispensaries. One great advantage that they seem to have over their rivals of the other sex is that they can tack out their sign and then go as professional nurses until business comes to them. The male doctor frequently has to starve through a course of a year or two, and then he frequently fails to make enough to keep the pot boiling. Women doctors are generally proficient nurses, and they are trained by nature and study to care for the sick. They can take a patient and prescribe for him, and then watch by the bedside until all is over. At the end double fees are demanded—the regular doctor's fees for prescribing and then the nurse's salary for watching and nursing the patient according to the prescriptions made out by herself. There is no doubt but a great advantage is obtained in this way, and the nurse and doctor are both held responsible for any mistake. Among babies and women the female doctor has a field which she is gradually making a specialty.—New York Times.

LIGHT IN CHILDREN'S BEDROOMS.—A medical writer says: If mothers notice that the brains of their little ones conjure up uncanny sights and thoughts from the shadows of a room more or less dark, let the light burn brightly. To force a child to become accustomed to the darkness is a grave error, if its nervous system is so organized that this forcing is productive of fright. The nervous system of a child is a very susceptible organization, and the deleterious impressions made upon it will often make their influence felt throughout its whole after-life. If the child asks for a light under such circumstances, *do not refuse it.*

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At the State Board of Trade.

[Written for the RURAL PRESS by MAUD M. S. PEASLEE.]

Well worth the attention of all who are interested in the resources of our State, is the State Exhibit at the Board of Trade on Market St., San Francisco. Always open to the interested visitor, it is quite an object lesson to all who have the opportunity to examine the display.

The attendants are most courteous, and all exhibits are so plainly labeled that they speak for themselves.

Products, *natural* and *manufactured*, fill the large room, representing the various industries of the State. All the counties are not represented; the ones having the finest displays being Tulare, Tehama, Colusa, Sacramento, Fresno, Stanislaus, Kern, Butte and Los Angeles.

The exhibits from these counties is well arranged and on stands of their own with name of county in large letters above each stand. Much that comes from other counties is not noticed by the casual observer, because it is so scattered about the room.

The Tulare county stand is made of curly redwood, said to be 3700 years old and is beautifully polished.

Visitors to California, prospective investors in real estate, would do well to visit this fine collection; and the counties not represented should rouse themselves to a sense of the injustice they are doing their own section of country.

Let it be said of the length and breadth of California that it is a rich and productive land, inhabited by people who know its resources of whatever nature, and appreciate the importance of urging its claims upon the uninformed public.

Almond Gathering and Hulling.

SANTA ROSA, Jan. 24.

TO THE EDITOR:—Will you please tell me how those who have large orchards of almond trees gather and shell their almonds? To knock them from the tree and pick them up is slow work, and to shell them by hand leaves little or no profit. If there is machinery to shell them with, is it expensive? —J. M. T., Santa Rosa.

Almonds are usually gathered by spreading canvas under the trees and shaking the limbs separately. The few nuts which cling to the limb are dislodged by striking with a small stick. The gathering should be done after the hulls have burst open, but should not be delayed until the nuts are badly discolored. Hulling is done with machines, of which there are several in use. J. Hobart of Nordhoff, Ventura county, has one; A. O. Rix of Irvington, Alameda county, another, and a later device has been brought out on the Pearce ranch at Brentwood, Contra Costa county. We have not space to describe these machines, but they are simple and not expensive. All interested can write concerning them to the parties named.

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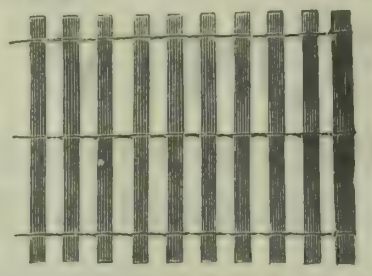
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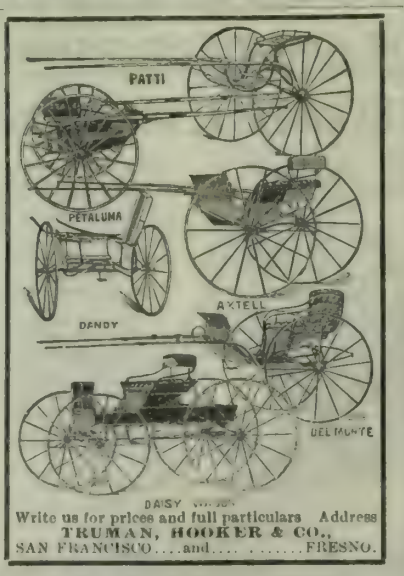
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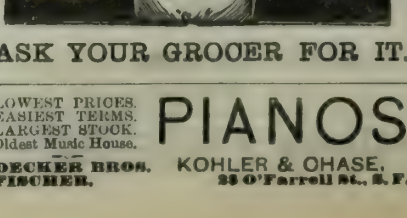
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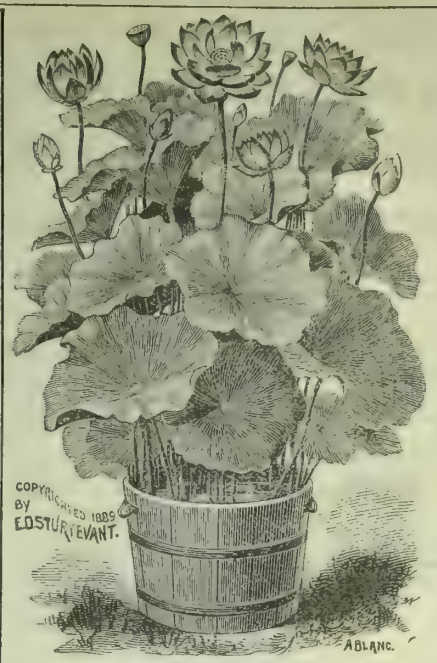
BLUE GUMS.

Monterey Cypress.

In lots to suit. Write for prices delivered on wharf in San Francisco. Address

W. A. T. STRATTON, Petaluma.

Seeds, Plants, Etc., Continued on Pages 154-155.



RARE

WATER LILIES

—AND—

EGYPTIAN LOTUS,

California Grown Roots.

HEADQUARTERS FOR AQUATIC PLANTS.

The finest gardens in the country are our patrons. Central Park, New York; Executive Mansion at Washington; Lincoln and Jackson parks, Chicago; and Golden Gate park, San Francisco, all purchased their original stock of aquatics from us.

WATER LILIES IN ALL COLORS—Red, White, Blue, Yellow, Pink, Purple. Also a choice variety of

ORNAMENTAL PLANTS and PALMS,

Consisting of KENTIAS, PHŒNIX, COCOS, Etc.

NELUMBIUM SPECIOSUM, $1.50 EACH.

Our COLORED PLATE of the EGYPTIAN LOTUS (14x21 inches) shows the flower, actual size. Our ILLUSTRATED CATALOGUE contains directions for culture, and full information with prices of plants. Catalogue, with colored plate, sent for six cents. Catalogue without plate free.

Nursery and water garden in the foothills between Edgemont and Cahuenga Pass. Address

EDMUND D. STURTEVANT,
Box 404 Station C, LOS ANGELES, CAL.

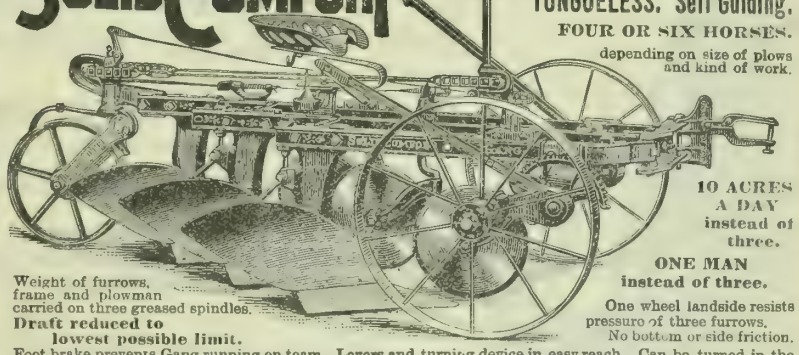
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THE "WONDER ON WHEELS"

TONGUELESS. Self Guiding.

FOUR OR SIX HORSES.

depending on size of plows and kind of work.



10 ACRES A DAY instead of three.

ONE MAN instead of three.

Weight of furrows, frame and plowman carried on three greased spindles.

Draft reduced to lowest possible limit.

One wheel landside resists pressure of three furrows. No bottom or side friction.

Foot brake prevents Gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. **Easier Driving, STRAIGHTER Furrows,** and **LIGHTER DRAFT** than any Gang in America. **Adjustable frame**—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut.

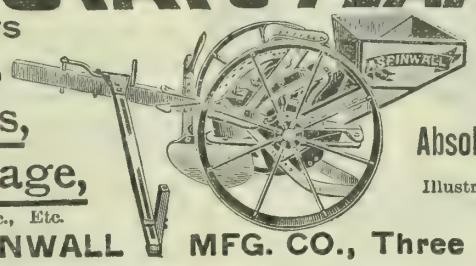
ECONOMIST PLOW CO., SOUTH BEND, INDIANA.

☞ **Special prices and time for trial given** on first orders from points where we have no agents. Our book, **"FUN ON THE FARM,"** sent **Free** to all who mention this paper.

"ASPINWALL"

POTATO-PLANTER

PLANTS
Corn,
Beans,
Ensilage,
Etc., Etc.



DISTRIBUTES FERTILIZERS.

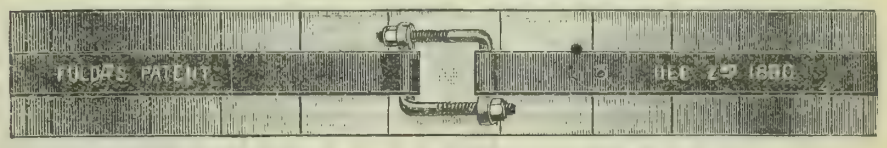
Absolutely Guaranteed.

Illustrated Circular sent Free.
(*Mention this paper.*)

ASPINWALL MFG. CO., Three Rivers, Mich.

TRUMAN, HOOKER & CO., San Francisco and Fresno, Agents for the Pacific Coast.

FULDA'S PATENT BAND AND HOOP COUPLING.



The Best, Simplest and Cheapest Coupling for Tank Hoops.

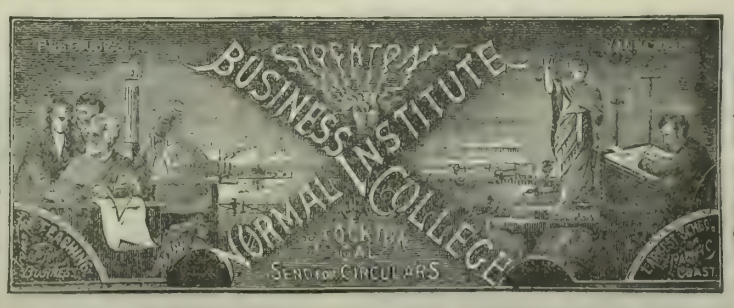
A sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size. Made in sizes to fit any width of iron

Prices, $1.00 to $1.50 per Pair. For sale to the trade. Liberal discount in quantities.

FULDA BROTHERS,
30 TO 40 SPEAR ST., SAN FRANCISCO,
MANUFACTURERS OF **MINING AND WATER TANKS.**
Send for Catalogue.

Stockton-Fresno Business College.

EXCELLENT BOARD $10 per Month.



FURNISHED ROOM $3 per Month.

THE LEADING FEATURE OF THE SCHOOL IS ITS HOME.

Tuition One Year (52 Weeks), $75.

Sixteen Regular Teachers and Over Three Hundred Students attending. Courses Thorough, Rates Lowest Instruction the Best, and School the Most Reliable. **Address W. C. RAMSEY.**

A School Girl's Rig.

If you are fitting out the children for school please remember that it can be done better and cheaper than any place on the coast at

Smith's Cash Store, 416-418 Front St., S. F., Cal.

Black and white ginghams, large plaids and stripes, fast colors, closing at 6¼c per yard, reduced from 15c, add 3c if by mail. Stylish dress gingam in large plaids, stripes and combination styles down from 15c to 6¼c to close out and make ready for March arrivals now enroute.

Plain, that is, solid color ginghams, wash and wear beautifully, down to 6¼c and 8c, some light, some dark, mostly dark colors. Nothing ever offered like 'em at twice the money.

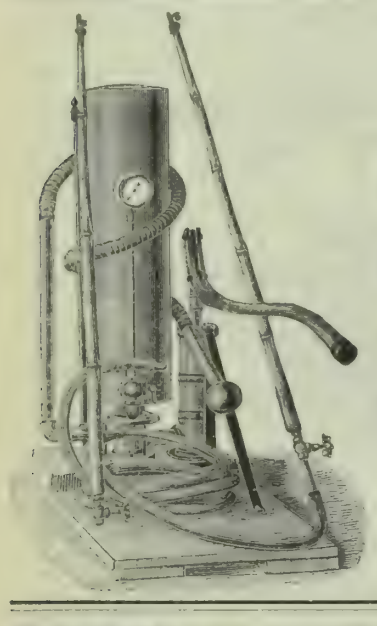
If these are not what you need ask for full 40-page list of goods from 5c up, and it will be sent you free of cost. Why not save money and have something good when you have the opportunity.

In Shoes we offer 11 to 1½ for misses in NARROW widths to close at 90c to $1.25, for fine, serviceable kid shoes of best quality. Our shoe list alone is worth $20 to you in a year if you have several to buy for.

In composition books, drawing books, pencil tablets, letter tablets, ink, paper, envelopes—everything for school, we can save you 50 to 100 per cent. Small sponges for slates, middling good, we offer 15 for 25 cents, such as you pay 5 cents for in town.

For boys we are just as well fixed. Good school or Sunday suits from 5 to 13, knee pants, at $2.50, $3.50 and $4.50. With long pants and vest, $4 50, $5.50, $6.50, and even higher We do not keep the cheap cottonade or common low-priced suits. We have a few from 7 to 11 years we are closing at $1.40, worth $2.50, in two-piece suits, but shall not replace them.

But we have about 60 SINGLE COATS, without vests or pants, from 9 to 17 years, at $1.50, $1.75, we would like to sell, and they would be called cheap at $4.00. Hats, shoes, shirts, caps, collars, stockings, boots, underwear, one line of ready-made dress shirts, colored, at 25 cents, well ——



If you want a First-Class Spray Pump

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.

Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

SAN JOSE, CAL.



SURE DEATH

To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

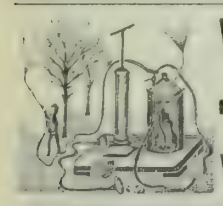
Ongerth Liquid Tree Protector,

The only effectual remedy in the market. Indorsed by the University of California. Send for circular with testimonials to

Ongerth Grafting Compound Co.

212 Davis Street,

SAN FRANCISCO.....CALIFORNIA.



Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

For Orchardists, Florists, Stockmen, Poultry Raisers

THERE IS NOTHING LIKE THEM

Pump sent complete as in cut for $14. Send for Illustrated Catalogue.

WAINWRIGHT SPRAYING APPARATUS CO., 10 Hayes St., S. F

Contracts taken for Large Jobs of Whitewashing.

CLUFF BROTHERS, Wholesale and Retail Grocers.

Orders by Mail Promptly Filled. Packed and Shipped Free of Charge.

Send for Price List, or send us a list of what you want and we will put prices to it and mail it back for your approval, by which you can see what you save by ordering from us.

All Goods Guaranteed as Represented, with Special Terms to Grange Trade-Card Members.

— ADDRESS —

CLUFF BROTHERS, Grange Department, 9 Montgomery Ave., S. F.

BREED'S UNIVERSAL WEEDER

Every practical farmer is especially interested in any implement that will tend to lessen the amount of his labor and increase the production of his crops and is constantly on the outlook for such implements. During the last few years the methods of cultivation of crops have become almost entirely revolutionized. The deep root pruning process is going out. Surface culture is going to become universal. For this purpose no implement equals the BREED WEEDER. Investigate. Send for circulars.

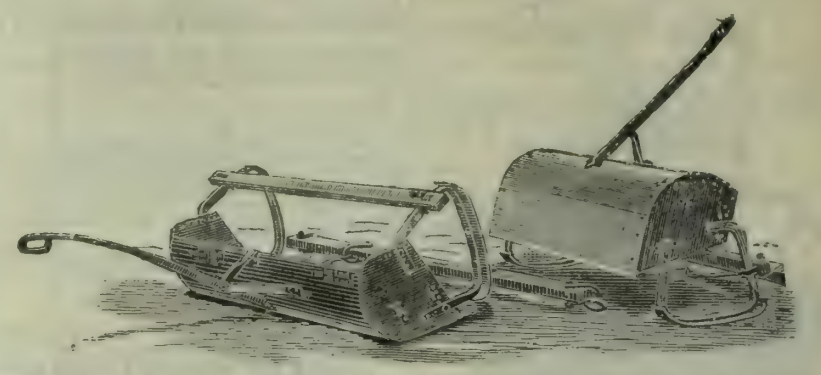
General Agents, KNAPP, BURRELL & CO., Portland, Oregon.

ORANGE CULTURE A practical treatise by T. A. Gaan giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts per copy. DEWEY PUB. CO., 220 Market, S.F

JOHN CAINE, 369 El Dorado St., Stockton.

1892—Wholesale and Retail—1892.

General Agent Winans' Pat. Carriage Co., Mich.; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

FRESNO AGRICULTURAL WORKS

FRESNO, CAL.

CARBOLINEUM AVENARIUS.

PRESERVATIVE AGAINST ROTTING, DECAY, FUNGUS, ETC., OF WOOD AND STONE.

REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:

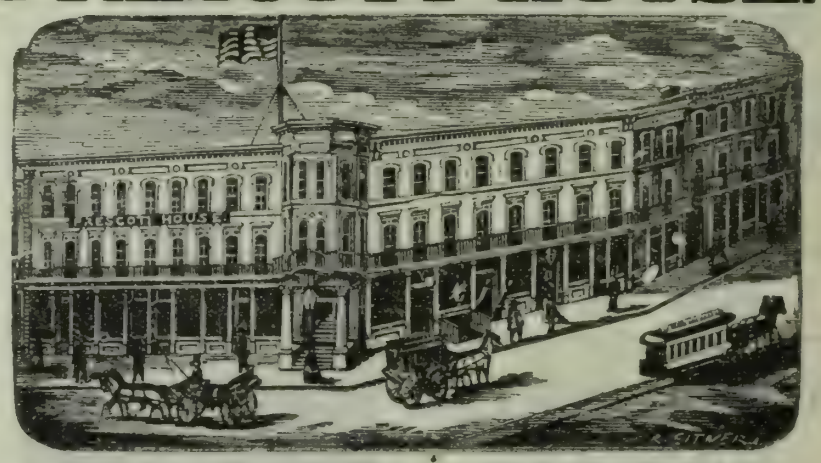
1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.

All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

CARBOLINEUM WOOD-PRESERVING CO.,

MUECKE & CO., Pacific Coast Agents. 319 California St., San Francisco, Cal.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House. J. W. BECKER, Proprietor.

GRANGERS' BUSINESS ASSOCIATION,

SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager. A. M. BELT, Assistant Manager.



Progress in Kern County.

New Colonists Arriving from England. Large Acreage of Fruit being Planted.

BAKERSFIELD, Feb. 8th, 1892.

TO THE EDITOR—Another large party of English colonists arrived here last week and at once proceeded to Rosedale, where selections had already been made for them. In several cases these lands had been improved in advance, so that the new settlers went upon places already planted with trees and vines instead of having to take the initiatory steps themselves. This plan gives great satisfaction, and the newly arrived colonists are invariably greatly pleased with the idea. All of these new comers belong to a class which makes the most desirable citizens, and the people of Bakersfield and the county at large are more than pleased to welcome not only these but as many more like them who can be induced to come to this far Western shore. One good thing is that the English settlers who have been here the longest are doing the best missionary work. They are all well satisfied, and the accounts sent home by them of California in general and Kern county in particular are productive of great benefit not only to this community but to the State as a whole.

The horticultural outlook in this section for the coming season is most promising. All the new settlers are making arrangements for planting trees and vines to an extent larger than before, while the older settlers have caught the prevailing contagion and are talking orchard and vineyard in the most enthusiastic manner.

A conservative estimate of the fruit acreage prior to 1891, and of the additions made during that season, is as follows:

Variety.	Before 1891.	Added in 1891.
Almond	71	4
Apple	44	50
Apricot	2	115
Cherry	4	6
Fig	116	240
Orange	30	4
Peach	161	327
Pear	4	140
Prune	25	221
Walnut	35	22
Grape	1,360	1,965
Miscellaneous	137	140
Totals	1,989	3,240
Total acreage at close of 1891		5,229

It is believed, from all that can be learned, that this acreage will be at least doubled during the present season. It will be observed that the grape leads, and there is good reason for this. The raisins put up here the last year have received the highest praise from all who have seen them, and what is of still more account, they received high prices as well, an average of six cents a pound having been netted. These unusually favorable results have induced the preparation of a large area for raisin vineyards this season. While the Muscat is the favorite, the Seedless Sultana is being extensively sought for and will be given a great deal of space.

It will be observed that the fig is second favorite after the peach, and here, too, it is not without good reason that such is the case. During the past year, White Adriatic figs dried in this county were sold for 18 cents a pound wholesale by the producer, and he was assured that there was an unlimited market at good prices for all the fruit of equally good quality that could be produced. The fig growers of Kern county are of the opinion that the White Adriatic, at such figures and even considerably less, is "good enough for them," and they are not wasting any time waiting for the long-delayed "genuine Smyrna." Of course they will be glad to welcome that variety, but in the meantime they are content to cultivate the White Adriatic, which will pay them several hundred dollars an acre annually.

Not many people probably are aware that Kern county possesses the largest area of alfalfa of any county in the State, or for that matter of any other State or Territory. A modest computation of the "alfalfa patches" in this county gives the following result:

Alfalfa Acreage in Kern County.

Poso Ranch	22 920
Rosedale Ranch	3,810
Lakeside Ranch	2,230
Mountain View Ranch	1,900
Hop Ranch	1,770
Greenfield Ranch	9,120
Stockdale Ranch	5 800
Anderson Ranch	960
Bellevue Ranch	4,170
McClung Ranch	2,130
Buena Vista Ranch	4,880
Cotton Ranch	840
Total	58,530



CORN IRRIGATED FROM CANALS OF KERN COUNTY LAND COMPANY.

Owned by the Kern Co. Land Co.	58,530
Other parties	29,500
Total in county	79,030

This will be added to this year, considerably also. The new settlers are one and all fully impressed with the value of alfalfa, and no "ranch," however small, is regarded as complete without the alfalfa patch for the support of horses, cows, pigs and chickens—all of which are exceedingly fond of this nutritious and rapidly growing grass.

Immense as is the area devoted to alfalfa, the product is nearly all consumed at home—a plan which all advanced farmers know to be the best. The motto of the wise farmer should be to convert his hay, grain and root crops into beef, mutton and pork on the farm where they are raised. Only by this method can the best results be realized. This advanced method of farming is carried out comprehensively here, as may be seen from the fact that according to the Assessor's report (which is probably 33 per cent. at least below the actuality) there are in this county the following number of farm animals:

Cattle	72 995
Horses	9.542
Mules	1,053
Oxen	68
Goats	840
Hogs	5,824
Sheep	317.752

This does not begin to represent the actual number of animals fed on alfalfa raised here. There is a continual coming and going all the year round of which there is no record on the assessment books. Range cattle are shipped in constantly from Arizona and elsewhere, fattened in our alfalfa pastures, and after a few weeks are reshipped to San Francisco, having been converted into prime beef. During 1891 no less than 700 carloads of fat cattle alone were sent from here to market, and 450 carloads of mutton sheep were also forwarded. A good idea, by the way, of the rate of growth here can be formed from the fact that during 1891 no less than 445 carloads of lumber were received at Bakersfield—a sure indication of the large volume of building done.

A great deal of interest is being taken here in the extensive deposits of petroleum, asphaltum and natural gas known to exist in this valley. In the western portion of the valley is a belt of oil-bearing territory, in which a local company has already sunk six wells, all of which are producing an abundance of petroleum of fine grade and of extra commercial value. Other wells will be sunk as fast as the machinery can be provided, and refineries will be established at Bakersfield and elsewhere, in which to prepare the crude product for use. In this crude oil, too, is to be found fuel of admirable quality and low cost, which can be utilized in manufacturing enterprises in conjunction with the abundant water power already enlarged upon.

In the same vicinity are vast deposits of asphaltum, both liquid and crystallized, and covering thousands of acres. Two companies are already at work here, and refineries have been established which from their very inception have been successful. The crystallized asphaltum found here is of the highest value for use in the manufacture of mineral varnish, and for other purposes, and its purity is such that experts have been unwilling to credit the statement that though just taken from the earth it had not been subjected to a refining process.

In the immediate vicinity of these deposits are vast quantities of sulphur, which exists in ledges in a state of great purity, and which can be readily made available for commercial purposes.

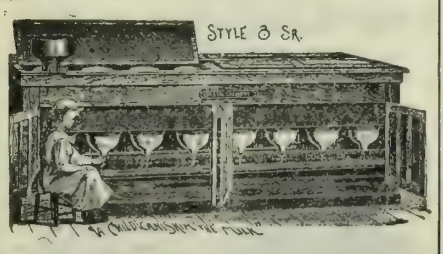
The Southern Pacific Railroad is now surveying a branch from Bakersfield to these valuable as well as wonderful mineral deposits, which will thus be made tributary to that city, and whose development will necessarily prove a source of great wealth. Not only will the preparation of the asphaltum for market be a source of no small wealth and give employment to many, but the constantly increasing variety of manufactures into which this wonderful material enters, and which can best be carried on here in close proximity to the source of snpply, will create industries which will play a most important part in the future of this place. G. F. W.

The famed Diamond Dyes in the household to day
May well hold a prominent place;
By using them, treasures that Time has despoiled
Come back to us clothed with new grace.
Philosophers long sought a fountain or stream
Whose waters their youth might restore;
The Diamond Dyes offer to all fading things
A promise to do this and more.

* * * * * * *

From leather to laces, and all things between,
The Dyes can transform by their art;
No fabric but yields to the magical touch,
Which gift it is swift to impart.
The poor faded splendors bloom brightly once more,
We prize what we held cheap and light—
Their value is heightened to eyes that behold,
And hearts are made glad by the sight.

The above are selected stanzas from a prize poem on Diamond Dyes. We recommend to our readers the use of these reliable home dyes, and feel assured that you will find them a most valuable aid to handsome and economical dressing. They are the strongest and simplest dyes known, and they offer an escape from the delays and expense incurred by sending goods to the dye-house.



The accompanying illustration is a cut of one of the large sizes of the Crystal Creamery. It must interest every butter maker (either large or small producers), as this creamery is not only made in large sizes for dairies of from 50 to 100 cows, but also for one or two cows.

This creamery has now been in use in N. Y. State, in the best dairying counties, for seven years.

The Crystal Creamery Co., of Lansing, Mich., was organized within the last year, taking up the good will of the inventor, who had manufactured in N. Y. State for six years, and had never been able to supply the demand.

Chinese Matrimony

Is a subject of much general interest. How it is associated with flower culture is told in the attractive advertisement of Peter Henderson & Co. in another column. Ladies will be especially interested in this advertisement—and what interests the ladies will certainly be worth the attention of the men.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING FEB. 2, 1892.

468,144.—THIMBLE, ETC., FOR BARRELS—Anthony & Savage, Oakland, Cal.

468,291.—PILE ARMOR OR CASING—Bedbury & Badgley, S. F.

467,968.—ANTIFRICTION AXLE BOX—E. M. Briedwell, McMinnville, Or.

468,069.—GRAIN CLEANER ATTACHMENT—Henry Bryan, Modesto, Cal.

468,218.—DOOR SECURER—C. F. Cardwell, Bridal Veil, Or.

467,917.—TELEPHONE HOLDER—J. A. Christy, S. F.

468,134.—GRAVEL SCREEN—F. T. Gilbert, Walla Walla, Wash.

468,197.—GRAVEL SCREEN—F. T. Gilbert, Walla Walla, Wash.

468,063.—AMALGAMATING SILVER ORES—Alexis Janin, S. F.

468,303.—BAND SAWMILL—C. J. Koefoed, S. F.

468,036.—HOLDER FOR BRUSHES, ETC.—W. F. Loan, Portland, Or.

468,064.—CABLE GRIP ADJUSTER—H. H. Lynch, S. F.

468,029.—VALVE—D. R. McKim, Gold Hill, Nev.

468,205.—SLING CINCH—D. O'Sullivan, Spokane Falls, Wash.

468,206.—RIFLE SIGHT—R. W. Parker, Camp Huachuca, A. T.

468,208.—AERIAL TRAMWAY—Prunetti & Avignone, Sierra City, Cal.

468,066.—SEPARATOR—F. H. Wheelan, Santa Barbara, Cal.

468,067.—BALL-BEARING—H. G. Yates, S. F.

The following brief list by telegraph, for Feb. 9, will appear more complete on receipt of mail advices:

Frank A. Fox, San Francisco, car coupling; Frank A. Huntington, San Francisco, crushing mill; Edward M. Knight, San Francisco, filter; Thomas Powell, Stockton, wheel pump; Johnathan M. Robinson, Vacaville, propelling vessels; Anderson & Fairchild, S. F., adjusting device for cable grips.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

Saratoga Association.

Mr. Chas. Wheatly, Sec'y of above Racing Association, writes: "From the experience of many years' use of Quinn's Ointment, I unhesitatingly recommend it for the cure of Curbs, Blood Spavin, Windpuffs and other blemishes." Trial box, 25 cents, silver or stamps. Regular size, $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

DESIRABLE LAND

— AT —

AUCTION!

NEAR TULARE, CALIFORNIA.

BEST CHANCE NOW OFFERED.

All in the Wonderful Artesian Belt and the New Tulare Irrigation District.

One-fourth mile outside of Tulare City limits, 160 acres. Will be sold as a whole or in five-acre homestead (or villa) lots. Also,

Seven miles southwest of Tulare, 480 acres, principally good for grain, alfalfa, vineyard, fruit, nuts, etc.

A good, flowing, never-failing artesian well of clear, healthful water; large reservoir; two-story, eight-room, well built house; large barn and other convenient buildings; several acres of orchard and of alfalfa.

Will sell as a whole or in lots to suit. Title perfect. All surrounded and subdivided with wire fence. Residence has a garden, shrubbery and plenty of shade trees surrounding it. Terms, one-fourth cash and balance in easy payments to suit purchasers.

Also, 160 acres less than two miles south of the 480 acres, of equally good but unimproved land, bound also to greatly advance in price.

Examine this land and improvements and be ready to bid it off at a bargain.

Auction in Tulare City, Saturday, Feb. 27, 1892. Place and hour of sale to be announced later.

Write or call on E. M. DEWEY, Tulare City, or A. T. DEWEY, No. 12 Front St., S. F.



THE LATEST AND BEST.

BUSINESS CHANCE, FOR MAN OR WOMAN, Address, C. B. CROUTT, Orcutt, California.

Breeders' Directory.

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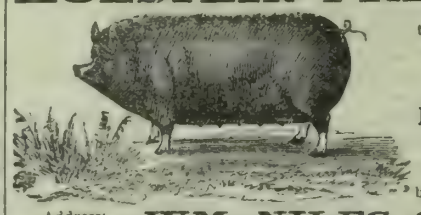
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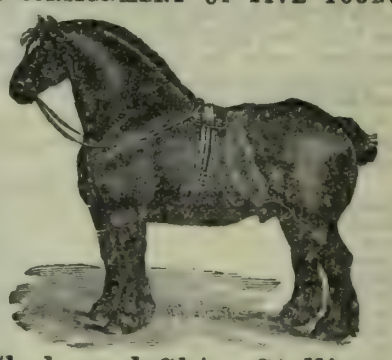
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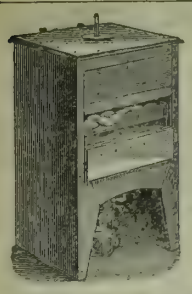
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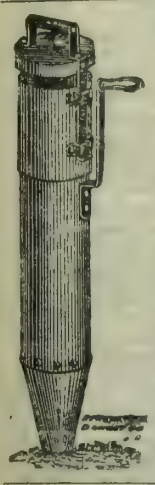
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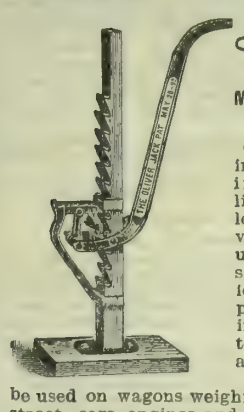
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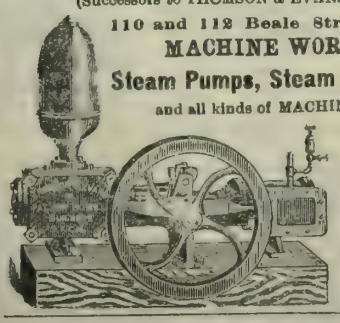
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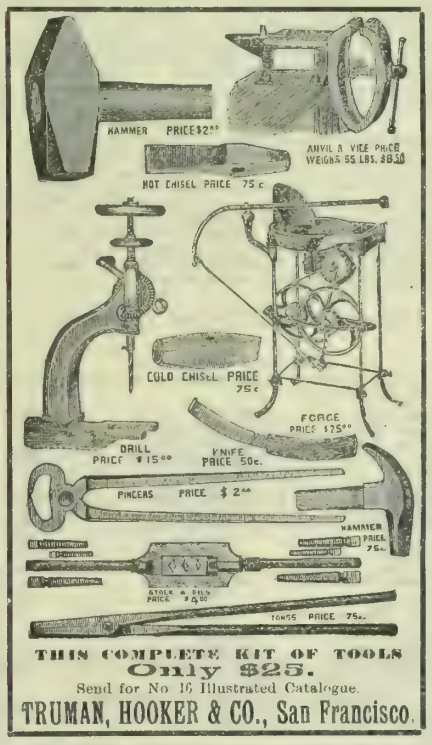
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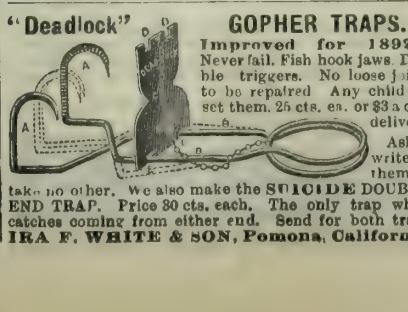
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 10, 1892.

The weather continues favorable to outdoor work Farmers, as a rule, have finished seeding and are now summer-fallowing. Pruning and other seasonable work is being pushed in the orchards. The low prices this season for all kinds of fruits, and with no corresponding reduction in railroad freights, horticulturists and others are trying to find ways and means by which the evil may be overcome. In this connection, the following from the financial department of the New York *Mail and Express*, Feb 2d, is refreshing reading and goes far to show what a harvest the Southern Pacific Company reaps from its exorbitant charges: "The Southern Pacific Company now claims a place second only to the Pennsylvania as the great system of the country under one management. The Pennsylvania system long ago passed the hundred million mark, with the Reading second as receiving almost $50,000,000 a year. The Southern Pacific last year (1891) received $50,449,255. Its expenses were but a little more than for the previous year (1890) and the net earnings were $19,285,548, almost a million a week of earnings and almost $400,000 of profit. The statement is a strong one in view of the falling off in the transcontinental business generally."

Foreign Grain Review.

LONDON, Feb. 8.—*Mark Lane Express:* English wheats are still declining and foreign wheats are lower, California 3d and other American wheats 2d lower. Flo is down 6d, Corn is and Oats 3d. At to-day's market English wheat was firm and foreign wheats were up 6d; Flour and American corn were 6d higher. Oats and barley were in better demand at fractional advances.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June
Thursday		7s07d	7s6d	7s6d	7s06d
Friday	7s08d	7s08d	7s07½d	7s07½d	7s07½d
Saturday	7s10½d	7s10d	7s09d	7s08½d	7s08½d
Monday		7s08½d	7s08d	7s07½d	7s07d
Tuesday	7s09½d	7s09d	7s09d	7s08½d	0s08½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for he past week.

	O. C.	P. S.	N. D.	Market for P. S
Thursday	38s3d	38s3d	38s3d	Quiet.
Friday	38s9d	38s9d	38s9d	Turn dearer.
Saturday	38s9d	38s9d	39s0d	Steady.
Monday	38s9d	38s9d	38s9d	Quieter.
Tuesday	39s3d	39s3d	39s3d	Steadier

To-day's cablegram is as follows:

LIVERPOOL, Feb. 10.—WHEAT - Dull. California spot lots, 7s 9½d; off coast, 39s; just shipped, 38s 9d; nearly due, 38s 9d; cargoes off coast, weaker; on passage, quiet; Mark Lane wheat, quiet but steady.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	1.68	168⅜	168⅜	168¾	1.68⅜
Friday	17 ⅛	1 68	170⅜	170⅝	1.70⅜
Saturday	170⅜	170⅝	17 ⅛	172	169
Monday	169	173	172⅜	170⅝	167½
Tuesday	170⅛	171	170⅝	167⅜	166⅜

The following is to-day's telegram:

NEW YORK, Feb 10.—WHEAT - $1.01⅜ for March, $1.01 for April, 99½c for May, 98¼c for June, and 96¼c for July.

CHICAGO, Feb. 10.—WHEAT—89¼c for May.

San Francisco.

WHEAT.

	Buyer Season. H	L.	Buyer Aug. H	L.	Seller 1892. H	L.
Thursday	161½	159	144½	144½	142	141
Friday	161½	161½	....	....	145	141
Saturday	165	162½	147½	147	....	....
Monday	167	165	....	....	142¼	142½
Tuesday	166½	163⅜	....	....	141	141

The following are to-day's record d sales on Call:

Morning Session – Buyer season: 1.0 tons, $1.64; 100, $1 63½; 200, $1 63½; 200, $1 64½; 500, $1.64½; 300, $1.64¼; 300, $1.64¼ ₩ ctl. Buyer season: 800 tons, $1.63½; 1600, $1.63½; 100, $1.63⅝; 800, $1.63½; September—100 tons, $1.44 per ctl.

Afternoon Session –Buyer season: 2600 tons, $1.65; 300, $1.65½; 800. $1.64¼ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892 H.	L.
Thursday	97½	96	92½	92¼	....	....
Friday	99½	96¾	1 01½	....	....	....
Saturday	102	1 00½	94½	93½	....	....
Mond y	1 03	1 00	93½	93½	88½	88½
Tuesday	102	100	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Session—Buyer seasn: 100 tons, $1.00½; 400 $1 00¼ ₩ ctl.

Afternoon Session—Buyer season: 100 tons, $1.01; 100, $1.01½, 200, $1.01½; 200, $1 01½ ₩ ctl Seller season: 200 tons, 93½c; 100, 94c; 100, 94¼ c; 200; 94¼c; 100, 94¾ per ctl.

Markets by Telegraph.

Decrease in Available Wheat.

NEW YORK, Feb. 6.—Stocks of available wheat in the United States and Canada, Europe, and afloat from all sources for Europe, decreased only about 1,300.000 bushels in January, as compared with more than 6,000,000 bushels decrease in January, 1891, over 9,000,000 bushels decrease in January 1890, and more than 11,000,000 bushels decrease in January, 1889. Exports of wheat (and flour as wheat), from the United States, both coasts, this week aggregate 4,740,000 bushels, an increase, as contrasted with the preceding week.

Eastern Dried Fruit Market.

NEW YORK, Feb. 8.—Evaporated peaches are weak at 6@6½c. Chicago has lightened our stock materially. Prunes are strong a d not over plenty; five s zes bags, 7¼c; four sizes, 7c; boxes, respectively, 8¼c and 8c. Apricots are weak; choice sacks, 7@8c; best boxes, 9c. The efforts of New York dealers to introduce a more general offering of California dried fruits in England show little favorable result. Apricots, which were so largely counted upon for a position over there, continue to be offered as novelties by shopkeepers, who charge unpopular prices.

Eastern Raisin Market.

NEW YORK, Feb. 8.—The position of raisins is nominal, but hopeful for a good stock. There has been considerable Western inquiry for some good parcels sin e the stiffer price on the coast set in.

NEW YORK, Feb. 9. The *Commercial Bulletin* says: For example, it is shown that the importations of raisins for three years ending with 1890, averaged about 39,000,000 pounds per annum, while less than 19,000,000 pounds were imported in 1891. This apparent opening for 20,000,000 pounds of California raising, however, sinks into insignificance alongside the prune exhibit.

NEW YORK, Feb. 9.—The *Commercial Bulletin* in 1888 says; No less than 74,500,000 pounds of prunes were imported, while the average of the three years ending with 1890 is about 60,000,000 pounds. In 1891 only 9,336,850 pounds were imported. Evidently California prunes have a promising future. Certain it is the product of the Golden State must profit by the remarkable falling off in the foreign supply. It looks very much as though California should secure a large percentage of the former foreign trade, if prices are kept within reasonable bonds.

CHICAGO, Feb. 9.—The *Trade Bulletin* says of California dried fruits—The market is rather quiet. Peaches are meeting with moderate demand. Inquiry is for the best goods, on account of prices being low. Common are slow. There is a fair trade in apricots. Silver Prunes are in fair demand. Other kinds are meeting with some sale, but nothing big is doing.

Eastern Orange Market.

CHICAGO, Feb. 9.—It is thought that California shippers have made a mistake in forwarding frosted oranges to the East. Being imperfect, the fruit has had to be sold low and the poor quality has brought the fruit into disfavor. Plenty of choice fruit is expected later, but it may take some time to convince the trade that there is merit in the goods. First impressions are sometimes difficult to eradicate or change. California green fruits are quiet, with pears selling as follows: Easter Beurre, ₩ box, $2@2 25; P. Berry, $2 50@3. Winter Nelis, $2 25@2 50; d'Alencon, $2 75@3; California Navels, not frosted, $2 50@$3 25; frosted, $1 50@2 25: Seedlings, not frosted, $1 85@$2; frosted, $1 25@1 50.

Eastern Wool Markets.

NEW YORK, Feb. 5.—A fair amount of wool has been taken during the week by manufacturers, but at prices favorable to them. There is not much wool held in Eastern markets on consignment. Dealers show too much willingness to unload these stocks, and as a rule manufacturers can secure wool at their own prices. The wools which show the greatest strength, are those which are owned by dealers. The season has been against the goods markets, and manufacturers in consequence are not inclin d to carry large stocks, and are for the most part buying wools only as they need them. With the exception of pulled wools stocks of all grades are large. Large shipments of Australian wools are now being received, and the amount already taken for this country at the London sales is said to be heavy. American buyers are meeting with strong competition, and in consequence there is considerable firmness shown in all wools suitable for America. The worsted and dress goods mills have been large buyers, other manufacturers having taken only small lots. Carpet wools are still dull and sales are light.

NEW YORK, Feb. 8.—The feeling is not so heavy this week, as there have been encouraging Eastern sales, though prices have neither shrunk nor advanced. The London market, now well attended by our buyers, has taken a stiffer turn and this fact has checked the weak tone of Ohio washed grades. The feature of the week was the large movement of Territory. In the dry-goods market cheviots lead the sales. Worsteds are slower than counted upon, Manufacturers at any point show no disposition to take much material ahead. The sales at New York were 303,000 lbs of domestic; 716,000 lbs of foreign, mainly carpet and China, and 250 bales of Australian to arrive. Boston sold 2 917,700 lbs domestic and 500,000 foreign, chiefly Australian. Philadelphia reports fair trade at easy prices, with some pressure to sell.

Eastern Hop Market.

NEW YORK, Feb, 8.—Light business all the week. Brewers obtained prime for 28½c and choice at ½ cent off at the close. State ninety-ones range from 20@.6¼c; Pacific, 20@26c; previous crop, 13@18c. The English market is quiet. The closing call on change bid and asked, March, 24@25c; April, 24¾@25¼c; May, 25¼@26c; June, 25¼@26c; July, 24¼@26c; August, 26@26¼c; a sale of choice March at 26c. Exports for the week, 1674 bales. Freights are easier ⅛ of a penny for London, via Liverpool.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 1, '92, were as follows:

Flour, qr. sks	60,180	Bran, sks	8,510
Wheat, ctls	268,770	Buckwheat "	....
Barley, "	11,365	Middlings "	4,238
Rye, "	2,206	Chicory, bbls	270
Oats, "	1,265	Hop, "	....
Corn, "	460	Wool, "	....
*Butter, "	616	Hay, ton	1,644
do bxs	296	Straw, "	27
do bbls	....	Wine, gals	267,460
do kgs	21	Brandy, "	14,120
do tubs	....	Raisins, bxs	1,922
do ½ bxs	45	Honey, cs	41
†Cheese, ctls	353	Peanuts, sks	....
do bxs	....	Walnuts "	199
Eggs, doz	51,570	Almonds "	95
do " Eastern	....	Mustard "	....
Beans, ctls	9,715	Flax "	....
Potatoes, sks	36,571	Popcorn "	....
Onions, "	1,953	Broom corn, bdls	88

*Overl'd. — ctls. †Overl'd. 336 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compa.e as follows.

	July 1, '90 to Feb. 1, '91.	July 1, '91 to Feb. 1, '92.
Flour, ½ sks	186,115	302,788
Wheat, ctls	794,057	1,095,773
Barley, "	181,937	28,207
Oats, "	242,788	300,974
Wool, bales	5,790	5,733
Hops, "	333	339
Rye, sks	....	3,293
Potatoes, sks	44,441	41,456

Cereals.

The situation abroad, it is believed, will gradually become less favorable as the season advances, and unless there is some serious accident to the growing crop, Western Europe will have the whip handle of the market instead of America. It is calculated that the new Indian crop, the Australian and Argentine crops and the exports from Chile will supply enough wheat, so that purchasers in America need be only enough to fill the immediate requirements, until the amount on passage and the shipments from the countries named will become available for use In connection with this there is quite a difference of opinion. In a recent review of the situation *Beerbohm* estimated that Western Europe will require 144,000,000 bushels of wheat from America during the balance of the crop year. Following this, the *Corn Trade News*, of Liverpool, estimated that it will require about 105,000,000 bushels. The average of the two estimates would indicate about 125,000,000 bushels from January 1st to August 1st next. This does not take into consideration the requirements of the West Indies and South America, which have been increased by the reciprocity treaties. The question arises whether with the prospects of selling the greater part, if not the entire amount of the surplus, American farmers in the Central States will rush to sell their wheat at less than $1 a bushel, in New York.

Reports from the Argentine Republic estimate that the wheat export surplus will be 22,000,000 bushels, but it is stated that other and more reliable commercial advices point to not more than one-half this figure.

Last year's crop in India was 6,842,000 tons or 356,000,000 bushels, against 6,123,000 tons or 229,000,000 bushels in 1890. Beerbohm says that the prospects for this year's crop point to a production about the same as that of 1890, and that there is probably very little wheat yet remaining to be shipped from the crop of last year.

The Government report of the Indian wheat crop is fairly satisfactory. In the Punjaub the area in wheat increased, but dry weather prevented good filling. In the Bombay presidency the insufficient Moonsoon rains caused a diminution in the area, and the crop is disappointing. In the Northwest provinces and the Oudh the whole prospects are good.

Advices from Germany state that the rye crop in North Germany shows a more forward growth than last season and wheat is developing nicely.

The imports of wheat and flour into the United Kingdom in 1891 was 166,786,000 bushels, the largest on record. The total imports for ten years past have been 1,483,987,000 bushels, an average of 148,398,000 bushels. Of this amount in the past year the United States furnished 80,400,000 bushels of wheat and flour, reduced to its equivalent in wheat, or 48 21 per cent. The total imports from the United States in the last ten years have been 729,.259,974 bushels, an average of 78,925.798 bushels. The average per cent of the total imports has been 49.82 per cent.

In the local wheat market, dealing in futures was more active the past week, with quite an advance up to Monday, when the market began to fall off. There is a growing impression that parties who have oversold to any great extent will have some difficulty in filling it called on for actual grain, but as this seldom occurs, particularly with the wheat ring desirous of keeping the market down for new-crop purposes, private settlements may be in order. For actual grain the sample market has held to fairly strong prices, notwithstanding a report current that exporters have all requirements met for vessels in port under charter.

The bears on Call succeeded in forcing barley futures to lower figures, which dragged down the sample market. The supply of bright grades is very light, causing the market to be overstocked with dark grades of coast. The consumption continues quite large, which is rapidly reducing the supply. Those in position to know are firm in their conviction that the season will go out with a light carryover. The low prices ruling for barley will cause many more fields to be cut for hay than otherwise would. Oregon and Washington continue to send us light supplies.

Oats have remained fairly steady thoughout the week. The consumption continues large, while the receipts are only fair.

Corn has a stronger tone, due to quiet buying for export and light receipts.

Rye and buckwheat are essentially unchanged.

Feedstuff.

In ground feed the market is reported firm for all kinds, with free buying for feeding. High and advancing markets for stall fed bullocks and mutton sheep is an incentive to liberal feeding by stockmen, while in other directions the demand shows only a slight falling off.

Hay has a weak tone under improved range pasture and a falling off in the demand. From information at hand that is considered reliable, it appears reasonable to state that the crop to be harvested this year will be very large, owing to favorable weather and high prices, causing more attention to be given to seeding for hay-cut ing.

Dairy Produce.

Butter has held fairly strong at last week's quotations. Receipts of Californian are increasing in this and other cities. Free shipments up north are a temporary relief to our market, but with milder weather in Oregon, that demand market will be cut off.

Cheese is steady, with a fair demand ruling. It is claimed that receipts will begin soon to increase quite fast.

Eggs set off still more, but at the close a steadier feeling has set in. Receipts are large, with a steady increase looked for, which, if realized, ought to cause the market to shade off to still lower prices.

Fruit.

The receipts of apples show signs of decreasing, and as the supply of good to choice oranges is light, it is not at all unlikely but slightly better prices might obtain for the more choice before Australia begins to send us liberal supplies. Eastern apples in barrels continue to come to hand.

The outlook for liberal crops of deciduous fruit is of the most promising character. It is quite certain that horticulturists are giving more attention than ever before to pruning, spraying and cultivation of fruit trees, so as to bring out better grades of fruits. The cultivation of berries shows increased attention, with more acreage given over to the industry.

Dried fruits are essentially unchanged The market is very hard to quote correctly, prices being governed largely by sellers and buyers—for forced sales low prices rule, for forced buying high prices obtain, These remarks, to a certain extent, apply to the poorer grades of raisins. Choice to fancy raisins are firmer.

The market for oranges continues to be overstocked with frosty, poor trash. The older the frosted oranges get, the poorer they become. Choice to gilt edged or fancy oranges are in light supply, and as the trade wants these grades, good prices are obtainable. Orange growers would do well to let frosted and trashy oranges rot at home, for in sending them here, they work an injury to the industry.

Lemons are steady at current quotations. Limes do not show any material change.

Vegetables.

Spring garden truck begins to come in slightly freer. The outlook is promising for heavy supplies of all kinds.

Under free receipts and an offish demand, onions sold lower. Liberal receipts of cut operate against the market.

The potato market continues to drag for all kinds except Salinas Burbanks. This is contrary to the general expressed views of dealers, who looked for a steadying market in this month.

Sweet potatoes are scarce and high. Sales are reported as high as 4 cts per pound.

Live Stock.

Bullocks continue to advance. This is the natural result of improved pastures in Southern California, and also in Arizona. Mutton sheep are quoted lower, although at the close the tone is stronger. Hogs are easier. Fresh milch cows are in good inquiry.

Miscellaneous.

From reliable advices up to Feb. 10, the following summary tonnage movement is compiled:

	On the way 1892.	1891.	In port 1892.	1891.
San Francisco	245,051	29 ,468	*100,982	*55,380
San Diego	21,708	15,209	2,968	....
San Pedro	2,414	6,433	2.134	
Oregon	23,269	34,907	37,035	15,784
Puget Sound	16,147	14,154	.....	
Totals	308,589	368,171	143,119	71,164

*Engaged for wheat, 1892, 53,072; 1891 46,770

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 4th, are as follows:

	1891.	1890.
Wheat, ctls	10,641,634	7,175,054
Flour, bbls	686,027	697,364
Barley, ctls	777,977	199,932

Poultry is in buyer's favor for those not in good condition. Large sized and well conditioned are in good demand.

Honey continues to rule strong with light receipts reported.

In beans there appears to be a better demand and an improved tone. This probably is due to a prospect of securing better overland freights.

Hops are scarce. Gilt edged are wanted. For new crop delivery, contract sales are reported at 12 to 13 cts.

Wool is quiet. The stock of old is about cleaned out. For new clip delivery, we are unable to hear of any particular inquiry.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, February 10, 1892

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, City Mills	5 00 @ 5 25
Butter	2 20 @ 2 65	Do Country Mills	5 00 @ 5 25
Pea	2 45 @ 2 70	Superfine	3 15 @ 3 45
Red	1 75 @ 2 05	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 65	Do Choice	8 @ —
Large White	2 10 @ 2 45	Do paper shell	8 @ 9
Lima	1 70 @ 2 10	Do Chili	7½ @ 9
Wld Pea, blk eye	1 35 @ 1 65	Almonds, sft shl	11 @ —
Do green	1 70 @ 2 50	Paper shell	13 @ —
Do Eastern do	2 55 @ 2 75	Hard Shell	6 @ 7½
Do Nies	1 30 @ 1 45	Brazil,	6½ @ 8
Split	3 85 @ 4 15	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 22½	Peanuts	3 @ 4
Do good to choice	27½ @ —	Filberts	11½ @ 14
Do Gilt edged	32½ @ —	Hickory	7 @ 8
Do Creamery rolls	32½ @ —	Chestnuts	11½ @ 16
Do do Gilt edge	34 @ —	**ONIONS**	
Eastern	20 @ 32½	Silver Skin, Ch'e	1 20 @ 1 30
CHEESE.		Fair to Good	90 @ 1 15
Cal. choice mild	13 @ 14	Cut	70 @ —
Do fair to good	10 @ 12½	**POTATOES.**	
Do gilt edged	14 @ 15	Early Rose, ctl	25 @ 40
Young America	12 @ 15	Burbank Seedling	30 @ 50
EGGS.		Do do Salinas	95 @ 1 20
Cal. ranch, doz	23 @ —	Do do Oregon	80 @ 1 10
Do do selected	25 @ —	Do Humboldt	80 @ 90
Do store	21 @ —	River Reds	35 @ 40
Eastern	20 @ 25	**POULTRY**	
FEED		Hens, doz	5 50 @ 8 00
Bran, ton	20 00 @22 00	Roosters, old	5 50 @ 7 00
Feedmeal	27 00 @ —	Do young	6 00 @ 9 00
Gr'd Barley	22 00 @23 50	Broilers, small	4 00 @ —
Middlings	22 50 @24 00	Do large	5 00 @ —
Oil Cake Meal	25 00 @27 00	Fryers	6 00 @ —
Manhattan Food ₩ cwt	7 50	Ducks	6 50 @ 9 50
HAY.		Geese, pair	1 75 @ 2 50
Wheat, per ton	13 50 @ —	Turkeys, Gobl'r	12 @ 15
Do choice	14 50 @ —	Turkeys, Hens	14 @ 16
Wheat and Oat	12 50 @ —	Do Dressed	15 @ 19
Wild Oats	11 00 @ —	Manhattan Egg Food ₩ cwt	11 50 @ —
Cultivated do	12 50 @ —	**PROVISIONS**	
Barley	11 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Alfalfa	10 00 @ —	Medium	11 @ —
Clover	12 00 @ —	Light	12½ @ —
Straw bale	50 @ 60	Lard	9 @ 11
GRAIN. ETC.		Cal. Sm'k'd Beef	11½ @ —
Barley, feed, ctl	90 @ 1 02½	Hams, Cal salt'd	10 @ —
Do Choice	1 03 @ —	do Eastern	12½ @ —
Do Brewing	1 05 @ —	**SEEDS.**	
Do do Choice	1 10 @ —	Alfalfa	7 @ 8
Do do Gilt edge	1 15 @ —	Clover, Red	12 @ 13
Do Chevalier	1 10 @ 1 45	White	9 @ —
Do do Gilt edge	1 48½ @ 1 52½	Flaxseed	2 50 @ 2 80
Buckwheat	1 70 @ 2 10	Hemp	3½ @ 4
Corn, White	1 27½ @ 1 32½	Mustard, yellow	3 25 @ 3 75
Yellow, large	1 22½ @ 1 27½	do Brown	3 00 @ 3 25
Do small	1 20 @ 1 30	**WOOL.**	
Oats, milling	1 46 @ —	**SPRING, 1891**	
Feed, Choice	1 43 @ —	Humb't & Men'cino	20 @ —
Do good	1 35 @ —	Sac'to valley	16 @ —
Do fair	1 27½ @ —	Free Mountain	19 @ —
Surprise	1 50 @ —	S Joaquin valley	13 @ —
Black Cal	1 35 @ 1 75	do mountain	15 @ —
Do Oregon	1 25 @ 1 40	Calav's & Fth'll	6 @ —
Gray	1 30 @ —	Oregon Eastern	14 @ —
Rye	1 60 @ 1 72½	do valley	21 @ —
Wheat, milling. Gilt edged	1 68½ @ —	So'n Coast, def	11 @ —
Do Choice	1 66½ @ —	So'n Coast, free	13½ @ —
Do fair to good	1 63½ @ —	**FALL, 1891.**	
shipping, choice	1 63½ @ —	San Joaquin	9 @ 13
Do good	1 61½ @ —	Mountain	10 @ 15
Do fair	1 59½ @ —	Humb't & Men'cino	14 @ 18
Common	1 52½ @ —	**HONEY**	
Sonora	1 55 @ 1 67½	White Comb, 2-lb	10 @ 13
HOPS.		do do 1-lb frame	12 @ 14
1891 Choice to Ex	24 @ —	White extract'd	6½ @ 7
Fair to Good	20 @ —	Amber do	5½ @ 6½
		Beeswax, lb	22½ @ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½ @ 3½	Sun-dr, pl'd, prime, bl	10 @ 11
Do do prime	3½ @ 4	Do do choice	11 @ 12
Do do choice	4 @ 4½	Do do fancy	12 @ 13
Do sliced, common	3½ @ 4	Evap, peeled, in boxes, prime	4 @ 4½
Do do prime	4 @ 4½	Do do choice	4½ @ 5½
Do do choice	4½ @ 5½	Do do fancy	16 @ 17
Evap bleached, ding 50-lb boxes	7 @ 8	**PEARS.**	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl. com	2½ @ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	6 @ —
Do do choice	6 @ 6½	Do ring do	10½ @ —
Do bleached, prime	7 @ —	**PLUMS.**	
Do do choice	7½ @ —	Pitted, sun-dried	4½ @ —
Do do fancy	8½ @ 9½	Do evap, boxes, choice	— @ —
Evap, choice, in boxes	9½ @ 10	Do do do fancy	— @ —
Do fancy, do	10½ @ 10½	Unpitted	2 @ 2½
FIGS.		**PRUNES.**	
Sun-dried, black	3 @ 3½	Cal. French, ungraded	5½ @ 6
Do white	3½ @ —	Do graded, 60 to 100	5½ @ —
Do do washed	— @ —	Do do 40 to 60	7 @ 8½
Do do fancy	— @ —	Fancy sell for more money.	
Do do pressed	— @ —	**RAISINS.**	
Smyrna boxes	— @ —	London Layers, choice ₩ bx	$1 50 @ —
Do sacks	— @ —	Do fancy, do	1 75 @ —
GRAPES.		Layers, ₩ bx	1 25 @ —
Sun-dried, stemless	3 @ 3½	Loose Muscatels, common, ₩ bx	1 00 @ —
Do unstemmed	2½ @ 3	Do choice, do	1 20 @ 1 30
NECTARINES.		Do fancy, do	1 50 @ —
Red, sun-dried	3½ @ 5	Unstem'd Muscatels, in sacks, ₩ lb	4 @ 5
Do Evap., in boxes	6 @ —	3temmed do do	5 @ 5½
White, sun-dried	5 @ 6½	Seedless do do	6 @ —
Do evaporated	6½ @ 7	Do do ₩ 20-lb bx	1 15 @ —
PEACHES.		Sultanas, unbl, bx	1 15 @ 1 40
Sun-dried, unpeeled, common, bleached	3 @ —	Do bleached, in bx	1 30 @ 1 60
Do do prime, do	4½ @ —	Halves, quarters and eighths	25, 50 and 75 cents higher respectively than whole boxes
Do do choice, do	5½ @ —		
Do do fancy	6 @ 6½		
Evap unpe'd, choice	6 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, February 10, 1892

Limes, Mex	7 00 @ —	Do Lady Apples	75 @ 1 25
Do Cal	75 @ 1 00	Do Eastern, bbl	3 75 @ 5 00
Lemons, box	1 25 @ 3 50	Beets, sk	— @ 1 00
Do Sicily	5 50 @ 7 00	Carrots, sk	35 @ —
Oranges Seedlings		Okra, dry, lb	15 @ —
River Ide	85 @ 1 50	Parsnips, ctl	— @ 1 25
Los Angeles	65 @ 1 25	Peppers, dry, lb	12 @ 18
Do Navels—		Do green	20 @ 35
Los Angeles	75 @ 1 25	Turnips, ctl	70 @ —
Riverside	1 25 @ 3 00	Cabbage, 100 lbs	60 @ —
Duarte	1 25 @ 3 00	Garlic, lb	2 @ 3½
All kinds of oranges free from frost sell at an advance of $1 per box on the above quotations.		Squash, Mrft, tn	6 00 @10 00
		Do Summer, lb	20 @ 25
Apples, box	50 @ 90	Pumpkins, ton	7 00 @ —
Do choice	1 00 @ 1 25	Tomatoes, box	1 50 @ 2 25
Do extra choice	1 50 @ 2 00	Aspa agus, lb	15 @ 20
		Do choice to ex	25 @ 30
		Peas, green, lb	3 @ 12½
		Rhubarb, lb	15 @ 18

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	7½ @ —	Wethers	10 @10½
Grass fed, extra	7 @ —	Ewes	9½ @10½
First quality	6½ @ —	Lamb, yearling	11 12½
Second quality	6 @ —	Do Fall	15 @ —
Third quality	5½ @ —	**HOGS.**	
Bulls and thin Cows	2½ @ 3½	Light, ₩ lb, cents	4½ @ 4½
VEAL.		Heavy	4½ @ —
Range, heavy	5½ @ 7	Feeders	4½ @ —
Do light	8 @ 9	Stock Hogs	3½ @ —
Dairy	8½ @10		

State Horticultural Society.

The regular meeting was held at the State Board of Horticulture January 29, Vice-President S. J. Stabler in the chair.

The Secretary announced the following appointments by Pres. Hilgard.

Committee on nomenclature and new fruits: Leonard Coates, John Rock, R. C. Kells, James Boyd, B. M. Lelong, F. C. Miles and Prof. Husmann.

Committee on Papers: Emory E. Smith, Ed. M. Ehrhorn, A. L. Bancroft, C. H. Allen and H. P. Stabler.

Emory E. Smith of the World's Fair Committee reported progress; that several informal conferences had been held with the State commission, but that nothing definite had been agreed upon.

Leonard Coates, chairman of the committee on meeting of pioneer horticulturists, reported in favor of devoting the February meeting of the society to this subject and the secretary was instructed to issue a circular to that effect. The meeting will be held February 26.

A general discussion was held on marketing of dried fruits, in which J. L. Mosher, C. H. Allen, A. G. Freeman, B. N. Rowley and others took part.

A. L. Bancroft presented a paper outlining a place for the establishment of a Fruit Exchange in San Francisco, which was referred to the committee on that subject.

C. F. Wyer made a preliminary report on the establishment of a dried fruit sample-room in this city, stating that B. N. Rowley of 321 Market St. would furnish space and custodianship for such a sampleroom.

B. M. Lelong submitted a call for a general meeting of dried fruit producers to be held in Fresno, Feb. 18, and a telegram from Mr. Motheral asking that the Society send representatives to a preliminary meeting to be held Feb. 17. Upon motion Vice-President Stabler appointed B. N. Rowley, E. W. Maslin and C. F. Wyer as delegates from the Society.

An exhibit of processed prunes was submitted by Felix Gillet of Nevada City, which was generally sampled and commented upon. It was thought that thinning of the skin by dipping would have improved the fruit. Members expressed their satisfaction that Mr. Gillet had found prune-processing profitable, while others had abandoned it, but they still maintained the advantage of the sun-drying method of curing prunes in this State.

The following new members were elected: J. H. Ramsay, Woodside, San Mateo county; Thomas Jacobs, Visalia; Theodore Deming, 1222 W street, Sacramento.

The Artificial Production of Rain.

Attempts at the production of artificial rain have been undertaken by many enthusiasts during the last 50 years, but thus far without any decided success. The name of Espy will be recalled by many as one who caused no little interest in this direction from 1840 to 1850. His theory was probably more philosophical than that of any of his successors. His proposition was to effect changes of currents in the atmosphere by means of large fires, producing ascending currents of heated air—the exact manner in which such phenomena are produced by nature. But nothing came of it.

Somewhere about 1859 or 1860, an officer in the French army conceived the idea that rain might be produced by the use of explosives. He had seen much service in Africa and visited France with the view of interesting the Academy of Sciences in Paris to aid him in making experiments, but that body declined to have anything to do with the project. The officer returned to his post somewhat dejected, but resolved to do what he could in demonstrating the value of his theory. Some experiments were made, but on a small scale, and without success. The officer became known as "The Rain Maker of Sahara." He died in 1870, or near that time. His name was Parceau.

The particulars in regard to the recent experiments of Prof. Dyrenforth in this direction, made in Texas, are familiar to our readers. The professor had all reasonable means and appliances which a liberal Government appropriation could furnish, with a selected staff of enthusiastic assistants; but the results seem to have been quite unsatisfactory to the public, although the participants and some of his friends claim partial success. There is no probability that the Government will take any further interest in the matter.

While the Texas experiments were in progress, another "rain maker" appeared in several of the Western States. His process was a secret, and many claimed for him great success. He operated in various localities and in several States, but the public in general gave no credence to his claims.

Within the past few weeks, Mr. O. H. Smith has, according to common report, been conducting a series of rain-producing experiments in this State. Mr. S. is a member of the "Interstate Artificial Rain Company," a corporation organized in Kansas last December. Branches have been in operation in Kansas, at Temple, Texas, and at Pixley in this State. He claims that the efforts to produce moisture have been eminently successful. He has certainly commenced operations in this State at a very favorable time for success, but it is the impression of the people at large that he will have to divide the causes of success with the presiding rain genius of the Pacific Coast, with the honors largely in favor of the latter.

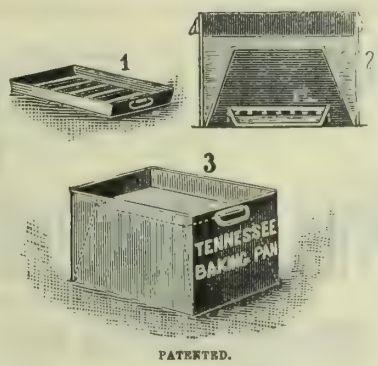
The system of Mr. Smith differs materially from the Dyrenforth plan of discharging explosives. Five chemical compounds are administered as medicine to the atmosphere by means of a machine, the modus operandi of which is secret, as is the entire process. The machine requires to be kept going day and night, and the inventor claims that the only condition causing failure is a thermometer below 40°.

The company claims to have engagements in advance covering the balance of the winter. Huron, in the San Joaquin valley, and Los Angeles are among the points to be visited in this State. Experiments will also be conducted in South Dakota, Eastern Oregon and Colorado.

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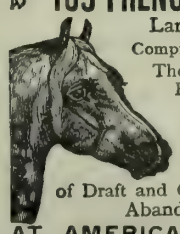
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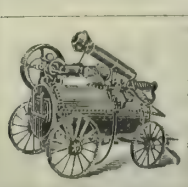
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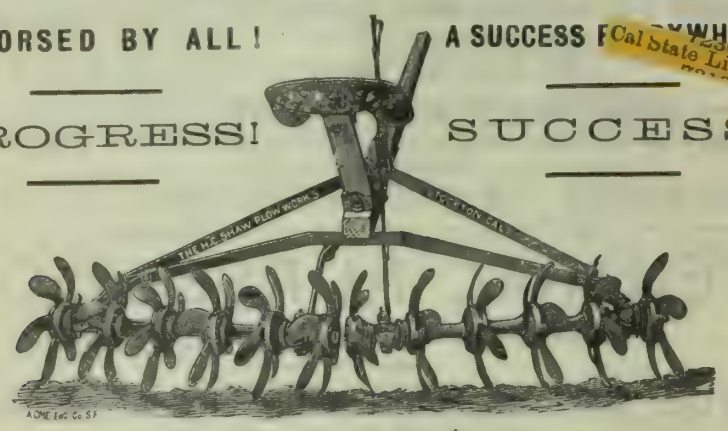
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TESTIMONIALS.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: In response to yours of the 25th would say that I am pleased to give your Triumph Spading Harrow a good recommend. I have used two harrows to cultivate my orchard and vineyard for the past year, and they did my work better than any tool used to do like work on my ranch. I am very well pleased with the harrows. Yours truly, A. W. TOZER.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: We have your favor of the 25th inst. In regard to the Morgan Spading Harrow would say that we have used the harrow cultivating our orchard and vineyard and find it just the tool. In fact, we know of no tool that will surpass it as a cultivator. Yours truly, HATCH & GIST.

VISALIA, CAL., Dec. 5, 1891.

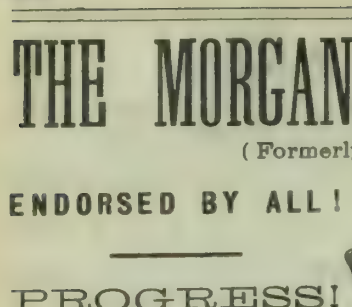
H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow I purchased from L. N. Wood, your agent, is a complete success. I have had considerable experience in the orchard and nursery business in this State, and I can from personal experience recommend the Morgan Spading Harrow to be the best cultivator in existence. Respectfully yours, CAIN FRUIT & NURSERY CO., Supt. GEO. F BEALES.

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It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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A liquid which evaporates quickly. It fills the burrow with its vapor and kills every occupant of the hole without injuring anything outside. It has no effect on the operator—is not poisonous nor injurious to the skin or clothes. WHAT MORE COULD BE WISHED?

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PACIFIC RURAL PRESS

Vol. XLIII. No. 8. SAN FRANCISCO, SATURDAY, FEBRUARY 20, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

The California Building at Chicago.

At the meeting of the California World's Fair Commission, last week, a final choice was made from the 29 plans offered by the various architects, for the State building to be erected at Chicago. The design selected by the Commission as the best, was that submitted by A. Page Brown of this city.

It will be seen from the engraving, which we have prepared from Mr. Brown's drawings, that the style of the proposed building is that of the well-known "California Mission," with the arcade, Spanish roof garden and flat dome. When the old padres, headed by Junipero Serra, came wandering into this region from Spain and Mexico, their idea was to convert the Indians and incidentally take possession of their horses and lands. The Indians were gathered around the missions and had to settle down to work—this being called the first settlement of the State. Wherever the Mission fathers determined to stop, they put up these mission buildings, consisting of a church, with the necessary structures for residence, storage, etc. All the buildings were of the same general style, with broad, arched corridors and tiled roofs, the usual material being sun-burned adobe bricks, commonly whitewashed.

Mr. Brown has closely copied the best features of these old Mission buildings, maintaining the simplicity of detail which is a marked characteristic. These peculiar structures, many of which are still standing, are much admired by Eastern tourists, and in fact it remained for travelers to discover their picturesqueness and beauty, the old Californian seldom looking beyond utility in such matters. The buildings are very cool in the hot summer and comparatively warm in winter, the thick walls, wide and low, being also peculiarly adapted for a country where earthquakes are liable to occur.

The old Mission buildings have been so often described and figured in various publications that they are everywhere recognized as peculiar to California. It is therefore very appropriate that the California building at the World's Fair should be of this type. The only wonder is, however, that such good judgment should have prevailed, and something chosen so common here, but which will be an object of curiosity to visitors to the World's Fair. As a general proposition, we might have expected some ornate structure having nothing whatever to do with this State or its architectural history. As it is, the Commission may be congratulated on its excellent choice, and Mr. Brown also for confining himself to the peculiarities of the type, and carrying out his plans in such a skillful manner.

The extreme measurements of the building will be a length of 500 feet by a width of 110 feet. The total floor area will be 100,000 square feet, of which 60,000 feet will be on the ground floor. From the ground to the eaves will be 50 feet, and to the center line of the roof, 65 feet; the top of the dome will be about 80 feet high. The lower portion of the roof is to be covered with genuine Mexican tiles and the upper portion, including the dome, with iron plates shaped like the tiles. It is intended that the walls shall be a close imitation of the adobe. Plenty of the well-known adobe soil of the State could be spared, of course, to build with after the Mexican fashion, but in the climate where the building is to be erected, the adobe could not very well be sun-dried in the way it is done here.

The main entrance of the building will be in the center, as the drawing shows, the various departments being arranged along the sides of the structure. The gallery will afford an area of about two-thirds that of the ground floor. The offices are to be grouped in the second story in such a way as to command from them a view of the whole interior. It is estimated that the cost of this building will be about $75,000.

These plans will doubtless be accepted at once by the construction department of the World's Fair and work on the building will be commenced as soon as possible.

A great deal more has been already done in preparing for the World's Fair than many persons imagine. Many of the buildings are in process of construction. The buildings themselves are in many varied styles of architecture. The Administration building alone will cost over half a million of dollars. It will be about 250 feet square and will consist of a central building surmounted by a gilded dome of fine proportions and with large square pavilions at its corners. The edifice devoted to manufactures and liberal arts will be the largest of the kind ever constructed; it is to be 1688 feet long and 788 feet wide, covering in all about 31 acres. This will cost about one million dollars. The architect of this building, George B. Post, says of it: "Two of the vast machinery halls of the Paris Exposition could be wheeled through it and the Auditorium, the building of which Chicago is most proud, could be pushed under its great roof, tower and all."

The agricultural building will cover nine acres and cost $540,000. Its dimensions are to be 800 by 500 feet. All these buildings are well under way.

The Art, Machinery, Electrical, Horticultural and U. S. Government buildings are all to be grouped about the basins and lagoons; that for Manufactures and Liberal Arts occupying the central position close to the lake shore. Outside of the circle a large space is reserved for the erection by foreign governments of buildings to illustrate the special features of those countries.

We have in previous numbers of the PRESS illustrated and described some of these buildings, many of which are in process of construction. There is good reason to believe that the California building will have its due share of attention; and when filled with the varied products of this great State, will attract numberless visitors whose influence will in the end be of the greatest benefit to us.



CALIFORNIA'S BUILDING AT THE WORLD'S FAIR.

THE DISEASED TREE QUESTION.—The diversion created by Mr. Caminetti's bill in Congress to prohibit interstate traffic in diseased plants and trees is leading Eastern indignation into other channels, and making the little protective measures of California seem of little moment to the great Eastern tree growers. The Nurserymen's Association of the United States has published a circular and distributed it in Washington, opposing Caminetti's bill, on the ground that the germs of many tree diseases are too obscure for recognition even by experts, and that nothing short of a recognition of every microscopic point upon the surface of every plant could show the absence of disease germs. We are inclined to the same view. The more feasible ways to approach the question, if it is worth approaching at all, would be to inspect and to quarantine nurseries showing disease or to order disinfection of all stock offered for sale. However, we do not set out to tell Eastern nurserymen what to do. They can handle Mr. Caminetti on their own account, but they will find him able to defend his ground when he believes it is right.

IDAHO has about enough population and territory to give each person a square mile. There are 84,290 square miles of land in the State and 84,385 people.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.—ED.

Santa Barbara Notes.

CARPINTERIA, Feb. 8 1892.

TO THE EDITOR.—The year is now promising finely, as over three inches of rain have fallen in the past two weeks, and to-day, Feb. 8th, a nice rain is falling with indications of a heavy storm. All the rain so far has soaked into the ground, and streams have not raised, but now a heavy shower would cause streams and gullies to "boil" in a short time. Farmers are well up with their work as nowadays the bean farms are kept free from weeds from harvest to seed time by the use of improved cultivators, in many cases entirely doing away with the use of the plow. Thus farm work is relieved of much drudgery, and crops are improved as well as the farmer's minds. The keeping of the weeds from growing at all, greatly lessens the danger of drought, as the ground retains the moisture instead of giving it to the weeds.

Prospects are good for the fruit crop, all kinds excepting pears being loaded with fruit-buds. Peaches have been a very light crop for several years but are budded full this season and will probably have a large crop. A cannery somewhere in the vicinity of Santa Barbara would be a great help to the country hereabout, as much fine fruit goes to waste every year. Last year Bartlett pears and apricots were sent to Los Angeles canneries, and many carloads of apricots were sent to Newhall and dried there in the sun.

The tendency of the people in this section is towards smaller places, and many extremely small ones can be seen ranging from five acres downward. Not a great number of trees are being set out. Walnuts, lemons and olives are taking the lead in this part of the country.

Santa Barbara city will be connected in a few days, by telephone with Ventura, Los Angeles, San Bernardino and intermediate towns. The line is completed to Carpinteria, ten miles from Santa Barbara. Goleta is to be the present terminus of the line, but eventually it will be extended up the coast to San Francisco. Seventy thousand dollar bonds have been voted to build a drive along the beach from State St. to Castle Point. The drive is to be paved with asphaltum and lined with ornamental trees. A tunnel is being run in the hill adjoining the city on the north (Arlington Heights) for the purpose of developing water for the city. A project to establish a museum of natural history and zoology has been under discussion for some time as Dr. L. G. Yates, F. L. S., offered to donate his fine collection for that purpose. Such a collection as Prof. Yates has is hard to beat and no hesitation should be felt in embracing such a grand opportunity.

Feed is now commencing to grow nicely and will soon be good for stock. Range stock have had a close call but very few if any losses have occurred in this county on account of the long dry season.

There is some movement in beans but at low prices about $1.60 per 100 pounds being paid. It looks as if a beet sugar factory would be a good thing in this section and would lighten up the bean product so better prices might rule again for beans. L. B. CADWELL.

Tulare Water Park.

TULARE, Feb. 10, 1892.

TO THE EDITOR:—Fresno, Tulare and Kern counties are talking of a canal to tide water, and it seems a suitable time to direct attention again to the rare opportunity now offered to the people of these counties to create, with little trouble, a unique and beautiful pleasure resort, the like of which exists in few places in the world. Tulare lake ought always to be maintained as a reservoir and to soften the climate, and as a fishing ground for the people of this end of the San Joaquin. But now it is a shallow, unapproachable pool. It needs improving to fit it for all its uses. A dredge kept going around and around it for two or three years would throw up a high bank, which would deepen the water, make the banks approachable and prevent overflow. A lock opening into a canal to the San Joaquin would regulate the water.

So much for utility. Now it needs no vivid imagination to picture the scenes of wonderful beauty that may be created here by a touch almost; $1000 would do more here than $10,000 in Golden Gate Park or Central Park. A dredge could easily throw up the bank in curved lines, in points and bays and sheltered coves. Timber properly and artistically placed would quickly beautify every shore line. Islands would as easily be made dotting the surface of the lake. In this climate and soil there is hardly a limit to the lovely effects possible to the landscape gardener. Such another opportunity has probably never been offered before either to the landscape artist or to a people to secure a pleasure resort of such magnificent possibilities.

Such a lake would be about 15 miles wide by 25 miles long, with a 300 foot driveway all around it and a suitable number of boat-landings, for this lake would be a part of the canal and a feeder for it, and in days to come will be anything but a solitude, but busy carrying some of the freight of the great valley. When the banks are accessible, with shores and islands beautiful with waving trees of every zone and every land, who indeed would not relish a day's sailing and fishing in this the people's water park? Some might prefer a spin along the widest and longest driveway in the world, bordered sometimes by oranges and palms, sometimes by the New England elm. The picture is not exaggerated in the least. The chance is here, can be easily taken, and ought to be. I invite the attention of the people, especially of Tulare county, to their opportunity.

W. S. PROSSER.

THE APIARY.

Bees Deserting Their Hives, Swarming, Etc.

GRIZZLY FLATS, Feb. 12.

TO THE EDITOR:—It is a mystery to many why bees should leave their hives when, apparently, they were prospering in every respect. A new swarm will sometimes leave, even if every precaution is used; you may put them in a fair sized hive, every frame fitted up with foundation, the hive well shaded, but all to no purpose; after being in there for a few hours, out they come, and start to parts unknown.

If they had returned to the parent hive again, an apiarist would have known what caused their strange behavior, for their queen did not come out, and therefore their return.

I am well aware that it would never do in a country where there are many suitable habitations for bees, to hive where they settled in swarming, because their returning scouts would call the swarm out, and away they would go. I always move the hive quite a distance from where they settled, and, therefore, I am more puzzled as to why they leave; they may possibly have a future location picked out, and then the only way to make them stay would be to cage the queen a couple of weeks, that is if you are lucky enough to catch them after they have started.

I think that bees do occasionally choose a future home before swarming, but not very often.

Bees will sometimes swarm at odd seasons of the year, which, to a beginner, looks very strange; this is easily accounted for though, as they must have been on the brink of starvation. If they are returned to the hive again and fed, they will be all right, although the queen will never be as prolific as before.

In robbing season, sometimes bees will swarm out, but they are generally robbed and are starving. Many times these roving swarms that have been robbed of stores, will unite with the bees that robbed them.

Queenless colonies will many times swarm out, after all hope of ever rearing a queen is given up. Such colonies are generally worthless, because there are more or less fertile workers among them.

Fertile workers will nearly always be found in colonies where there is no larvæ of the right age for rearing queens; with Carniola, Cyprian, Syrian and Holy Land bees, fertile workers rapidly develop, when their means of rearing a queen are lost; with Italian and black bees, fertile workers do not develop so rapidly.

Sometimes, in full colonies of Cyprian, Syrian and Holy Land bees, fertile workers will be at work when a laying queen is in the hive, but still they do not seem to be of any serious detriment to the prosperity of the bees, as long as they have a good queen.

Some beginner may possibly wish to know what a fertile worker is, so I will state that fertile workers are worker bees that lay eggs, and what is more, these eggs hatch, and produce inferior, undersized drones. The ordinary worker bees are not neuters, as many suppose, but in reality are undeveloped females. Microscopic examination reveals the fact that they are possessed of nearly every organ that a queen has, only a great deal more minute, and that their reproductive organs are too small to admit of their fertilization by a drone.

It is easy to detect when fertile workers are present in a a hive; if you find a number of eggs in a cell, and here and there notice high convex cappings over brood, you may be pretty certain that fertile workers are at work; take a good look anyway, and see if you can find a queen; if no queen is present, they are indeed fertile workers.

Sometimes a queen, failing to get mated, will lay eggs similar to fertile workers; these eggs also hatch and produce drones, but whether these drones are capable of fertilizing a queen or not, I am unable to state.

A well sexed queen's eggs are laid regularly in the cells, and in perfect order; each egg fastened to the bottom of the cell, whereas, with fertile worker eggs, they are fastened disorderly to the sides and bottoms of the cells.

If you find two or more eggs in a cell, it is not always conclusive evidence that there are fertile workers present; sometimes a very ambitious young queen, in a small colony, will lay two or more eggs in a cell; but they will be found fastened to the bottom and not to the sides.

Every apiarist should keep track of all colonies during the season, and see that each one has brood of the right age to rear a queen at any time, and fertile workers will rarely, if ever, be found. If fertile workers are discovered before they get any of their own brood capped, it is quite possible to save them, if a little care and caution is exercised in giving them a fertile queen, or if you have a young virgin queen just hatched, introduce her. Another good plan is to give them a queen cell (protected with a cell-protector) that will soon hatch.

In hiving a new swarm, it is a good idea to give them a frame of unsealed brood, as it greatly encourages them to stay; also, if the swarm came out without a queen, they will stay and make a queen from this unsealed brood, and rapidly grow into a prosperous colony.

Bees that have just swarmed should be kept well shaded for a few days, until they are well established, and they will be all right. In the dry, sterile, foothill sections of Central and Northern California, in the spring, bees bend all their energies to swarming, and some seasons it is very hard to make them stay; their instinct seems to teach them to seek more favorable honey fields, and they accordingly strike out for them. In these dry sections, I have known bees, after being in their hives a few weeks, and drawing out eight or ten frames of comb, which was tolerably well filled out with eggs and honey, to swarm out and leave entirely.

Bees should not be allowed to swarm too much, but should be controlled as much as possible, by cutting out queen cells and giving needed room, also by proper ventilation and shading. I am aware that this will not prevent swarming, but it will keep it down to a great extent. The frequent use of the honey-extractor also tends to lessen swarming.

Bees are a great deal harder to manage in some locations than in others; the better the location the less trouble is experienced.

In good locations very little trouble by robber bees is ever experienced, but in poor locations the apiarist is continually in hot water trying to devise some method of getting ahead of them.

Therefore, if you intend to start in the bee business, try and start in a good location, where nectar-yielding flowers grow in abundance. S. L. WATKINS.

THE VINEYARD.

Careless Pruning of Vines.

TO THE EDITOR:—Having visited many vineyards in the San Joaquin valley at a time when the principal and most important operation was in progress, connected with the cultivation of the vine, viz., pruning, I observed closely all I saw and the upshot of these observations is, that not one in ten of the large vineyards, and a less percentage of the small, are correct in the methods they have adopted. Some of the large vineyards have the good sense to hire men who thoroughly understand the business, and hence the crops are all that is desirable both for wine and raisins. By making inquiries, I found the prevalent idea of the necessities in this important operation was simply to cut off all the old limbs, leaving as many buds as you please, in some cases eight to ten, for the future growth. When asked if it was not necessary to know something of the nature of the kind of grape, the answer in most cases was characteristic, "O no, not at all." But, I said, how about the prevailing wind? "O that makes no difference." Then I asked, did you not find that the grapes (muscat) became, to a certain extent, raisins before the rest of the first crop matured, by being exposed to the sun? "Well, yes, a great many of them were, and most of the exposed bunches to the windward side were dried like sticks before those that lay on the soil had time to ripen." Then by this means, you lost much? "Yes."

Then, on another occasion, I repeated the same questions and added (for I got the same reply), Should you not endeavor to prune your vines with a view of obtaining the necessary shade to enable them to ripen in a uniform manner? The answer came, "Who can you get to do this? Who will take any interest in the matter? A hired laborer will not, and as to instructions, well, it will do very well while you are watching them, but as soon as your back is turned, it is go as you please."

I replied, hire some responsible vineyard man—some man that knows his business; pay him well, and make him show you that he understands his work. There are plenty of men, French and Italian, who understand this; try them.

On a vineyard near Merced of some extent, I found a boy of 16 years in charge of this important branch of work. His only qualification seemed to be (for the work accomplished was all wrong) the amount of cheek he had and the supineness of the proprietor and his foreman. In speaking to one of the men with reference to this callow youth and his ability, he said: "You bet he knows all about it. His father has 20 acres of vineyard; besides, he has two sisters who work in a cannery every season."

Thus it is that many people are under the impression that failure is due to natural causes, when it is a patent fact that the fault lies with themselves, for they will not take the trouble to furnish themselves with information, either by learning from the study the methods of successful men, or by reading the current literature on viticulture. Some are too egotistical to learn from others; some too mean to hire the experienced help, and others who think they can find it all out in some unknown or miraculous way.

There is a great want of such journals, in most ranches, vineyards, etc., as the RURAL PRESS. If the intelligent men engaged in farming in this country would read, mark, learn and inwardly digest the words of wisdom to be found for a mere song, they would not then allow boys, with shallow pretence to knowledge, to mutilate a valuable vineyard at so much a day; in fact, it would pay any person who has the remotest regard for his vineyard, to pay such pruners (?) to keep away from the district altogether.

I will have something to say ere long on the subject of propagating by cuttings. WANDERER.

THE ORNITHOLOGIST.

Beneficial and Injurious Birds.

Each man who cultivates the ground for profit should be able to distinguish the beneficial from the injurious birds. Every woman who desires to see her grounds adorned with lovely and attractive flowers knows how unceasingly she must combat the slugs, beetles, plant-lice and other insect pests. From the moment the seed is planted till the ripe grain is harvested the farmer has to contend against loss and destruction from injurious insects. As the orchardist watches the numerous birds amid his fruit trees, he eyes them anxiously and is often in doubt which ones are doing him good and which ones harm. Some facts given below will make this more clear to the farmer and fruit grower. Europe and America lose each year in food and fibrous plants $300,000,000 from injurious insects, yet in the face of these immense losses 5,000,000 birds that keep these insects in check are annually slaughtered for feminine adornment. In a number of States, laws have been passed protecting the beneficial birds from their human enemies, and in several, fines of $2 are imposed for each bluebird, martin or swallow killed. Among the injurious insects kept in check by our birds are the strawberry borer, twig borer, a small chestnut-colored beetle that does much damage to young fruit, the woolly aphis, codlin moth, peach-root borer, sun-scald beetle, the striped squash bug, the red spider, the flat-head borer, the grape-vine hopper, the

grasshopper, the pear slug, army worm and hessian fly.

We desire below to call attention to the birds that are found most useful in keeping down these insects. The common robin is complained of as detrimental to the orchardist. Two years ago, myriads of these birds entered the olive orchards of Placer and caused a loss of hundreds, possibly thousands, of gallons of berries. It is believed they were driven to this by the unusual severity of the winter, for on a careful study of the food of these birds, it is found they are destructive to fruit and vegetables 59 1-2 days during the year, are beneficial 142 1-2 days and neutral 163 days. Meadow larks are considered by many to be pernicious, and farmers will tell you that in the spring much young wheat is pulled up and eaten by them. A careful examination of the stomachs of a large number of larks shows that their food is mostly insects, and hence the damage done is slight compared to the good they perform. Thirty larks' stomachs showed 100 seeds, 25 caterpillars, 57 grasshoppers and 80 beetles. When we consider the damage that would have been done by these caterpillars, beetles and grasshoppers had they not been destroyed, it shows conclusively that the lark should never be killed upon the farm or in the orchard, for he is a friend of the farmer and fruit grower. Owing to the small amount of nourishment that is found in these insects, birds require an immense number of them for food. E. A. Samuels, a keen observer of birds, ascertained that two robins, in a single hour, brought to their young 50 cut worms. On another occasion, in the same length of time, he counted a pair that brought to their nest 40 cut worms and smooth caterpillars.

A writer in the Lakeport *Avalanche* thus scores the bluejay: "He will raid the vineyard and steal every grape if left alone. He will perch upon the boughs of the fruit trees and stick his bill into the most luscious fruits, and what he cannot eat or carry away, he will spoil by nibbling. If you succeed in killing one, a hundred strangers come to attend his funeral and supply his place." He gave but one side of the picture, while the eminent ornithologist Audubon gives the other, when he says that two jays and their five young require for food, in 100 days, 20,000 insects that are harmful to fruit and food plants. More than 40 years ago the horticulturists near Boston petitioned the legislature to repeal the law protecting the robin from sportsmen. Prof. Jenks was appointed a judge to try the robin and ascertain whether he deserved death. He found that from March 1st to the last of April the robin lived almost exclusively upon the larvæ of the *bibio albipennis*, which was very destructive to strawberries, vines and other food plants. During May and June the robin lived upon worms and other harmful insects, while during the next two months he lived upon berries and the seeds of noxious plants. Fruit and grain had hardly been touched by him, so that when Prof. Jenks made his report the petition was promptly withdrawn. Ninety-seven years ago the forests of Saxony were almost destroyed by insects which fed upon the foliage and the tender wood. When the cause of the great increase of these injurious insects was ascertained, it was found that a war of extermination had been waged by the people upon the woodpeckers, the natural foes of these insects. In Prussia, at one time, sparrows were thought destructive to wheat, and the Government ordered as many killed as possible. Within two years such was the increase of noxious insects that the law was promptly repealed, and one was passed protecting the feathered friends of man. Wilson Flagg, a keen observer of birds, says that forest tracts in Virginia and the Carolinas were many years ago nearly stripped of their leaves by a borer of the beetle family. These beetles had been allowed to increase prodigiously by a warfare waged upon their natural enemies, the woodpeckers. A farmer's son in Ohio watched a bevy of quail in his father's corn field, and as they ran from hill to hill, he was convinced they were eating the corn. He waited an hour, and then shot one of the birds and ripped open his stomach to count the kernels of corn. He found one cut worm, 21 striped vine bugs and 100 chinch bugs, but not a single kernel of corn. Buffon, the great French naturalist, says that grasshoppers accidentally introduced from Madagascar to the Isle of Bourbon proved damaging to crops, so blackbirds were brought from India to destroy the insects. The planters saw the birds pecking so constantly in the fields that they became alarmed and at once set to work to exterminate them, at the same time declaring that they were eating up their crops. Now, the grasshoppers increased so rapidly that the farmers saw their mistake and a new lot of blackbirds was brought to the island, where they were carefully protected and in the end effectually destroyed the insect pests. At North Bridgewater, Mass., in 1820, birds were slaughtered in such quantities that cartloads of their bodies were used to manure the ground. The woods and orchards were decimated of their feathered tenants, and as a result, immense damage was done during that summer by harmful insects. The people realized when it was too late that they had slain friends instead of foes, but it was some years ere the woods were again filled with the insect destroyers.

A similar case took place in Pennsylvania in 1860, when a war of extermination was waged against larks, robins, swallows and other birds, which the people declared were eating their fruit. The killing took place about the last of May, and during that whole summer scarcely a bird was to be seen in the whole neighborhood. As a result, the cut worms ravaged the cabbage patches, whole orchards were destroyed by borers and caterpillars, and one-third of the grain crop was eaten by army worms. The farmers, when too late, realized their mistake, but it was several years before the birds had multiplied in sufficient numbers to keep in check the injurious and destructive insects. The downy woodpecker or sapsucker is considered an enemy by all orchardists in California, and is slain whenever there is an opportunity; but while he does damage by girdling the trees, yet his food consists largely of insects and grubs that are harmful to fruit. An examination of the stomach of one of these birds will show that he has killed large numbers of ants, beetles and borers, and is, therefore, entitled to consideration at the hands of the fruit growers. The ruby-throated humming bird is not a honey seeker, as many suppose, but an insect destroyer that does much good. The cranes ought to be protected by law, for their food consists mostly of gophers, mice and other enemies to the farmer. The night hawk that goes skimming through the air is one of the most useful insect exterminators, and should never be killed. There is no greater friend to man than the sparrow hawk, for he is a large feeder and his diet consists almost entirely of destructive insects, field-mice, snakes, etc. The owls are entitled to protection, for they are equal to terriers as rat exterminators. They bring large numbers of rats, mice, etc., to their young in the early part of the night, and their presence should be encouraged by every orchardist and farmer. Linnets, on the other hand, feed very largely upon fruit buds, and during the season of ripe fruit they devour peaches, figs, grapes, nectarines and cherries in great quantities. Martins and swallows feed largely upon insects, and they should be protected. The crow is a bird concerning which there is a division of opinion. John Randolph, who watched these birds carefully, would not permit one to be killed upon his lands, but recent observers declare that the crow does more harm than good. Not but what he eats more insects than fruit or grain, but because he destroys the eggs of other birds. Had these eggs been left unmolested, the birds hatched from them would have destroyed far more insects than the crow, hence from this cause he must be classed as one of the most injurious birds. Mr. Samuels, who paid special attention to the crow, estimates that he devours but one-ninety-sixth of the borers, beetles and worms that would have been killed by the birds that would have hatched from the eggs he destroys in a season.

To the list of injurious birds must be added ducks and geese, which are very destructive to grain at certain seasons of the year. It will be seen, however, that the injurious birds are few compared to those that are beneficial, and if all fruit growers knew which ones to kill and which to let live, they would in the end be greatly benefited.—S. S. Boynton in Evening Bulletin.

THE FIELD.

How to Exhibit at the World's Fair.

Chief Buchanan, of the Department of Agriculture, has issued rules for the guidance of intending exhibitors at the World's Fair in that department. These rules have been approved by all the necessary authorities, and should be carefully examined by all our readers who desire to enter their produce in the regular classes for competition. The regulations are as follows:

Articles intended for exhibition will be admitted to the agricultural building on and after Nov. 1, 1892.

All exhibits, except those of a perishable character, must be in position on or before April 20, 1893. Vegetables and other perishable products will be admitted during their season, and may be replaced with fresh specimens when found necessary by obtaining a special permit from the Chief of the Department.

The Chief of the Department reserves the right to order the removal of any vegetable or perishable exhibit contemplated by rule 2, where the exhibit is not properly cared for. Arrangements can be made with the Chief of the Department for the sale of such perishable products as may become necessary to comply with this rule.

A special display of sugar beets will be made during the two weeks beginning Monday, Oct. 9, 1893.

A special display of potatoes and other tubers will be made during the two weeks beginning Monday, Sept. 11, 1893.

The space granted an exhibitor will be indicated on the permit in feet and inches, together with its location. It may be utilized in such a manner as the exhibitor may think best in arranging his exhibit, under the direction of the Chief of the Department, subject to the approval of the Director-General, in accordance with the following specific regulations:

All platforms must be of uniform height, namely, eight inches. All railings and counters must be uniform, namely, 36 inches above the floor. No partition will be permitted exceeding 6 ft. in height above the floor. Space will be computed to an aisle or to some definite point, and all railings and ornamentation are to be included therein. No distinct form or design is prescribed for the construction of counters, railings, etc., for the arrangement of an exhibit (columns, pyramids, cones, etc.), except that a drawing to a scale of one-quarter of an inch to the foot must be submitted by each exhibitor to the Chief of the Department, showing elevations, construction, material to be used and the arrangement of his exhibit so far as possible. This design must be approved by the Chief of the Department before such exhibitor will be permitted to proceed with the installation of his exhibit.

MUST FIRST GET A PERMIT.

The permit for space issued to an exhibitor must be presented and properly stamped at the office of the Chief of the Department before the exhibitor begins preparation for the installation of his exhibit. Provision will be made for the storage of empty boxes and cases immediately after unpacking.

It is required by the Director-General that exhibitors begin work on the space assigned them at as early a date as practicable, so that the installation may be rapidly carried on after the arrival of an exhibit at the exposition.

Exhibits of cereals and other farm products must be accompanied with the following data and information: Name of object; name of producer; place where grown; character of soil; date of planting; quantity of seed planted per acre; method of cultivation; date of harvesting; yield per acre; weight; price of product; nearest home market; average temperature by months for the time intervening between planting and harvesting; average rain or snowfall by months for the time intervening between planting and harvesting; was exhibit produced by irrigation.

CONDITIONS OF THE DAIRY EXHIBIT.

Dairy products will be received for exhibition only between the 1st and 10th of the following months: June, July, September and October, 1893.

The arrangement of all dairy exhibits will be under the control of this department.

Exhibits of butter will be classified and limited as follows:

(1.) Dairy butter made by exhibitor on the farm from a mixed herd. Exhibit to consist of not less than one package; weight to be not less than 10 pounds nor more than 20 pounds.

(2.) Dairy butter made by exhibitor on the farm from a herd of one breed. Exhibit to consist of not more than one package, weight to be not less than 10 nor more than 20 pounds.

(3.) Prints and fancy packages butter must be manufactured by exhibitors. Exhibits to occupy space not exceeding 18 inches square. Total weight of exhibit not to exceed 20 pounds.

(4.) Creamery butter made by exhibitor from the milk of mixed herds from cream separated from the milk in the creamery where the butter is made. Exhibit to consist of one commercial package, to weigh not less than 55 pounds

(5.) Creamery butter made by exhibitor from gathered cream. Exhibit to consist of one commercial package to weigh not less than 55 pounds.

(15.) Exhibit of cheese from the United States and Canada will be classified and limited, as follows:

(1.) Factory cheese—Cheddars, exhibit to consist of one cheese, diameter not less than 14 nor more than 15 inches; height not less than nine inches; weight to be not less than 60 pounds. Flats, exhibit to consist of one cheese, diameter not less than 14 nor more than 15 inches; weight to be not less than 30 nor more than 35 pounds. Young Americas, exhibit to consist of four cheeses in one package, total weight to be not less than 35 nor more than 40 pounds.

Domestic Swiss, exhibit to consist of one cheese, weight to be not less than 30 pounds. Brick cheese, exhibit to consist of six bricks in one package, total weight to be not less than 20 nor more than 30 pounds.

(2.) Dairy cheese, made by exhibitor on the farm from exhibitor's own herd. Exhibit to consist of one cheese, weight to be not less than 30 pounds.

(16.) Cheese other than that mentioned offered for exhibit from the United States and Canada, and all cheese offered for exhibit from points ontside the United States and Canada, will be subject to such limitations and restrictions as may be decided upon by the Chief of the Department at the time application for space is made.

(17.) All cheese exhibited from the United States and Canada known commercially as "American" and "Canadian" cheese must be manufactured of full new milk.

(18.) Cheese that has been cut, bored or tried in any way will not be admitted for exhibition.

(19.) All cheese will be divided into two classes, that made previous to the year 1893 and and that made during the year 1893, and will be judged on the following points, the figures set opposite each indicating the maximum per cent, the total of all such maximums making 100:

Flavor	45	Make-up	10
Grain	20		
Color	15	Total	100
Salting	10		

THE BUTTER AND WOOL EXHIBITS.

(20.) Butter will be judged on the following points, the figures set opposite indicating the maximum per cent, the total of all such maximums being 100:

Flavor	45	Packing	5
Grain	25		
Color	15	Total	100
Salting	10		

The general standard for butter will be "June grass butter."

Special blanks will be furnished by this department for the use of exhibitors of dairy products.

(21.) Exhibits of wool will be classified and limited as follows:

(1.) Pure-bred fine wools.
(2.) Pure-bred middle wools.
(3.) Pure-bred long wools.
(4.) All cross-bred wools.

The following entries can be made in each of the above classes: First fleeces from lambs, fleeces from animals under two years old that have been sheared, fleeces from animals over two years old.

Entries in any of the above classes to consist of one fleece in the natural condition taken from the animal. Exhibit to be neatly folded and secured against injury in handling and to be accompanied by the following information: Sex of animal, breeding of animal, age of animal, date of shearing, weight of animal after shearing, age of fleece in days, gross weight of fleece at shearing.

(22.) Exhibitors of agricultural and other machinery comprised in the classification of this department must furnish a drawing, to a scale of one-quater of an inch to the foot, of the plan and distribution of their exhibit, and must state the actual horse power required for each machine, diameter of steam, water or gas pipes (if any), and must state whether water, gas or steam is necessary in connection with their exhibit. Power will be supplied from shafting having 120 revolutions per minute. Pulleys to be placed on main shafts must be balanced in halves, and must not exceed two feet in diameter, and must be secured in a manner satisfactory to the Chief of the Department. All pulleys, countershafting and belting must be furnished by the exhibitor, and all connections will be made at the exhibitor's expense.

(23.) Exhibitors must assume the supervision and responsibility of all gearing supplied by themselves.

(24.) Exhibitors of traction and portable engines, wishing to show them at work, should so advise the Chief of the Department on making application for space.

(25.) All freight and other charges for the delivery of an exhibit intended for this department must be prepaid by the exhibitor at the point of shipment.

26.) Right to amend or add to above rules is reserved.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Have a special commlttee in each Grange on "Woman's Work." The women of the Grange will do much to keep up the interest in every meeting. Call on them for a report under the heading "Reports of Special Committees." Ask them to communicate with the like committees appointed by the State and National Granges. Give the women of the Grange a chance and you will be surprised to see the work they will do for the good of the Order.

Write to E. J. Wickson, State University Berkeley, for full particulars about having and holding a Farmers' Institute. Hold an Institute in your town or county! Try one, it costs you nothing.

Do you study the science and art of agriculture, as you would expect an attorney to study and present your case in Court? If not, why not? There is as much study required of a farmer who would know about his business and succeed with it, as is required of the lawyer who would know about your law-suit if he would succeed with it. Study cooperation, study soils, study products, study the world's markets, study yields, study money values, study laws affecting buyer and seller, shipper and insurer, study transportation, if you hope, as a farmer and as one who produces to succeed. The vocation of the farmer is one that requires the work of the student as well as of the laborer.

The Agricultural Bulletins of the State University ought to be read by all who love their calling or who believe in education.

The County Assessor will soon be out to see you. Receive him kindly. Ask him if he is going to assess city property, both personal and real, on the same footing that he is assessing country property. No doubt he will say "yes." Then look to it this summer that the John Does and Richard Roes who have fine buildings and large stocks of goods in the towns and cities are properly assessed. Fairness and Justice will hurt no one. The burdens of Government should be, as far as possible, equally distributed. Look to the assessment in your own county, fellow Patrons. You will find the rich are escaping a big lot of the burden of taxation right in your own county. Remember that "Charity begins at home," but that one must not be dishonest even with his charity.

Within the coming three months, the "cunning politician" will be at his old tricks. The political pot will be boiling. Already the campaign fires are lighted, and it is surprising to see how many firemen are ready to offer their services and to contribute their fuel that the blaze may be so bright that the political party to which they belong may see them in the light of a nomination for office. In the meantime, these politicians are asking one another, and no doubt they are asking you, good reader, "What do the farmers want? What are you farmers going to do in this campaign?" To these politicians, I think we can all say: "We want honest, competent, working tax payers in office. We want men who will represent something besides themselves; men who will represent homes, ideas, principles, honor, manhood; men who will not 'cinch' or be 'cinched;' men who know right from wrong, and who, without the fear or the favor of corporations, political parties or bosses, will dare to vote, act and speak as the dictates of an honest conscience direct. And we are going to vote for men, without regard to political affiliation, who will aid in reducing the public expense account; who will do the business of the county, of the State and of the nation in a spirit of fairness to all persons, and who will not use their official position to dishonestly promote their own ends and the welfare and bank account of the members of their own family." The farmers are willing to bear their full share of tax burdens, and they insist on having their full share of honors, of emoluments and of protection offered by the Government. Nothing more is wanted; nothing less will satisfy.

Eureka Grange.

TO THE EDITOR:—Upon the suggestion of Past Master Overhiser, Eureka Grange decided to hold two meetings a month hereafter, on the first and third Saturdays of every month, the first meeting to be held in Edgewood schoolhouse in the evening, commencing at 7:30, and the second at I. O. O. F. Hall, in Auburn, at 10 A. M.

Our officers for the ensuing year were all installed but one last Saturday. With the addition of several new members, and the good words and impressions left by Bro. Overhiser, the Grange has taken up a more active life than ever before. We hope to see the Grange prosper as it never did. The writer has retired from the guiding position, and is now more at liberty to write to the RURAL the doings of our Grange. The labors as Master are done, but the activity of one deeply interested in the principles of our noble Order shall not cease. Whatever lies within my power to do will ever be cheerfully done.

What a feeling of fraternity is evinced at the announcement of a brother or sister! What are the joys of meeting one connected in a brotherhood! And yet so many forget to visit other Granges. Why, sisters and brothers, do you not visit more? Keep posted upon the time and place of meetings of other Granges, and drop in for a few minutes whenever you have business in their vicinity. Try it. Try it this year, and you will at its end be a better Patron than you ever were. Fraternally, B. A. GIANTVALLEY.

ENTERPRISE GRANGE, Sacramento Co. expects to hold their annual re-union in April, in lieu of a special meeting as proposed by the Ex. Com.

LOCKFORD GRANGE expects to return Washington Grange a visit February 20th.

The Noble Cause of the Grange.

The following was read by Mr. E. C. Hayden before Washington (Oregon) Grange, February 8th:

"Some say 'one cannot be a Granger and be a Christian.' Others say 'we must mingle with all sorts of people if we join the Grange,' this has been said to me. Now, if the good people who say those things knew what our obligations are, they would know that even if they did see a black sheep in the flock, that it is not simply because he or she is a Granger. And where will they find an organization of any kind, even a church, with no black sheep?

"But, my dear brothers and sisters, if we are more careful to study the real weight of our obligations and live up to them as near as possible, perhaps we may induce our should be friends to think differently, and perhaps our work would be more prosperous; if we will, we can live up to the mark.

"We should be very careful whom we admit to our Order, for, if a worthy person sees an unworthy person admitted, the worthy one will most likely stay out.

"Just think what a noble cause is ours, and it requires a noble and determined mind, as well as a strong and determined will, on the part of every one of us, to accomplish the good work well begun. So, let us all lift and pull together, shoulder to shoulder, hand and hand, not waiting one for another. In so doing, our work will be accomplished harmoniously, and with ease and pleasure, especially if the work is well spiced with fun, as is our wont, for amusement is as cheering as music, and music cheers the poor soldier through the hottest battle.

"If we do this, we will, some day in the not distant future, see that we have won a glorious victory in lifting a burdensome yoke from off the necks of millions of poor white slaves to monopoly, and I fancy we will have done almost as noble a work as that of freeing the colored slaves, without having to put ourselves up for a target to be shot at, or live on half rations. No, indeed, we have plenty to eat and the most of us pleasant and comfortable homes; why, then, can we not make a little sacrifice for the future happiness of the farmer, "the man who feeds us all."

Sixth Degree Certificates.

Recently, seventy-six certificates for the Degree of Flora were mailed to members who received the Sixth Degree at the State Grange in Haywards. Where there were two or more in the Grange, the certificates were mailed to the secretary of the subordinate Grange. If any have failed to receive their certificates, they are requested to notify the secretary of the State Grange.

DEATH OF MRS. ELIZABETH RISTINE.—Memorial resolutions have been received from the Committee of Potter Valley Grange (Laura B. Sierby, H. P. McGee and W. Kilbourne) on the death of "Grandma Ristine," who died on the 11th of January last, at the age of 79 years. The members of Potter Valley Grange deeply sympathize with the relatives in their sad bereavement by the loss of one whose cheerful face and voice will be greatly missed.

SOUTHERN COAST GRANGES.—Hon. Geo. Steele, of Arroyo Grande Grange, in letter of Feb. 15th, says: "Our Grange will do all that it can to assist the work in this portion of the State." Bro. Steele suggests that the special meetings be held so as to allow the visiting officer to meet the Granges on consecutive days through Monterey to San Luis Obispo county. Arroyo Grande is nearest to the southernmost Grange now in the State, viz., Carpinteria, in Santa Barbara Co.

NEW SECRETARY.—On account of poor health and increased business cares, C. E. Mack, Jr., the able and efficient Secretary of Sacramento Grange, has resigned his position. Our readers are under many obligations to Bro. Mack for his inimitable Grange reports and correspondence. We hope that with improved health he will soon write for our columns again. Elmer G. McMullen, Bro. Mack's successor, we hope will favor us with items of interest.

SPECIAL MEETINGS. — About thirty Granges have answered the circular sent them regarding holding a special meeting soon. With two or three exceptions each has expressed a desire to have a special meeting to be attended by some State officer. The letters received are now in the hands of the Worthy Master, who will in due time arrange for the contemplated visits. Early word is now desired from the rest.

ON Jan. 30th Representative Davis, an Alliance member of Congress from Kansas, introduced a bill authorizing the erection of the postoffice buildings in places of more than 3000 inhabitants, and in places of less population where such place is a county seat, the building is to cost not less than $6000 nor more than $50,000. In the second stories of the buildings there shall be public libraries.

WISCONSIN VISITORS.—L. F. Rogers, of Milton Junction, Wis., and wife, old neighbors of S. C. Carr, P. M. of Wisconsin State Grange, recently visited Temescal Grange. The fraternal greeting was enjoyed by all. Bro. and Sister Rogers, who have been visiting their son, Dr. D. W. Rogers, of Oakland, started home via. the Southern route, intending to call on Dr. E. S. and Jennie C. Carr at Pasadena.

BATES DE HART, P. M., Hollister, had a serious breakdown lately, crushing his foot and several ribs. He writes in good grit and with satisfaction to friends, that they may expect him at the next State Grange session in San Jose.

J. E. REAMER, librarian of the W. P. C. Association of San Francisco, appreciatively returns acknowledgment for copy of annual proceedings of the State Grange, which has been placed in the library.

WORTHY MASTER DAVIS writes, Feb. 15th: "I go to Sebastopol Grange on the 20th. Santa Rosa Grange gives a social Friday night for the benefit of their piano fund. Am very busy with farm and vineyard work."

FURTHER GRANGE MATTER will be found on page 170 of this issue, in Bro. Amos Adam's address on "The Grange and Its Relation to Class Legislation."

FARMERS' ALLIANCE.

A Statement From the National Secretary.

Men often speak when their utterances are the legitimate offspring of their wishes. Some say that the Farmers' Alliance is going to pieces because it is favoring the People's party; others say it is going to pieces because some are trying to hold it in one or the other of the old parties, but the facts, as they are coming to my office every day, prove that both are wrong. By observing closely, I find that we have men in our Order who would gradly see it sink into oblivion if thereby their individual political fortunes could be built up. Beware of the men who are howling themselves hoarse to prove that the Alliance should stay in the Democratic or republican parties to accomplish its purposes, and be equally guarded against a similar class who would have you believe that the only road to success is for the Alliance to go into the People's party.

When a man talks party, give him a deaf ear, but when he talks reform as laid down in the Ocala demands, listen to him and aid him in every possible way, for this is the duty of every good Alliance man. As an organization, let us quit talking party and spend all our time and energies in educating the people, and when education has done its perfect work, we need have no fears, for the people are determined to take care of the party that takes care of their principles. Reports from the County Alliance meetings all over the country are very encouraging. Every mail brings the cheering news that "Our county is solid for the Ocala demands, and we will not vote for any man or party that does not adopt them." I am also very much gratified at the way the Sub Alliances are responding to the call for a "propaganda fund." It is coming from every State in amounts ranging from fifty cents to ten dollars. This fund will enable us to push the work of education as it has never been before, and good will inevitably result.

Face to the front and pass it down the line, that by the help of God we are in the Alliance to stay till victory perches upon our banner and the people get relief. Fraternally,

I. H. TURNER,
Sec'y N. F. A. & I. U.

Alliance Cooperation.

Los Angeles Farmer.

The members of the Farmers' Alliance in this section are getting ready to work out their cooperative plans, and yesterday articles of incorporation were filed in the county clerk's office for the Alliance Cooperative Exchange. The design of the new exchange is to provide ways and means for the handling and disposing of the products of the members of the Farmers' Alliance to the best advantage.

The exchange will erect factories for canning and drying fruits, and store houses for the storing of fruits and vegetables, and such other establishments as may be required. They will conduct a commission merchant business and make all arrangements for the shipment of the farm products of the members.

The principal place of business of the exchange will be located in Los Angeles. The following board of directors have been elected for the exchange: Thomas Wardall, Duarte; Jacob K. Bashen, Covina; W. H. Carlin, Colegrove; Joseph Lucas, Compton; J. W. Hains. The new exchange will commence operations as soon as possible.

Los Angeles Alliance Resolutions.

The Los Angeles Alliance adopted the following resolutions at its last meeting:

WHEREAS, We are bound together for self-protection against the ward strikers, politicians and money kings,

Resolved, That this County Citizens' Alliance indorses the action of Judge Wallace in his noble effort to see crime where it justly belongs, regardless of rich or poor, and believe him to be a true, honest and impartial judge and worthy of our confidence and esteem, and

WHEREAS, Marion Cannon, President of the California State Farmers' Alliance, has raised his voice in warning against the gigantic conspiracy known as the Nicaragua canal scheme, and

WHEREAS, It would rob the taxpayers of the United States of over one hundred millions of dollars to build up a gang of money kings,

Resolved, That this County Central Citizens' Alliance of Los Angeles county hereby indorses the action of President Cannon in denouncing this gigantic scheme.

President Cannon's Story.

At an Alliance meeting held last Saturday night in Avenue schoolhouse, reported in the Ventura *Democrat* of the 12th inst., President Cannon told the following story: "An old darkey down South, got religion in the intensest form, and in obedience to that spirit was on his way to church one evening, when in the midst of his pious meditations he espied a few fat turkeys roosting low on some limbs hard by. When he got home from "meetin" he spent a long and laborious hour supplicating the good Lord to bring him one of those fowls, but nary a bird came. He then took a new tack and prayed more fervently than ever that the blessed Lord would direct him to the roost in his dreams and enable him to secure one, and as he himself expressed it, "de very next morning dat turkey was in de cellar."

STATE SECRETARY BARBEE of the Farmers' Alliance states that from one to six Alliances are being organized in this State a day. The total number of Alliances in California now reaches a total of 524.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

AN OLD ORCHARD.—Gridley *Herald:* George and Prescott Thresher's father settled here in 1852, and here the "boys" have lived ever since their birth. The elder Thresher was only possessed of a comparatively small tract of land, but he made the location and his sons have profited thereby. Now a splendid farm of 750 acres is under their control. The home is built near the river upon high ground and is surrounded by magnificent trees, both native and foreign. One of the first orchards in the country was set out, now many years ago. Pear trees, now old, are bearing heavily, some of them from 600 to 1000 pounds to the tree, proving the adaptability of soil and climate. The Threshers have some 60 acres in fruit trees, including an olive orchard of 15 acres, three years planted. Twenty-five acres are in pears only a year or two planted. To show the quality of the land, it may be stated that the ground between the pear trees was planted to potatoes last year, turning off 2100 sacks, which shows pretty well for a half crop. Not far from the house may be found the oldest olive tree in all the country round about. It is extremely thrifty and filled with fruit. A Hermosa orange tree stands near, pretty well filled with fruit, healthy and bright, although it has had no extra attention. A small "patch" of blackberries of extremely vigorous growth serves to emphasize the fact that anything grows with great luxuriance here. Prunes, peaches, apricots, walnuts, almonds, may be seen, all adding their testimony to the same effect.

FAVORABLE FOR GOOD CROPS.—Oroville *Register:* A farmer who has been growing grain in this valley for many years says the outlook this year is for an excellent crop. The cold weather is causing the grain to stool out, and there will not be the rank growth of straw there was last season. He asserts that when the grain grows very vigorously the heads do not fill out and the yield of grain is considerably less than during seasons when the growth of straw is only medium.

Fresno.

USING GYPSUM FOR FERTILIZING.—Fresno *Californian:* Some of the colonists of Central and Washington Colonies, whose lands have become too strongly impregnated with alkali, are trying the experiment of hauling gypsum from the Coast Range, about 45 miles distant. Gypsum is found in great quantity in the coast mountains, and may be had for the mere hauling away, and being such an excellent neutralizer of the evil effects of strong alkali, and a first-class fertilizer even where no alkali exists, it is quite likely that the experiment of hauling it by teams will prove profitable to those who are able to do their own teaming. Freight rates are too high to justify bringing gypsum out on the Huron branch of the Southern Pacific.

Kern.

ROSEDALE GRAIN NOTES.—Cor. Bakersfield *Californian:* It is said that from 5000 to 6000 acres of land in this vicinity have been seeded to wheat this season, upon which the recent rain has had a most beneficial effect. The sprouts have taken a fair start, and so have wild flowers.

FIGS AND FROST.—C. Brower in Bakersfield *Echo*: I notice in your last issue the discouragement of Mr. L. S. Harmon, in the Rosedale district, over the loss of his young fig trees by frost, and his conclusion to replace them with a hardier fruit. This is a mistake, so far as his fear of the non-adaptability of the fig to the climate is concerned. It is no new thing to have young figs killed by frost in the San Joaquin valley, and still there is no place where the fig is more satisfactory in growth and fruiting. The writer has in his grounds adjoining Bakersfield a number of very large fig trees, some 15 years of age, which bear regularly immense crops of fruit, and still he found it necessary to protect them slightly for the first year or two. He has also a five-acre orchard planted on the warmer lands of Rosedale, which, like our friend Harmon's, were killed to the ground by the unexpected severity of the present winter, but he will by no means abandon them for this reason. They will spring up readily from the root and make a splendid growth next summer, and he will then take the precaution of protecting them during the following winter. This is a very simple and inexpensive matter; a mere handful of tules or flags, tied around the bodies, or on the sunny side, will carry them through safely, and the slight freezing, if any, at the tips of the limbs, will work no injury.

Los Angeles.

CROP PROSPECTS.—L. A. *Herald:* We have interviewed a number of leading farmers in order to get their views about the agricultural outlook. They all declared that the rains have come at a time when they would do the most good, and that the yield of the field and the orchard ought to be phenomenally large this season. There might, in some places, be a shortage of the acreage of grain planted, on account of the difficulty of planting dry soil early in the season; but whatever shortage there might be on that account, would be more than made up by the fullness of the crop sure to be harvested. Mr. Freeman, who is among our very largest grain farmers, says that the Sausal Redondo and the Centinela ranches will have nearly the usual number of acres planted, while there will be a considerable acreage of volunteer grain that can be depended upon for half a crop.

Napa.

VITICULTURAL NOTES.—St. Helena *Star:* Storehouse-keeper E. S. Gridley, who has been in charge of the St. Helena bonded warehouse during the past month, has kindly furnished us with the following recapitulation of business transacted there: Brandy on hand January 1st, 72,296 gallons; received from other distilleries, 5,149; withdrawn, tax paid, 2,078; loss allowed on tax-paid brandy, 191; transferred to other warehouses, 3,131; balance on hand, 62,045. We are credibly informed that J. H. Wheeler has just sold nearly 9000 gallons of the brandy, from the San Francisco bonded warehouse, half in barrels and the remainder in half-barrels, to a New York firm for 52½ cents per gallon. This is certainly encouraging news and should be an incentive to our wine men to hold on to their wine and brandy for the good prices which are inevitable. The San Francisco papers report that 92,500 gallons of brandy left that city Saturday for Hamburg, Germany. Our brandies are fast coming into great demand in foreign countries.

Orange.

INVESTIGATING FRUIT PESTS.—Santa Ana *Blade:* Newton B. Pierce, Special Agent U. S. Department of Agriculture, says investigations of the grape disease show that cuttings made from diseased trees show disease in proportion to the amount contained in the parent stock. As a consequence, the healthy parent vine will give a better cutting, and proportionate success to a new vineyard will result. Great pains should be taken in procuring cuttings in a region where the disease does not already exist. In many instances, viticulturists gather cuttings from different localities, and due care should always be taken to the health of the vines from which the cuttings are taken. This object is not always kept in view, and with bad results. The professor is engaged in a study of the fig disease. The fruit is found to ferment both on the tree and on the drying board. Especially is this found to be the case when the soil is damp and wet, and where the trees have received too much irrigation. The direct cause of this fermentation is found to be yeast contained in the fig, and the indirect cause is ascribed to moisture, which affects the sugar of the fruit and produces fermentation. The professor displayed cuts of figs on the branch and on the drying board, in which is displayed the different stages of fermentation produced by incubation of yeast, and the study of the process is a most interesting one. All these experiments are being constantly carried on by Professor Pierce, and the results cannot help but be of the utmost use to the Department, and a great aid to the future extermination of diseases that have been detrimental to the successful cultivation of the grape and other fruits in this country.

Sacramento.

SUGGESTING DATES FOR MAIN RACING CIRCUIT.—Sacramento *Bee:* At the meeting of the directors of the State Board of Agriculture, it being developed that individual members of the board having been spoken to by the directors of the various Agricultural District Associations in the main racing circuit, on the subject of suggesting a schedule whereby such associations that have pavilion displays could be accommodated by dates which would enable them to encourage exhibits in this department, it was ordered, on motion of Director LaRue, that the State Board—merely as a suggestion—present the following schedule of dates: San Jose, August 1st to 6th; Oakland, August 8th to 13th; Napa, August 15th to 20th; Petaluma, August 29th to September 3rd; State Fair, September 5th to 17th; Stockton, September 19th to 24th; Fresno, September 26th to October 1st.

FRUIT PESTS DECREASING.—Sacramento *News:* State Inspector Alexander Craw of San Francisco came down from Marysville and spent the last three days in visiting various nursery firms and inspecting their stock. Mr. Craw reports a great improvement in the condition of fruit trees in this locality, and expressed the opinion that it would only be a matter of a short time when insect pests would be driven from the orchards of the Sacramento valley. Several large orchards were visited on the river. Among them were a number of pear orchards which a few years ago did not produce enough salable fruit to pay expenses, but with the introduction of improved spraying solutions the trees have been cleansed of vermin, and last year yielded enormous crops. Mr. Craw found the trees perfectly clean and bright and in a vigorous condition. The new growth, heretofore very small, was in some instances sufficient to give the tree an entire new top. He gives it as his opinion that the orchards on the river never were in better condition to insure a large crop of fine fruit than now. A marked prosperity among the fruit growers was also noticeable over that of a few years ago. The same favorable condition of affairs was found about Marysville and other northern points visited.

San Bernardino.

BEET-PLANTING.—Chino *Champion:* The weather is now first class, and the soil could not be in better condition for farm work. In fact, the prospects for the farmers never looked brighter than they do now. Four beet seeders have been kept busy this week, and there are now about 300 acres planted to beets. Planting will now go steadily on at the rate of at least 300 acres per week until the entire 4000 acres are planted. Mr. Gird's steam plow is at work, plowing about 35 acres every day, besides a number of teams and gang plows, which are plowing about an equal amount. It is one of the most animated scenes one can look upon on a ranch nowadays, to see the numerous teams on gang plows, the steam plow turning up the soil and a number of beet seeders placing the seed in the ground at the rate of about 50 acres per day. By daylight every morning the ranch hands are astir, and soon the heavy draft teams are at work on the plows and seeders. These farming operations are much more extensive than those on any other single ranch in California where intense cultivation is employed. The first planting of a few acres is now well up and about ready for thinning. As soon as this work commences in earnest, Chino will again be the liveliest place in Southern California, and so continue throughout the season.

San Diego.

SILK CULTURE.—*San Diegan:* In a circular issued by the Ladies' Silk Culture Society of San Diego county, the following statement is made: "A mulberry orchard of one acre may contain 1210 trees. The second and third years they will support some worms, and the fourth year one acre, well cared for, will support the worms hatched from six and one-half ounces of eggs (40,000 to the ounce), and yield a net profit of $226.25 if the cocoons are sold. If they are converted into silk the acre will net $357.50, allowing $1.50 per day to each laborer except the reeler. In this State the regular wages paid for reeling is $40 per month. An expert can reel one pound of 16 ounces per day. The mulberry tree should be pruned low every year after the warm season is over, i. e., in June. They are a clean, long-lived, healthy tree. The roots strike deep into the ground. They bear two crops of leaves yearly. There are many varieties. The Morus Multicaulis is the best for early feeding, as it comes out first in the spring. The Morus Alba furnishes the best silk. The Morus Tartarica (or White Russian) furnishes a strong silk. All kinds of mulberry grow rapidly here, either as orchard or forest trees. The orchard is best for silk culture, requiring less labor in securing the leaves, and yielding more to the acre. They do not require as much irrigation as most other trees."

Solano.

RECLAIMED LAND.—Rio Vista Cor. Dixon *Tribune:* A number of prominent farmers from this and other counties have recently inspected the new reclamation district and they are unanimous in the belief that when the directors have accomplished what they have set out to do, they will have a veritable Eden within their levee walls. The land cannot be excelled for productiveness in the world, and it is only necessary to keep it clear from water. The reclamation operations will cost a vast sum, but the farmers will be able to recoup themselves in two seasons' crops.

CROP PROSPECTS.—*Tribune:* There is some complaint among the farmers on account of the light rains, but the general impression seems to be that the rainfall will be ample to insure a crop. The grain is looking well and with the usual spring showers there need be no cause for apprehension. The tule farmers, as well as those living on the higher lands, have sown a larger area than usual this year. If even a fair crop is obtained there will be a larger quantity of grain in the country than in ordinary years. Taken as a whole, the farmers of northern Solano have not as yet any cause for complaint.

Sutter.

ORCHARD NOTES.—Yuba City *Farmer:* The season is opening for grafting and from indications there will be considerable work of that kind done this season. New varieties of fruit coming in and creating a preference in the market for the same, the fruit growers find it more profitable to cut down large trees of varieties not exactly suited for large profit, and graft on the new varieties. In the line of peaches the grafting this season will run mostly to the Orange, Phillips and Runyon Clings. There will be a large amount of grafting done in some of the large vineyards where wine and table grapes will be cut back and the seedless raisin varieties grafted. The demand for spraying material is great this year as every orchardist is alive to his own interests and understands that he must take action to destroy the injurious pests that are attacking the fruit trees. The thorough work done in this line last season has about eradicated the scale from many of the larger orchards, and although only a few trees are found infested in many orchards all the trees are thoroughly sprayed to leave no room for a doubt as to their healthy condition. The orchards in this vicinity certainly show the benefiting effects of the spraying. Our enterprising nurseryman, Jas. T. Bogue, who is alive to the present situation regarding the necessity of eradicating injurious pests and insects detrimental to the fruit interests, on last Tuesday burned the entire lot of Simon plum trees recently quarantined by the County Horticultural Commissioners as being infested by the Eastern peach root borer. There were 1900 trees in the consignment. Mr. Bogue is to be commended for his prompt action.

Sonoma.

DRIED FRUIT FOR LONDON.—Sebastopol *Times:* As representative of Sonoma county at the citrus fair held recently at Auburn, Placer county, Mrs. F. Purrington gave 250 pounds of dried fruit to be sent by the board of trade to London, England, as samples, with a view to opening a market there for California dried fruits. Mrs. Purrington visited this place Friday in that interest. Messrs. G. W. Huntly, C. Wightman and others responded liberally, and it is to be hoped that more than the promised amount will be donated.

Tulare.

FARMING ON A LARGE SCALE.—Visalia *Times:* J. J. Cairns of Lindsay is planting 18,000 acres to wheat this season. In order to give our readers some idea as to the size of this ranch, we will say that it only lacks 1306 acres of being as much land as was cultivated to wheat in 1887 in the States of Nevada, New Hampshire, Massachusetts and Connecticut. The following information was given by Mr. Cairns, and will prove interesting: When the first rain fell about the 18th of December Mr. Cairns had 4000 acres of grain sown. Since that time he had plowed and planted up to February 5th about 12,000 acres. He is working 65 men and 320 head of mules and horses. By the latter part of this week he will finish sowing, as he plows about 300 acres a day. The men are boarded and lodged at three camps located conveniently to the land that is being plowed. At one of these camps he has a canvas barn in which he keeps 150 head of horses. It requires the services of a bookkeeper to look after the accounts, while three blacksmiths are kept busy during the planting and harvesting season. Mr. Cairns does not summer fallow any of his land, planting it all every winter. Harvesting usually begins about the 15th of June, but some seasons it is commenced as early as the 25th of May. Mr. Cairns will gather the grain from his 18,000 acres this year with two steam harvesters, which make a cut of 26 feet each, and a horse power harvester, which cuts 16 feet. In addition to these he has 15 header wagons. It takes about the same number of men and horses to harvest the crop that it does to put it in. In 1890 Mr. Cairns was five months and 15 days harvesting 18,000 acres. Mr. Cairns says: "The farmers are putting their land in better condition this year than I have ever seen them do before, and the season so far has been better and the outlook to-day is more flattering for a good crop than I have ever seen since I have lived in Tulare county." Mr. Cairns is keeping a close account of the cost of planting his crop, and will also know exactly what it costs to harvest it.

FARM AND ORCHARD NOTES AT EUREKA.—Cor. Hanford *Sentinel:* The Solano Fruit Farm is looking well under the new management. Messrs. Dunlap and Porter are making every stroke count one, and the ranch looks as if the managers understood their biz. J. G. Mackey is through sowing grain, and has men and teams now on the roads. He will have them all in good order before he leaves them. George Tomer is in the vineyard business this year. He has Mr. Jacob's vineyard on the Wilson ranch partly pruned and plowed, and is this week on a vineyard near Lemoore.

Yolo.

A NEW DAIRY.—*Democrat:* C. P. Balzari, who recently disposed of his dairy to Johnson Bros., will again engage in business. This time he will devote his attention to butter-making, and will start a dairy on his farm in Willow Oak Park. He has already erected a large brick milkhouse, and will purchase the latest improved devices for manufacturing butter out of pure, rich cream. The dairy will be one of the finest in the State.

RAIN NOTES.—Woodland *Democrat:* Farmers in the southern portion of the county inform us that they have not yet received sufficient rainfall to make the land plow well, while those in the northern part say that they have had all they want for the present.

CROP PROSPECTS.—*Democrat:* Many men who have studied the situation say that Yolo will have an average crop, no matter whether the season be a dry or a wet one. If it is a dry season, the tule farmers—and there are many of them—will have a big harvest. If the usual amount of rain falls, the farmers on the highlands will have abundant crops. It is possible to have a heavy rainfall without drowning out the tule farmers, if the precipitation is properly distributed throughout the remainder of the season. In that event, both the highland and the tule farmers will strike it rich.

HIGH FREIGHTS AGAINST THE RAISIN INDUSTRY.—Woodland *Democrat:* Mrs. G. G. Briggs, who owns the largest raisin vineyards in Yolo and Solano counties, has just returned from Fresno county, and is not in a hopeful frame of mind over the outlook for the raisin industry. High freights and low prices have made the season very unprofitable. During her visit in Fresno county, she met many people engaged in the industry who are much discouraged on account of the prospects. One man told her he would have to give up his vineyard if low prices prevailed for another season, and she thinks many vineyardists are threatened with the same danger.

Yuba.

SEVENTEENTH DISTRICT AGRICULTURAL FAIR.—Marysville *Democrat:* The Seventeenth District Fair will begin on Tuesday, August 30th, continuing five days, and will not conflict with any of the other fairs, the dates for holding which have been agreed upon. The State Fair will open on Monday, Sept. 5th, the week following our local fair. It is understood that the Willows, Red Bluff, Chico, Marysville and Nevada associations will advertise their fairs and premiums together. By such an arrangement, the advertising will be more general than usual.

THIRTEENTH DISTRICT FAIR.—Marysville *Appeal:* The week preceding the State Fair has been selected as the time for holding the next District Fair in Marysville. At a meeting of the directors, general plans were formed that should promise as a result one of the most successful fairs that the district has ever known. W. T. Ellis Jr. was elected President of the Association; A. D. Cutts, Treasurer, and G. R. Eckart, Secretary. The election of a Vice-President was passed for the present, and the meeting adjourned to the call of the chair.

THE TREE BUSINESS.—Marysville *Democrat:* The demand for nursery stock in this vicinity has never been as great as at the present time, and every purchaser wants a guarantee from the dealer that the trees bought are entirely free from insects or diseases that are injurious. This is correct, and in accordance with the sentiment which prevailed at the late meeting of the horticulturists in this city, as voiced by resolutions, and which instigated the bill of Representative Caminetti, mentioned in another part of this paper.

THE HOME CIRCLE.

Secret Thoughts.

I hold it true that thoughts are things
Endowed with bodies, breath and wings,
And that we send them forth to fill
The world with good results—or ill.

That which we call our secret thoughts,
Speeds to the earth's remotest spot,
And leaves its blessings or its woes
Like tracks behind it as it goes.

It is God's law. Remember it
In your still chamber as you sit
With thoughts you would not dare have known,
And yet make comrades when alone.

These thoughts have life, and they will fly
And leave their impress by and by,
Like some marsh breeze, whose poisoned breath
Wafts into homes the seeds of death.

And after you have quite forgot
Or all outgrown some vanished thought,
Back to your mind to make its home,
A dove or raven, it will come.

Then let your secret thoughts be fair,
They have a vital part and share
In shaping worlds and moulding fate—
God's system is so intricate.

—ELLA WHEELER WILCOX.

The Horrors That Beset Our Pathway.

[Written for the RURAL PRESS by ISABEL DARLING.]

There now, look at it! Does not the very sight of such a many-jointed, double-geared name prove the existence of what it refers to? Let us see how it applies to everyday life.

It is Saturday morning, and you have a small world full of big and little things to do. Your John comes rushing into the kitchen door, calling for his other hat, his rubber coat and umbrella, turning every other half minute to shout "whoa!" to the uneasy horse and at the same time asking you what you want to send for. You breathlessly answer, sugar, and dart away for the required articles. Perhaps he is one of those strange beings who likes brown sugar better than white; perhaps he has been turned against the latter by unpleasant accounts of the cleansing or bleaching process; perhaps he is only careless or hurried like yourself; whichever it is makes little difference if he brings the brown when you wanted white.

While you took your after-dinner rest you picked up a paper and read this:

Thousands of disgusting little insects creep over one another in almost every pound of the low grade sugars. Samples taken at random from stores by a curious analyst of this city have shown that some qualities contain as many as 250,000 of these repulsive-looking little creatures. They are plainly visible under a microscope, and in some cases under an ordinary magnifying glass, and even to the naked eye. In the human stomach they are said to be capable of doing great damage.

Of course you are so glad he bought brown sugar!

In desperation you reach for a glass of water to wash the very impression of the hideous things out of your throat. Just then one of the children begins to read aloud:

What sensible man or woman who ever held a glass of water up to the light, felt that it was pure? Even a near-sighted person can see that it is full of vegetable and animal matter. In this city, where water is allowed to accumulate in tanks on the top of the roofs, naturally the bottom of the tank becomes covered with black mud. In the country, wells are simply drainings from the surface water outhouses, often from barns and stables. Is it any wonder it is impure? Is it any wonder people get sick from drinking it? Some people boil the water, and while this may kill the live germs, it does not remove them nor remove the vegetable matter which may be in the water, and which is often poisonous.

To be sure the following sentence begins: "The safest way for any one to do is to mix a little pure whiskey with the water—." You are a Teetotaler and unalterably opposed to that, but the sight of water just then sickens you.

The toddling two-year old is digging furiously at his ear and you ask him what is the matter. He says it itches, and you examine.

"Why your ear itches, I've found it!" shouts another of the children. "Persons having itching ears will learn with surprise of the development of a-n-i-m-a-l-c-u-l' a and e together—now what's that?"

"Bugs," you answer shortly, and he goes on, stumbling badly on the long words—"of a hitherto unknown species resembling in form the genus *culex*, but so exceedingly diminutive in size as to require the most powerful lens to bring them to a definition, the common microscope showing them also a moving mass without form. Prof. Wilborstadt, of the Berlin university, takes the ground that they are a possible development of a migratory species, having an origin in the vibratory chambers of the ear, and developed by the mixed use of the trumpet in the telephone; as examinations show the disease to be located, almost universally, in the left ear."

"Yes, we know all about it now," you exclaim. "It is more likely to be a flea in the old German's ear, the ear that is listening toward France," then you shake some loose sand out of that child's hearing organ.

"Mamma," whines another, "I don't want to make clay things in the kindergarten any more."

"Why not?" you ask in astonishment.

"'Fraid I catch something," and she holds out a marked paper some one has given her. You read:

It is claimed that the same clay is handled by all the pupils, and that any skin disease troubling a pupil may thus be communicated to others.

"Nonsense!" you exclaim, and of course it is nonsense. Those who know enough to teach in these schools also know enough to be careful in regard to sanitary conditions. Besides, among Indians, wet clay is the universal remedy for skin diseases.

John wants his dinner and tells you he has just laid a nice ham in the storeroom. Generally this would have no particular effect on you, but this forenoon when you unfolded the cloth for your new wrapper and pinned the old newspaper pattern to it, glaring, staring, intensely black headlines to an article attracted your attention and you leaned on one elbow to read about the "Harvest of Death," and how "The Trichina gets in its Deadly Work," and that there are "Two dead and four more just breathing their last in one house;" and—you don't feel hungry for ham.

Another benefactor of the human race has told you, in a mournful column of despair, that bacteria which produce epidemic diseases are floating in the air, and that when you breathe you appropriate millions of them, as the night hawk scoops in stray flies. This was just when you had half concluded to try the new-old cure called *Haemospasia*, for you do sometimes feel "powerful weak" in hot weather. Of course you know exactly what *Haemospasia* is. Of course, when you went to the Corn Flower Academy, you studied all the languages that were going, and some that had stopped, and you know perfectly well that the beautiful word means *air*, fresh air, outdoor air, brought indoor and compressed, not, you think, in a cider or cheese press, but somehow. Now, you conclude that if common air is so dangerous, that almost solidified preparation must be surely and suddenly fatal, and you know John couldn't spare you until after the planting is done, may be not till after harvest. After that you try harder than ever to coax the baby to keep his mouth shut, for if he breathes through both nose and mouth he will take more of that horrible air and, perhaps, get the diphtheria or something.

John brought home a new almanac, and while the dinner is cooking you open it. There is another dreadful thing.

"The nearer people live to each other the shorter their lives are." Well, where can we go?

"Oh, mamma," shouts the restless, observing boy, "the yeast is boiling over!"

How thankful you are as you set the jar into a pan that the action of yeast is said to be vegetable, not animal, and you almost wish scholars wouldn't try to learn so much, if the rest of the world must be made so uncomfortable; for, as they represent it, earth, water and air are filled with voracious, destructive, living creatures, that wiggle, creep, swim and fly wherever the human race presumes to try the dangerous experiment of existence, as well as wherever it does not. In the way of every contemplated movement for pleasure or benefit you find this bug-a-boo.

I once knew a man who indulged excessively in alcoholic beverages. Am I sufficiently considerate of his pride? (You know "Billy never forgot that he was a gentleman.") He has spent some time at the Napa Asylum, but for a long while before he went, he was continually bug-hunting. The snakes seemed to make him no trouble, but bugs swarmed everywhere, and the diligence required to keep from being eaten up by them left him no time to work at his trade. It would be a pity if all the world should become possessed of the same delusion.

Suppose there is minute life in every place. As the Dutchman said, when reminded of the tremendousness of Niagara Falls, "Vell, vat of it?" If it was not so, would there not be a waste of space? If all life germs were extracted from water, earth and air, would they sustain larger and coarser life? Is it any worse to swallow creatures too small to be seen than to close the lips behind sardines, shrimps and oysters, without regard to contents? or even than to devour hogs, sheep, cattle, horses, dogs, frogs and lizards? All these are eaten by human beings, who not only live but remain well, yet at other times have suffered severely after taking the same sort of food; which shows that harm done does not depend altogether on injurious qualities in articles of diet, but is produced partly by the condition of the partaker. The offense is in the receiver as well as in the giver. As strychnine may be needed for a remedy in certain states or stages of physical disease, yet be very harmful at others, so may the effects of food and drink, even breath, be various according to the chemical reception that it receives. Why does your doctor send you to the seaside at one time, and to the mountains at another, unless he thinks that an excess of one element or a deficiency of another requires a counteracting or supplying influence, and why is any potion likely to fail when the mind is possessed by fear? The records of all epidemics show this to be true, but give little explanation of the fact.

We know that digestion and assimilation are chemical processes that create and allow motion of various kinds and degrees in muscle, nerve and brain; we also know that strong emotions, not excepting fear, may interfere with digestion and assimilation so that the secretions of the body are greatly changed; just how, is hard to understand. If, as they tell us, too great an amount of any chemical in the system causes languor, depression, obstruction, disease in the weaker parts, it seems reasonable to believe that its opposite, sent into the circulation, would produce new action at the place of meeting; that action, heat, and that heat, electricity, the food supply, the needed stimulant for the nerves and brain, and that with this increase of force would come the power to remove obstructions and prevent or check disease.

Reasoning on the back track, we would say that languor and depression, like the sluggishness of a poor drain, allow injurious accumulations that give destructive life-germs time to develop.

Then, keep the drains open, all the circulations active, including the spiritual, which knows, feels that

> "All are but parts of one stupendous whole,
> Whose body Nature is and God the soul,"

And you may almost bid defiance to these numerous horrors; else what meant the promise: "And if they drink any deadly thing it shall not hurt them?" We read: "The slothful man saith, 'There is a lion in the way,'" and to that might be added: "The fearful man saith, 'There is a bug in the road."

Company Table Manners.

There seems to be an idea among many people that there must be a different set of manners for company from what is observed in everyday life. While it is the proper thing to have for an invited company a more elaborate dinner and a little more ceremony in the service than for the family table, it must be remembered that one should not put on and take off good manners as one would a garment. They are a part of one's self, and whether the family meal consist of many courses, or only a cup of tea and a slice of toast, it should always be served decently and in order, and the manners of the members of the household should be such that one need not blush for them, even in the finest company. As soon as a child is old enough to come to the table he should be taught by precept and example what good table manners are. If the father and mother be so unfortunate as not to have had proper training themselves, they should study to correct any bad habits they may have, for the sake of their children. Let it be understood that good manners are not the acquiring of every new wrinkle that fashionable society may prescribe. There is a great difference between good manners and good form. What is good form to-day may be very bad form to-morrow, but good manners are not changeable. Unselfishness, kindly feelings and politeness are the foundation of good manners.

Good table manners demand that one shall take soup from the side of a spoon; shall eat with a fork, rather than a knife; shall take small mouthfuls of food and masticate quietly, making no unpleasent sound; shall take in the fingers no food except fruit, confectionary, olives, bread, cake, celery, etc., and that the members of the family shall be as polite to each other as to any guest. Where people rush through their meals there is not much chance for table maners or good digestion. If properly managed, the table can be made one of the most refining influences of the home.—Ladies Home Journal.

W. P. A.

At the social meeting of the Women's Press Association, Monday, Jan. 25th, Mrs. Lemmon, the wife of Prof. Lemmon, whose researches in the botanical world have been of such great value to the science, was to read a paper on "Trained Nurses." The attendance was so small that it was decided to renew the subject at the next social meeting.

Mrs. Sarah B. Cooper, Vice-President of the W. P. A., has been dangerously ill, but was able to be present at the last business meeting, Feb. 8th.

Mrs. E. T. Y. Parkhurst, the efficient Corresponding Secretary, is ill.

The Pacific Coast Women's Press Association has been admitted to the Woman's National Press Association.

The P. C. W. P. A. was recently elected a member of the International League of Press Clubs.

Miss Minna V. Lewis has been made Associate Editor of the N. Y. *Business Women's Journal*.

Mrs. Frances M. Blades, formerly of the San Diego *Union*, has bought the plant of the *Great Southwest*, the official organ of the San Diego Chamber of Commerce.

From the length and breadth of the Pacific Coast comes encouraging news of the work of our members.

The new Constitution and By-laws have been printed in a very attractive form, and the neat little book contains also the names and addresses of all the members, together with the work they are legitimately engaged in.

The *California Illustrated Magazine* has in press an exhaustive article on the practical work of the W. P. A. for the past year, and upon the possibilities and scope of similar organizations.

Mrs. Mary Lynde Hoffman's monograph on "County Roads and City Streets," which was published in the RURAL PRESS, has been translated into Norwegian by Emmeline M. North, and is being printed in Norway for distribution among Norway editors and officials. It is hoped that an interest will be awakened toward the improvement of roads in that country. They are at present most primitive and ill-kept.

Spice of Life.

—"What makes you think that Stillwater is such a clever fellow? I never heard him say anything more than 'yes' or 'no.'" "That's what convinces me that he is clever."—Boston Post.

—Bingo—"Wasn't the servant girl unusually pleasant this morning?" Mrs. Bingo—"Yes. Her beau called last night." Bingo—"See if you can't get him to come here and live."—Life.

—Mrs. Musicmad: "Doctor, why is it that all the great pianists have such long, bushy hair?" Professor Savage (reflectively)—"I presume it is to keep off the flies while they are performing."—Puck.

—Nothing exasperates a woman, who has been shading her eyes from the gas light with her hand all evening, so much as to find that, after all, she had left her best diamond ring on the washstand.—Siftings.

—Mr. Briggs—"I always have a morning walk. I'm out of bed every morning at five, you know." Mrs. Trotfast—"How long have you been doing that?" Mr. Briggs: "Oh—eh—um—ever since the baby came."—Pick-Me Up.

—Courtier (Cannibal Islands)—"Here comes some more missionaries." King—(espying a detachment of the Salvation Army, with tambourines)—"At last these foreign nations are getting sense. With this lot they have sent along some plates."—Good News.

—Worried mother (in railroad train): I hope my baby's crying doesn't disturb you. I can't stop it. Old bachelor (genially): I'm all right, madam. Don't worry about me. I'm afraid, though, the noise is a sort of a wet blanket on those young people yonder. Worried mother: Dear me! Why? Old bachelor: They're on their wedding tour.

Young Folks' Column.

In a Mining Town.

[Written for the Rural Press by Mary E. Bamford.]

It seemed to Marianne that she had always known Hazel. Probably, though, the two children became acquainted with each other in flood time. Hazel's cousins, Jennie and Eliza, lived next to Marianne. Perhaps that was the reason why the children all went to Hazel's when the creek acted so. The creek ran through the middle of a small mining town among the foothills of the Sierra Nevada. Nobody cared much about the little thread of a creek in the summer, but in the winter or spring everybody had to care, for then came a flood. One flood time, Marianne's family moved by boat toward the hills out of danger, and then Marianne and Cornelia and Jennie and Eliza and Hazel lived in the same house till, after some weeks, the flood subsided.

Hazel was twelve years old—a pale, thin, sweet-tempered girl. She came down to the brick house occasionally after Marianne, and Cornelia went back there; and when Marianne's folks moved into the other brick house across the creek, the house that had the levee all around it to keep it from floods, Hazel came there, too, sometimes.

What things the children told each other as they played! How, if you lie down on the ground and put a straw hat over your face, and look at the sun, you can see little rainbows in the bits of cracks of the hat; that when folks go out in the rain without any umbrella, it is because they want to grow; that when people stand up in meeting in singing-time, and swing back and forth, it is because they want to encourage the singers.

But Marianne, who was deeply impressed by Hazel's goodness, concealed many things. She never would have told Hazel about the times of wrong-doing—the time Marianne stole some gooseberries from a neighbor's bushes; or the time she ate a green apple and threw the core under the bales of hay in the barn so that her mother might not know; or the time Marianne ran the feed-cutting machine in the barn after her mother had told her never to touch it for fear she should cut off her fingers.

Sometimes the children went by the camps of the Chinese miners on the hill just outside the town. The Chinese miners wore large hats, fringed around the brim with pendulous beads. Marianne and Cornelia had each a hat of this kind once. The Chinese campers used to have a peculiarly good kind of brown sugar candy that the children liked very much. There was a little of this Chinese sugar at Jennie's once on the mantle. Marianne saw the sugar when they were all there playing

"Chickany, chickany, McCraney crow,
Went down to the well to wash my big toe,
And when I got back, my chicken was gone."

Marianne wanted some of the sugar, but there was only one piece of it on the mantle, and she did not like to ask. She hoped Jennie would offer it to her, but she did not.

Hazel grew thinner and weaker, and coughed more and more as the long, hot summer days made the little town seem like an enlarged oven. She did not walk with the other children any more. She could not come down to Marianne's, and Marianne missed her very much, although Hazel was four years older.

To be sure, there was little Cornelia for company, and there were certainly a great many things to be done. There were great plum trees to visit. Marianne was wont to eat the plums, even before they were ripe, with the aid of lumps of white sugar.

And, in time, there were red manzanita berries to be had from the bushes over beyond the house where the woman lived who had no teeth, and who had the shocking habit of letting her little boy and girl chew apples for her before she ate them.

Marianne and Cornelia went on long rides with their father and mother, too, and once when the summer grass and the wild oats were brown and dry, the two girls saw a horned toad by the side of a road. Marianne wrote about it in the inky journal that she kept in an old red desk in the back room beyond the pile of bags of flour, where the swing was that Marianne sometimes swung in when she tried to learn the multiplication table. The table was very hard for the eight years old.

There were certainly a great many things to be done. Marianne and Cornelia had a little brick store of two minute rooms at the foot of the big peach tree at the corner of the piazza. The boy across the street built the store. The little front room was devoted to the sale of pepper grass and yellow mustard heads and the midribs of dock leaves and little "cheeses" from the low malva and juicy lengths of grape stems and pieces of fennel and whatever other vegetable remnants children are wont to find edible. The little back room was the treasury where the money used in trade was kept. The "money" consisted of peach stones which were brought from the orchard in candle-boxes drawn by strings.

Yes, there was plenty to be done, but Marianne missed Hazel. The two had not seen one another for quite a while. One day, at last, Marianne's mother said they would go together to Hazel's.

Marianne and her mother went up the road through the heart of the little town till they came to the building where the doctor had his office. Marianne knew that there was a bony skeleton hanging behind his office door. She and Cornelia were always proud to think that the skeleton did not frighten them. They dared to go up and touch the bones of the fingers. Other little girls were afraid of the skeleton, but other little girls did not have a doctor for a father.

Next, Marianne and her mother had to cross what was the terror of the way to the little girl, the new suspension bridge. It had been built across the creek after the last flood. Marianne was glad that her mother was with her, and held tightly to a corner of her mother's shawl till firm land was reached once more.

Next, the travelers went by the brick house where the girl lived who wore curls and was very "stuck up" and thought she knew how to play the piano. The airs of this girl were a trial to Marianne's plain little soul.

And then the two passed the house where the kitten was that Marianne had given away to save from drowning. The road now led northerly toward the hills. There were open fields beside the road, with here and there a house. Soon, Marianne and her mother passed the place where the boy lived who had once told Marianne that he would cut her ears off if she did not go home. Marianne had been horribly frightened by the threat, and had rushed down the road crying till she met her father, the doctor. To him she explained the cause of her terror, and the doctor declared that if Marianne's ears should disappear in any such fashion, he would see to it that the boy's ears were also cut off. This promise was a source of doubtful comfort to Marianne, who looked askance at the brick house now as she went by, fearing lest she should see that boy.

And then, away beyond, the next house, where the hills began to rise, was Hazel's. Out beside the house were the tea roses. There never were such tea roses anywhere as those that bloomed out toward the bee hives. So large, so full of sweet odor, were the roses that Marianne had often buried her face in them with delight! Marianne followed her mother inside the house, and there Jennie's mother showed them into the room where the sick girl was.

Hazel lay very still, with her eyes shut. She was so thin, and she coughed a little! She was propped up on pillows in the bed, and she barely lifted her eyelids to look at the visitors. She smiled faintly at Marianne, and then shut her eyes again.

Hazel's mother sat one side the bed, gently fanning the sick girl. Hazel's big sister was there, too, and her father and her aunt who lived over beyond the Chinese camp.

Marianne tiptoed to the foot of the bed and looked at Hazel. Everybody was very quiet. Soon, the visitors went out of the room.

Marianne peeped back at Hazel, but she lay there with her eyes shut still. Jennie's mother had come out with them. What made her cry? Marianne did not like to stay with people who cried. She left them, and ran out to smell the big tea roses and to stand and watch the bees coming and going. Marianne did not dare go too near for fear she should be stung. One of the bees did sting Hazel once. Which bee was it?

"Marianne," called her mother softly from the front of the house.

The child ran. Her mother and Jennie's mother were saying in low tones something about "consumption" and "night sweats." Marianne did not know what they meant.

"Good-bye," said the aunt.

"Good-bye," answered Marianne and her mother.

The two walked down the road. The mother looked at the little girl. It was so plain that she did not understand what was coming. How should she be told? But Marianne climbed the fence for some wild flowers.

That night, some time, Hazel died. Marianne's father told his wife the next morning, and then, as gently as they might, they told Marianne.

The child comprehended at last. She had never before known any one who died. She had never seen a dead person.

She looked at her mother, and then turned and ran away out of the house, up the steps of the levee, along on top of it till she came to a patch of mustard that grew high above her head. She flung herself down in the midst of the green and yellow growth and sobbed great sobs that came from her breaking child heart.

Hazel was dead. dead, and gone to heaven, and nobody would ever see her again! Nobody could ever tell her about anything! She would never talk or play with any one again, never, never, never! Oh, what made people die? What was dying? What did folks want to do it for? Marianne lay there sobbing till she could cry no more. The yellow mustard heads waved above her, and the locust trees by the levee shook a little in the breeze. She could hear the old flour mill going, by the creek. Hazel and she used to go over there, and the miller would weigh them sometimes. Marianne could hear Mrs. Jackson's voice across the street. Mrs. Jackson always gave the two girls cookies and bread with fresh butter on it. Marianne remembered that once when they were coming home, she had thrown a piece of Mrs. Jackson's bread into the irrigation ditch because there was so much butter on the gift. Hazel saw Marianne do it, but Hazel promised not to tell. Mrs. Jackson was a very generous woman. She was apt to put too much butter on bread. And oh, Hazel would never go to Mrs. Jackson's again! Hazel would never go anywhere again!

The next day but one was the funeral. The people brought Hazel in a coffin to the small, white church on one of the hills, the church of which Hazel had been a member for about two years.

Marianne went down front and sat there with Jennie. Jennie was crying, too, and Eliza cried.

"O dear! O dear!" sobbed Marianne to Jennie, softly, "what did make Hazel die? What *did* make her?"

But Jennie only sobbed on.

They had put Hazel's coffin before the pulpit, and the minister talked and folks sang. Out of the open window Marianne could see the pine trees near the church. Hazel and her father used to go with Marianne sometimes to get the little, sweet-tasting, brown and yellow pine nuts from the burrs of those pines. Marianne cried when she thought of it.

When everybody went to look at Hazel, Marianne looked too. Hazel's hair was just as pretty as it always was, and she had on a nice white dress, and Marianne could not possibly see how Hazel could be dead. She looked as she did that day when they played with the little plaster of Paris lambs together—the lambs that Marianne's mother made and baked on a tin in the oven.

Everybody rose. Some folks took Hazel in her coffin and went across the road. Everybody followed into the little cemetery that was just beside the mining flume. Outside of the graveyard fence, the hills were dotted with the heaps of red earth that had been thrown up by the spades of miners years before. Time did not seem to much the color of the red earth, neither did the grass car cover the relics of former labors, so there the red mou remained like so many more graves outside the cemetery, like graves of persons thought unworthy of burial in consecrated ground.

Marianne and Jennie and Eliza all watched while the men put Hazel into the ground. Oh, it seemed dreadful to bury her so! The men piled the red earth on top of her Marianne would never forget it. She had caught her first glimpse of the great mystery of death. Heaven held Marianne's first saint.

Somebody's Darling.

He was quite friendless—a mere stranger in whom no one was interested. When they found him in the wreck of the car, with the life quite crushed out of him, why, if he had been one of their own townspeople, they would have mourned over him, for realities were more to them than mere abstractions; but he was only a stranger, and after looking in solemn-faced silence upon the dead face, they went on their way and scarcely thought of him again. A mere stranger—a tramp, probably, for the body had been drawn out from the wreck of a freight car, and he must have been stealing a ride when the accident happened. But it was a young face, with a look upon it, cold and still as it was, that "told of a spirit that would not die!" In what far home did they wait for his coming? Where was the hand that had clasped his own when he was a babe, teaching it to take his first tottering steps? From what home corner did he go out on the road that ended here?

But some one, searching his pockets, has found a letter, only a few days old, and as they crowd around, the finder reads it aloud in a voice that falters as he reads: "My own brave boy," it says—oh, poor little mother! If she could have known that letter would lie next his heart when it was stilled! "My own brave boy, how my heart bleeds for you, away among strangers, without money, and trying so hard to get a foothold and obtain work. It seems very hard that such burdens should have fallen on you while you are so young. And so you have set your heart on having a little home for your sister and mother in that far land! Oh, if that could once be realized, what a home that would be! If it were only one little room, and I could have both my children with me, I would be the proudest and happiest woman in all the world. But I try not to be impatient, my dear. 'They also serve who only stand and wait,' and I am waiting for God's own time. But remember, my boy, wherever you may be, that every evening when you see the sun fade from sight behind the western hills, your mother is on her knees in your old room, praying God's blessing on her wandering boy."

The reader ceased. Some one, turning to look at the western sky, saw the sun dropping out of sight; and as the last of the golden disk went down behind the hills, every hat was removed and they stood uncovered around the quiet dead, for whom, in some far home, the faithful mother sent her winged prayer up to the throne.—Julia Truitt Bishop in Austin Statesman.

Domestic Economy.

Beaten Creams.

Whipped Cream.—A deep bowl and an egg-beater are the best accessories. Pure sweet cream, not too thick, is required, and it will whip much easier if very cold; therefore a pan of cracked ice under the bowl is usually recommended. When the whipped cream is wanted very stiff, a tablespoonful of gelatine dissolved in a very little milk may be added to it. For some purposes it is best to sweeten before the process begins, by adding two tablespoonfuls of pulverized sugar to a pint of cream. A few drops of rum or vanilla extract is also admissible. As the frost rises it is sometimes skimmed off and drained on a hair sieve, but this is not essential. If the cream is cold and not mixed with milk, a fine stiff whip will be produced in a short time by the vigorous use of the egg-beater.

Coffee Cream.—Among the most acceptable as well as generally available flavorings, coffee may be put first. Make by the drip method a small cup of very strong, clear coffee; soak half a box of gelatine in half a cupful of milk for an hour or two, then set in double boiler over the fire, and stir till dissolved; add a cup of sugar, the cup of coffee and the well-beaten yolks of four eggs. Strain and set away to cool. When almost cold, stir for a few minutes until smooth and almost stiff, then stir in quickly a pint of whipped cream. Mold and set on the ice.

Chocolate Cream.—For chocolate cream the mode is precisely the same, substituting a cupful of very rich, thick chocolate for the coffee. The amount of chocolate used is, of course, a matter of personal choice and may vary according to taste.

Orange Cream.—Fresh oranges make a delicious cream. Pare off a few bits of the thin, yellow rind, and soak and scald with the gelatine. Squeeze and strain the juice of four or more oranges, according to size and quality. Sweeten and mix with the yolks of four eggs, as before. Add the dissolved gelatine, strain, and when almost cold stir in the pint of whipped cream with a few light strokes.

A meringue made of the whites of the eggs, with a small cupful of pulverized sugar, is sometimes served wih these creams, heaped round them after they are turned out. But to most tastes a delicate cake seem a more appropriate use.

Many other variations will suggest themselves to one experimenting with this fascinating cookery. Desiccated or grated cocoanut makes a highly attractive combination. A French cream of this variety calls for an admixture of crushed macaroons or lady fingers. The cream itself makes a fine charlotte russe filling. Other flavors and fruits may be used.—Albany Cultivator.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 20, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Cream Separators—G. G. Wickson & Co.
Cultivators—Baker & Hamilton.
Nursery Stock—Frank Kunz, Sacramento.
Poultry—California Poultry Farm, Stockton.
Nursery Stock—Wm. Parry, Parry, N. J.
Wire Fencing—McMullen Woven Wire Fence Co., Chicago.
Sheep Shears—C. S. Burch & Co., Chicago.
Stallion For Sale—Mrs. E. Thalman, Pinole.

See Advertising Columns.

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

Agents Wanted.

It is proposed during the current year of 1892 to add 10,000 names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company: 220 Market Street.

The Week.

The week has been a continuation of the delightful season which has characterized the past month. Atmospheric disturbances have been light, growth is advancing somewhat, and there has been comparative freedom from drying winds and frosts. Were it not for the several inches deficiency in our season's rainfall, there would be nothing to provoke concern, for moderate winter growth is better than excessive. A good rain would be a great blessing, and as we write, the signs seem to be shaping for it.

Before this issue reaches readers the Fresno convention, in the interest of fair freight rates and fair trade generally in fruit and fruit products, will have been held. As we write on Wednesday, the indications are favorable to a good representative attendance at the convention, and there will be men there who can speak from long experience of the hardships under which the fruit interest has labored. We trust the convention will strike a trail out of the woods and pursue it. We believe the times are ripe for effective action, both in transportation and trade.

Warm Words on a Cold Subject.

If any lingering impression has remained in the minds of any one that the California State Board of Railway Commissioners is of any earthly use to the producers and merchants of the State, recent events should remove it. That producers and traders generally consider the Commission is a useless body, is clearly seen in the severity with which they let it alone. In a State where everything which exists on the surface of the earth is railroad-ridden to the utmost limits of endurance, a branch of the State Government, constituted to secure our industries against extortion and oppression, is allowed to hold mock meetings under whose soporific influence even Argus-eyed reporters yawn and doze and recover from the weariness of previous night-work. Could there be more forcible indication that the greatest task of the Commission is to determinehow not to do anything? Is it any wonder that those whose interests it was created to protect have determined that it is even better to delve and slave in production of which the railway takes the bulk of the profits, than stultify themselves and undergo the indescribable weariness and vexation resulting from an appeal to the Railway Commissioners?

Though this is the usual habit of the public with reference to the Commission, occasionally there appears a person or an incorporation engaged in production or trade to whom there remains but a choice of two evils—to expire quickly by railway garroters, or to pass away by the slow torture of the Railway Commission. Most people, as we have said, choose the former exit; some are so hardy as to endure the latter, and if they grow restive under the process there results a spasm of noisy but ineffective activity on the part of the Commission. The latest party to arouse the Commission from its grinding toil was an incorporation of ice manufacturers. By constant contact with its own product this incorporation has cooled its blood down to a point where it thought it could endure the forcing of an issue upon the Commission without losing its temper, and strange to say this cool daring of the appellant engendered heat in the Commission to such a degree that the public was aroused, and the water began to boil also in the freezers of the ice company. There was a great tumult. People thought that now certainly the Commission would take its hands out of its pockets and do something. And what was really accomplished?

Under the unanswerable arguments, sustained by unimpeachable statistics, showing that California local freight rates are outrageous, as compared with rates on Eastern roads, and showing also that in the matter of ice rates there was discrimination shown in favor of a mountain ice monopoly, so that it could deliver ice throughout California at about one-third the rates charged the appealing ice company, the Commission decided that a new schedule of ice rates was really demanded by the public. This is nearer than the Commission has come to doing any thing within easy recollection, and public attention was excited, as might be expected. In due time the new ice schedule appeared, and the ice company soon found that it was worse off than it was before, for the average rate to 30 or more points, according to the new schedule, is 4¾ cents per ton per mile, an apparent gain of one-quarter of a cent per ton per mile over the average rate cited in the original complaint. The result is that the company which appealed to the Commissioners seems to be worse off by a considerable amount than they were before the appeal was made. Poor fools, they did not let poorly enough alone. Strange spectacle—an ice company out of the frying pan into the fire!

Now, there is also a cruel humor about this business of a new schedule. It is current comment that the commission does not know enough to get up a schedule to run a hand-car on. It must of necessity go then to those who make schedules, and the freight bureau of the railway soon had it ready, elegant in its style, imposing in its serried columns and imposing also upon the public interests, as a railroad freight schedule is expected to be. Having fixed it up and labeled it with the sign manual of the commission, the freight director of the railway sat him down quickly and wrote a solemn protest against the adoption of the new schedule, as follows: "The company is advised by counsel and believes that your board cannot legally fix the rates to be charged for transportation over any of the lines of railway operated by the company, and therefore respectfully protests against your action in that respect."

Is it not a screaming farce? It is however a cruel sort of humor, for think of the position in which it puts the railway commission. Why should the company thus persecute its devoted slaves? Why, when putting a sword in the hands of its friends to cleave the ice company should it have chosen one in which the handle was sharper than the blade? Is it a piece of its old policy to kill off both friend and foe alike, that it may stand alone in its solitary grandeur? Is the railway aiding the people to make it plain that the present railway commission is a delusion and a snare? Does the company think it would be cheaper all around to abolish the commission? If this is the key to the situation, it is funny, but isn't it awfully cruel?

The Baden Stock Yards Enterprise.

In the RURAL of October 4th we gave illustrations and description of the great live stock enterprise being developed at Baden, San Mateo county. Work has progressed since the date mentioned, and at the annual meeting of the incorporation, which was held in this city on Tuesday of this week, it was reported that the company had expended $1,380,309.21 during the year 1891 for the improvements it is making.

The reports submitted at the meeting also give evidence of the design cherished by the copious capitalists who are putting money into this enterprise. They declare that they believe that, San Francisco being the commercial metropolis of the Pacific Coast, can be made one of the largest and most successful live stock markets on this continent, and as overpopulated Europe is to-day largely dependent upon the United States of America for its supply of food, composed of animal products, it is believed that this surplus can be produced and forwarded from this coast as successfully as it is now being done from Chicago and St. Louis. To accomplish this end, they believe it is only necessary to provide in this locality a live stock market of sufficient permanency as to encourage the farmers of California and adjoining Pacific Coast States to make it a business to raise cattle, hogs and sheep in largely increased numbers over what are now produced. They say further:

"The development of these industries to the extent intended by their promoters will necessarily, by the natural law of trade and commerce, result in material benefit to the great State of California; it will greatly promote emigration, as well as enhance the true interest of every farming industry throughout the entire western slope of the Rocky mountains. The progress of this development will of course be in proportion to the growth in the supply of cattle, hogs and sheep; in other words, the producer can always depend upon there being a market at the stock yards of South San Francisco for the stock he produces, with equal confidence of the farmers of the great Mississippi valley as to the markets of Chicago and St. Louis.

We are glad to find in the report of the company a statement of the imports of leading Eastern animal products to this coast during the year 1891: Hams, 5,400,000 lbs.; packed meats, 850,000 lbs.; meats in bulk, 21,394,000 lbs.; canned meats, 5,202,000 lbs.; lard, 6,598,000 lbs. A total of 39,424,000 lbs. The company claims that the greater part, if not all, of this importation will be prevented by the creation of adequate packing facilities at this point, and such facilities they propose to offer. We hope this claim may be realized.

Local Influences of the Farmers' Institute.

The Farmers' Institute held recently at Auburn, Placer county, was very satisfactory in the interest awakened and the freedom with which the farmers of the region participated in the addresses and discussions. Prof. Hilgard of the State University delivered a lecture upon soils and fertilizers, which was listened to with marked attention and provoked much discussion. Prof. Wickson was also present and conducted the meetings. We expect to present several of the papers read at the meeting, as space permits.

The influence which a good Institute exerts in building up local agricultural organizations in the region in which it is held is shown in the fact that 19 new memberships were taken by the Auburn Horticultural Society, under whose auspices the Institute was held. This fact should be generally noted. People who think they have already a sufficiency of local organizations should remember that it is not the sphere of the Institute to compete with them, but rather to build them all up by drawing in and interesting people whom the local societies do not succeed in gaining. This is done in part by the fact that outside speakers prove attractive to the public, and in part to the appreciation of the advantage of free concourse and discussion, which must be engendered by attendance at an Institute meeting, which is usually full of cordiality, earnestness and practical suggestions. The Institute creates an appetite for means of progress, which local societies can constantly provide at their regular meetings.

Death of President Arnold.

We hear with deep regret of the death of President B. L. Arnold of the Oregon State Agricultural College, which recently occurred at Corvallis. We had the pleasure of personal acquaintance with Prof. Arnold, and greatly admired him for his sterling character, distinguished ability and gentlemanly bearing. His death is a great loss to the educational cause.

It is the expressed intention of the Board of Regents of the College to fill the position made vacant by the death of President Arnold, with some competent man from the East who has had much experience in industrial lines of work, that is, in the work of an agricultural college. Such a man, when found, will be President of the college and Director of the experiment station, it being thought best to unite those two offices as hitherto. Pending this appointment, Prof. Letcher has been made Acting President and Prof. French Acting Director of the Station.

The State Press.

Colusa *Sun:* "The Southern Pacific has to bear a great deal it is not guilty of."

Escondido *Times:* "If thousands of the business men, legislators and financiers of the East would take a month or two each year in traveling over the country, north, south, east and west, it would be of incalculable benefit to both them and the great West."

Colusa *Sun:* "We have been around legislators for the last dozen years and have had an eye open, and have come to the conclusion that if we wanted to buy a legislator we would have no hesitation whatever in approaching any man who made a business of howling about everybody else's misdoings and his own righteousness—it is simply a question of price. If men of character and standing controlled our legislation and our press, instead of the howlers along the highways, the railroad companies, the insurance companies and others would be glad to come to decent terms, and save the money that corruption costs."

Fresno *Republican:* "Chinese labor is always unsatisfactory, both to its employers and the community in general, and it is growing more so every year by reason of the increasing independence of that usually servile race. The demand for their service having become equal to the supply, they are losing their only desirable characteristic from the employer's point of view—that of reliability. Hitherto they could be depended upon with almost absolute certainty to carry out their contracts with those who furnished employment. * * This labor problem will never be settled without some systematic effort on the part of the vineyardists and fruit growers."

Redlands *Facts:* "It is a singular coincidence that a people claiming to be a Christian nation do not allow the very book upon which Christianity is based to be read to the children. It is an absurd idea that all the laws of the Nation are based on the Bible and yet the children are not to be encouraged to study the foundation of the laws; that this book, which sets forth the rules governing the relation of individuals in every walk of life, shall be a sealed book; that that Nation which stamps upon its coin 'In God we Trust' dare not teach its children to trust in God. But the banishment of the Bible from the public schools is one of the 'political necessities' of the day—a political necessity because neither of the great parties can dispense with its portion of the ignorant and superstitious classes who have been flocking to this country, to its injury."

Stockton *Mail:* "If inebriety is permitted to play the part in the defense of crime, which the Supreme Court decision holds in the case of Jack Phelan, look at the armor which it places about the malefactor. John Smith has determined to burglarize your house this night, and he wishes to be as safe as possible in so doing. How does he accomplish this double end? Easily enough. He goes and gets drunk—not too drunk, but just drunk enough, and it is easy enough to act a little more razzle-dazzle than he feels—then he proceeds to burglarize your house. If he is not caught, well and good; if he is, he says, "I was drunk and did not realize what I was doing," and asks the protection of the law, as enunciated by the Supreme Court. Do you see that it is a perfectly simple and plain proposition all the way through. Let the man who attempts to commit a crime get drunk as a measure of safety. As the knight of old buckled on his armor when going into a tournament, so may the modern criminal buckle on his well-considered jag when about to pursue his nefarious calling."

Stockton *Mail:* "The most iniquitous tax of all is the poll tax—a tax per capita upon the privilege of existing, regardless altogether of the ability to pay, being $2 a head alike upon the millionaire and the pauper. The road tax is another form of laying the burden equally and indiscriminately upon all, ignoring entirely their widely varying ability to stand it. It was only the other day that our own Supervisors, following the law and the custom, notified every male citizen of the county, outside of the city of Stockton, within certain limitations as to age, that the regular annual time for paying the $2 road tax was at hand. Farmer Barnhart's hired men must each pay as much of this tax as their wealthy employer, whether they ever use the roads or not. It is important to Barnhart that the roads should be at least passable, for otherwise he might not be able to get his crops to market, but to some of his hired men it may be a matter of not the least concern. Nevertheless, they must pay the tax or suffer the consequences, which are severe, and not one of the cranks of the day lifts his voice against the outrage."

The San Diego *Union* thus sums up the advantages of improved country roads: "They would make it possible for the farmer to take advantage promptly of the highest market, no matter at what season of the year. They would allow him days and weeks of time which he wastes every year wallowing through the disgusting mire of dirt roads. They would reduce to a minimum the wear and tear on wagons and carriages. They would lesson the expense in keeping horses in working order, and vastly less horses would be required in a county to perform the farmers' work. They would require less expense to keep them in repair than do the dirt roads. They would make it easier for a team to pull several tons over their smooth surface than to drag a wagon through the mud. They would afford ready communication with the outside world at all times of the year. They would spare the farmer many vexations and nervous strains. The would practically shorten the distance to the local market. They would increase the demand for country and suburban property. They would be free from dirt in summer, and mud and ruts in fall, winter and spring. They would bring every farming community into closer social relations. They would make an evening's drive a pleasure instead of a vexation, as it is now."

Table of High Horse Values.

The sale of the California three-year old trotter Arion, 2:10¾. to J. Malcolm Forbes of Boston, for $150,000, makes a new record for horse prices, displacing the $105,000 paid for Axtell at Terre Haute, Ind., in 1889. The American trotter leads in the figures. He has more uses and value and lasts longer, though not having the earning capacity of a thoroughbred of equal quality. A table of the highest prices paid for trotters and thoroughbreds here and in Europe will be of value at this time. Here it is, as published in the *Drovers' Journal* of January 25:

TROTTERS.		THOROUGHBREDS.	
Horse.	Price.	Horse.	Price.
Arion	$150,000	St. Blaise	$100,000
Axtell	105,000	‡Common	70,000
Anteeo	55,000	‡Ormonde	70,000
Bell Boy	51,000	‡Doncaster	70,000
Stamboul	50,000	‡Blair Athol	62,500
Nancy Hanks	45,000	‡Kangaroo	60,000
Sunol	41,000	‡Meltoe	50,000
Acolyte	40,000	‡Prince	50,000
Maud S	40,000	‡Friars Balsam	50,000
Smuggler	40,000	‡Isonomy	45,000
Pocahontas	40,000	‡Busy Body	44,000
Rarus	36,000	‡Harvester	43,000
Harry Noble	35,000	‡Galopin	40,000
Antevolo	35,000	‡Scottish Chief	40,000
Dexter	33,000	‡Petrarch	40,000
Goldsmith Maid	32,000	‡Robert the Devil	40,000
The King	31,000	Kentucky	40,000
Jay Gould	30,000	Verneuil	39,000
Lady Thorne	30,000	King Thomas	38,000
Blackwood	30,000	‡Hampton	36,000
Prince Wilkes	30,000	‡Maccaroni	35,500
Pancoast	28,000	‡Beaudesert	35,000
Gov. Sprague	27,500	‡The Palmer	35,000
Patron	27,500	Bolero	35,000
Mascot	26,000	‡Gladiator	35,000
Alcazar	25,800	Iroquois	34,000
Happy Medium	25,000	Tournament	33,500
Jerome Eddy	25,000	Rayon d'Or	33,000
Wedgewood	25,000	The Earl	30,500
Geo. M. Patchen	25,000	‡King Lud	30,000
Fearnaught	25,000	Lady Primrose Colt	30,000
Macey	25,000	‡Rosicrucian	30,000
Voodoo	24,000	Galore	30,000
Sam Purdy	22,000	Bonnie Scotland	30,000
Nutwood	22,000	Kingston	30,000
Edward	20,000	‡Hobbie Noble	31,500
Rosalind	20,000	Dewdrop	29,500
St. Julien	20,000	‡Spinaway	27,400
Lulu	20,000	‡Blue Gown	26,000
Clingstone	20,000	‡Gatinuie	25,500
Startle	20,000	‡Julius Cæsar	25,000
St. Vincent	20,000	Potomac	25,000
Lady Maud	20,000	Virgil	25,000
Edward Everett	20,000	‡Wheel of Fortune	25,000
Socrates	20,000	‡Janette	21,000
Constantine	20,000	Cantinere	20,500
Russia	18,000	Luke Blackburn	20,000
Oliver K	17,000	Duke of Magenta	20,000
Darby	17,000	Mortimer	20,000
Lucy	17,000	Ban Fox	20,000
Parana	16,600	Louisburg	20,000
Edgmark	16,000	‡Priam	20,000
Edwin Forrest	16,000	Falsetto	18,000
Palo Alto Bell	15,000	Drake Carter	17,500
Prospect Maid	15,000	Pontiac	17,500
Warlock	15,000	Raceland	17,500
Alma Mater	15,000	Sir Dixon	17,500
Grafton	15,000	Proctor Knott	17,500
Zoraya	13,100	Terra Cotta	17,100
Electric Bell	12,500	Glencoe	16,000
Jack	12,500	Magnetizer	16,000
Chimes	12,500	Hanover	15,500
Electioneer	12,500	Norfolk	15,000
Launcelot	12,500	Lexington	15,000
Houri	12,500	Kingfisher	15,000
Susie S	10,050	Leamington	15,000
Suisun	10,100	Hindoo	15,000
Guy	10,000	Spendthrift	15,000
Reverie	10,000	‡Amderby	15,000
Midnight	10,000	‡Consul	15,000
Ansel	10,000	‡Glenlyon	15,000
		Darebin	15,000
		Retlare	15,000
		‡Loughsboroughs	15,000
		Baden Baden	15,000

‡English Prices.

The English thoroughbred record is not given below $25,000, or the American below $15,000. The trotting price record runs down to $10,000.

A Canal for Drainage and Navigation.

A very important suggestion is now made that the short canal needed to give Fresno producers a water route to this city be also a drainage canal, to relieve the country of surplus water and thus greatly advantage the producers in another important way, and do much also to settle the alkali question which bothers some of them. The following communication from J. H. Harding of Oleander, appears in the *Expositor:*

While we have been agitating a navigable canal from Fresno to the San Joaquin river, there has been one important feature overlooked in conjunction with that enterprise.

The water level lying beneath the surface of the irrigated portion of this country has been constantly rising for several years past, until it is a matter of serious consideration whether in the future we will not be compelled to adopt an extensive system of drainage, to reclaim large areas of valuable lands and also prevent the farther inundation of county roads in the low grounds.

Already thousands of dollars of the county road funds have been expended in throwing heavy grades across swamps and lagoons that less than ten years ago were as dry as any part of the highways, and still we are just in the beginning of these heavy expenditures.

The porous nature of the substrata of our lands allows the water from the irrigating canals to percolate and spread from the high ground upon which they are carried, to the lands of a lower level, sometimes flooding the surface, at other places reaching within a few feet, to the injury and often destruction of valuable orchard trees and vines.

With all these things in view, would it not be of untold benefit to the whole county to not only build such a canal, but to extend it up through the irrigated portion of the county and drop the water level a few feet and utilize the drainage to feed the canal, saving many dollars to the county that must ultimately be expended upon its roads, save thousands of valuable trees and vines, reclaim thousands of acres of valuable lands, carry off the excess of alkali and add greatly to the sanitary condition, and make Fresno county the richest and healthiest place on earth?

Our Board of Supervisors could do nothing that would add so much to the prosperity of our county as to give their unqualified aid to such an undertaking. The extra money annually spent in grading and keeping the roads above the water level would go far toward building such a canal. To go on as we have, annually expending thousands of dollars, and how much better will be our roads? How much better will be our sanitary condition? How much better will be our orchards and vineyards? And how much wealth will be added to our county?

Something must be done, and that soon, if this fertile valley continues to bloom as the rose, and many of our happy homes are not inundated by the continual rise of the water level.

This is a matter of the utmost concern to every horticulturist of our valley, and a problem that must soon be solved by public or private capital. Let our county government take the matter in hand, and they will find every horticulturist ready and willing to come to their aid and carry through this grand enterprise, that means their future salvation and continued prosperity. By all means bring on the canal to and beyond Fresno, and let us tap it with laterals, drain our county and supply it with the needed water.

Arizona Development.

TEMPE, ARIZONA, Feb. 16, 1892.

TO THE EDITOR: Since my letter to the RURAL as to that coming garden that is to be below Ft. Yuma, I have received more than one letter asking information as to the scheme. Now that the RURAL of January 30th, on page 93, has answered those inquirers how the thing is to be done, I will only add that those interested will find in Acting Governor Murphy's report to the Secretary of the Interior that the Governor thinks the climate and conditions favorable to the growing of the citrus fruits, in Yuma county, Arizona, cannot be surpassed in any region known.

The same climatic conditions so much valued at the bay of San Diego exist here at the mouth of the great Colorado river, namely, the gentle breezes from the southern Pacific ocean. The altitude being only a few feet above ocean level, those breezes that make famous even the coast of the Gulf of California, ward off the frost near the salt water. The RURAL, nor the Denver paper, made any mention of the labor and money spent in the coast survey at the mouth of the Colorado in the selection of the site for the coming city that is to spring up and claim a share of the commerce of the Pacific ocean. It may be visionary, but think about it. Our mountains of coal, and our multitude of low grade mines! With the Isthmus canal completed, cannot Arizona haul those ores to the gulf, and thence to Europe? Really, the amount of low grade ores is inexhaustible in Arizona. It is low grade ores anyway that are of value to a country. High grade ores make a few rich men; but low grade ores, like agriculture, gives employment to the people, and peoples a country.

It seems to be a mutual agreement these days that capital is to lead the way in the development of agriculture in the arid lands of the southwest. Many men of enterprise, like the late Dr. Woozencraft, tried to talk to those in need of homes that the region in and about the mouth of the Colorado offered great inducements. But pioneer will, to break in a new country, is a scarce commodity in the market these days. So now, if you want a home among the olive and the orange groves in Yuma county, just sit back and wait; they are coming, certain. But when you come for your nice home in these parts, bring a pretty long purse, pretty well filled, or else stay where you are; for a home in Southern Arizona is no longer a joke, but has something the same meaning as a home in Southern California.

From the Chamber of Commerce of the city of Phoenix, which is diligent in ascertaining what is being done in my county (Maricopa), we are informed that the planting of citrus trees in Salt river valley, for the year 1892, will be 3000 acres; and, too, that the parties planting are experienced orange growers, who think they know what they are doing. Among other reports, the Chamber of Commerce has given the following figures as to the products of Maricopa county. Considering the fact that our farm products increase at the ratio of about 40 per cent. per annum, and our canal systems are yet in the beginning, we may yet be able to have something of a country here.

Report for 1891: Grain, 58,500.000 pounds; alfalfa hay, 263,000,000 pounds; grain hay, 5,000,000 pounds; alfalfa pasture for 25,000 beef cattle, brought in from distant ranges.

GEO. KAY MILLER.

Irrigation Movement in Tulare.

It is announced that the Board of Directors of the Tulare Irrigation District has decided to purchase the Kaweah canal and irrigation system for $150,000 in bonds of the district. They also voted to purchase the Cameron and Rocky Ford system for $20,000. As soon as the transaction has been completed a large force of men and teams will be put to work in order to connect the systems and construct the laterals so that the water may be fully utilized this year. The Kaweah Canal Company will not bring their lands into the district, but contract to pay $1.25 per acre for one thorough irrigation. This large transaction has been under consideration several weeks.

ON THE IDAHO RANGES.—The stockmen seem to be having a most disastrous winter in southern Idaho. Stockmen say there is absolutely no hope for the stock upon the ranges. Thousands of animals are already dead and the efforts to save the remaining thousands will be abandoned. In some of the valleys the farmers have run short of feed and have been compelled to turn the poorest of their stock adrift to starve. The stallions owned by stockmen are a source of great trouble. They seem to go mad with hunger and run amuck among the herds and droves, tearing the other animals with their teeth and striking and kicking them with their feet. The present winter has never been equaled in Idaho.

SHEEP AND WOOL.

Wool Review for 1891.

Statistical and Other Interesting Data.

[Written for the RURAL PRESS by J. R. FARISH.]

The wool clip of California for the past quarter of a century is estimated in pounds as follows:

Year.	Pounds.	Year.	Pounds.
1867	16,288,600	1880	46,774,154
1868	14,237,687	1881	45,476 639
1869	15,413,970	1882	40,529,119
1870	20,072,660	1883	40,848,690
1871	22,187,188	188	37,415,330
1872	24,255,468	1885	36,561,390
1873	32,155,169	1886	38,509,160
1874	39,356,78	1887	31,564 231
1875	43,532,223	1588	32,569,972
1876	56,550,978	1889	33,591.720
1877	53,110,742	1890	34,917,320
1878	40,862,091	1891	32,416,250
1879	46,003,360		

By reference to the above table it will be seen that for nine years beginning with 1867 the industry forged ahead at a rapid rate. In 1876 the clip reached over 56,000,000 lbs, but two years after it fell off nearly 16,000,-lbs. From 1878 to 1884 it ranged from 40,-500,000 lbs to nearly 47,000,000 lbs. In 1887 the clip was the smallest on record. Since that year it has fluctuated from about 32,-000,000 to over 34,000,000 lbs. At this writing it begins to look as if it will again increase, owing to more attention being given to it as a farm auxiliary, unless the consumption of mutton sheep continues to increase as rapidly as it has within the past five years. As an auxiliary of the farm, carcass-breeding will be followed largely at the expense of wool, the same as obtains in Australia, where mutton sheep dress over 80 lbs to the head. Although the wool clip of this State shows a large falling off compared with 1876, yet the industry is, in the United States, third in the list as to the number of sheep, and second as to pounds clipped. In this connection the following tabular statement of estimated pounds of wool grown in 1891, as published by the National Association of Wool Manufacturers, affords an interesting study :

States and Territories.	Estimated average weight of Fleeces.	Number of Sheep as per Agricultural Dep't, 1891	Washed and Unwashed.	Estimated average per cent shrinkage in scouring.
Maine	6	547,670	3,288,020	40
New Hampshire	6	183 183	1,099 098	60
Vermont	7	351,249	2,458,743	60
Massachusetts	6	55,965	335,790	50
Rhode Island	6	20,433	122,598	40
Connecticut	5	45,824	229,120	45
New York	6	1 393,583	8,361,498	50
New Jersey	5	100,075	500,375	50
Pennsylvania	6	1,039,502	6,237 012	55
Delaware	6	22.517	135,102	50
Maryland	4	156,838	627,352	50
Virginia	5	444,563	2,222,815	50
North Carolina	5	398,226	1,991,130	55
South Carolina	5	98,970	494,850	50
Georgia	4	383,017	1,532,068	42
Florida	5	111,455	557,275	45
Alabama	4	274,788	1,099,152	50
Mississippi	6	235 345	1,412,070	55
Louisiana	5	113,931	569,655	55
Texas	6	4,990 272	29,941,632	60
Arkansas	7	269,484	1,886,388	65
Tennessee	6	511,118	3,066,708	55
West Virginia	5	518,827	2,594,135	40
Kentucky	6	765,679	4,594,074	40
Ohio	5	4,061,897	20,309,485	50
Michigan	6½	2,263,249	14,711 118	58
Indiana	5½	1,150,200	6,326,100	45
Illinois	6	770,993	4,625,958	50
Wisconsin	6	889,910	5,339,460	60
Minnesota	6	330,649	1,983,894	65
Iowa	6	452,025	2,712,150	65
Missouri	6	898,650	5,391,900	50
Kansas	7	447,079	3,1 9,553	65
Nebraska	7	234,612	1,642,284	65
California	6½	3,712,310	24,130,015	66
Oregon	7	2,431,759	17.022,313	60
Nevada	7	504,710	3,532,970	65
Colorado	7	1,819,569	12.736,983	65
Arizona	8	593,643	4 749,144	70
Dakota	7	274,319	1 920,233	65
Idaho	7	501,978	3,513,846	65
Montana	7	2,067,337	14,741,359	65
New Mexico	4	3,133,663	12,534 652	40
Utah	7	2,055,900	14,391 300	55
Washington	6	673,060	4 038,360	60
Wyoming	7	1,119,110	7,833,770	65
		43,419,136	262,401,507	

While the fleeces in 13 States and Territories average heavier than do those in California, yet when it comes to shrinkage in weight through scouring, California wool holds second place, and as buyers in purchasing, figure on the loss in scouring, it is readily seen that unwashed Californian wools, all else being equal, sell proportionately less than do wools giving a less loss in weight. In the above table, spring wools only are taken into account, fall clips not being given, neither is the pull wool given, which is estimated at a little over 41,000,000 lbs. for the entire country.

Statistical Review for California.

	Pounds.
Received in San Francisco from Points in California	24,845,976
Shipped East from interior points of California	4,067,500
Held at interior points of California	100 000
Total California clip, 1891	29,013,476
Received in San Francisco from Nevada and Territories	1,500,000
Received in San Francisco from Oregon and Washington	4,296,320
Received in San Francisco from foreign (Australian) ports	1,403 280
Total receipts in San Francisco, etc	36 213,076
Add stock on hand January 1, 1891	7,397,000
	43,610,076
Shipments during 1891 - From San Francisco by railroad to Eastern markets, Grease and Pulled	19 536,960
From San Francisco by sea to Eastern markets, Grease and Pulled	1 464,026
From San Francisco by sea to Eastern markets, Scoured	37,840
From San Francisco by railroad to Eastern markets, Scoured	5,773,750
Being product of Grease Wool of	17,359,090
Consumption of local mills	1,250,000
Wool held in country	100,000
Wool sold and awaiting shipment January 1, Scoured and Greased—equal to lbs. in Grease	1,400,000
Total lbs	41,110 076
On hand in San Francisco, January 1, 1892	2,500,000

Average Prices for 1891.

The following table shows the average prices in San Francisco during the year 1891:

	Per Pound.
SPRING CLIP.	
Northern, choice	20 @22½c
Northern, good	17½@20c
San Joaquin and middle counties	14 @17c
Southern coast	13 @15c
FALL CLIP.	
Northern, choice	16 @17c
Northern, fair	13 @15c
Mountain Falls, free	11 @14c
Southern and San Joaquin	8 @11c
Eastern Oregon, spring good	16 @17½c
Eastern Oregon, poor to fair	13 @15c
Valley Oregon	20 @23c
Nevada, spring	15 @20c
Nevada, fall	12 @14c

Scoured wools have ranged from 23c to 35c per lb. for the poorest defective fall up to from 46c to 50c for choice free stock. Eastern Oregon and Nevada spring scoured sold at 52c to 56c.

Market Review.

Taking the year 1891 as a whole, it was exceedingly prosperous, notwithstanding the low range of values for wools. The lower price which ruled for wool was more than offset by good to high prices for mutton sheep and lambs. James P. Hulms, of this city, very correctly states, in a contemporary, that, as has been the case for several years past, a very large portion of the wool coming to this city, except the very best bright spring grades, are scoured before being sent to other markets. Fully three-quarters of all the Eastern Oregon, Nevada and Arizona spring and California clip is now handled in this manner, and were the rates by the overland roads made a little more liberal on scoured wool, even a larger proportion would be treated thus. This is the only way to handle dusty and heavy shrinkage wools to advantage.

Prices through the year 1891 ruled very steady. With the advent of the spring clip in April came an active demand from all the Eastern markets, and through April, May and June there was a lively inquiry for all good wools at very full prices, ranging on an average fully 1c per pound over those of the preceeding spring. In July the large outflow of gold from the United States caused a feeling of uneasiness as to the future of the money market, and induced manufacturers all over the country to pursue a very cautious policy, buying wool only as they were forced to have stock. The consequence has been a slow, dragging market since then. In some instances, and especially on the poorer wools, a little weakening in prices has been shown.

Probably never within the history of the trade have prices exhibited so great a steadiness as was a characterizing feature of the 1891 markets of this country. This was contrary to general expectation at the time the McKinley bill passed Congress, increasing the duty on wools imported into this country. There have been several influences on the market which operate against our wools, namely, change in fashion for woolen goods, large stocks of foreign goods and wools rushed into this country to take advantage of the McKinley bill, more general use of shoddy, and last, but by no means the least, the improvement made in manufacturing cotton goods to imitate, when made into dresses, the general appearance of the best woolen goods.

In former years, satinets were made with wool filling; now shoddy is used. The same change has taken place in the manufacture of other goods in which was formerly woven more or less wool.

The United States is noted for the production of fine wools, outranking all other countries in this line, but with fashion demanding luster goods there was an increasing call for coarser wools, and our manufacturers found themselves compelled to import very heavily of this class to turn out the desired goods. This necessarily bore heavily against domestic wools, for, there being no foreign competition for buying our wools American buyers, or, at least the heaviest, combined, and would not pay over certain ranges for American wools. These ranges were placed only high enough to prevent shipments to foreign markets.

The demand of fashion for luster goods has brought Australian wools well to the front, making that Colony's remarkably large increased production cut no small figure in the world's wool market. The number of sheep in Australia were as follows:

Years.	Number.	Years.	Number.
1871	49,773,584	1888	96,487,811
1881	78,063,426	1891	1 9,167,625

The London *Economist* estimates that the fleeces average 5 1-2 lbs. each, so that it will be be seen that last year's clip was about 600,000.000 lbs.

Bearing on the above the following is taken from a private circular of a well known firm in this city.

"Considerable attention has been paid to foreign, particularly Australian, wools by dealers and manufacturers during 1891, and large importations were made. The London sales, which opened on January 26th were attended by at least ten buyers from the Eastern markets, and large quantities of wool continue to arrive direct from Australia in this country. The total exportation from the colonies, mostly to London, from July 1st to December 10, 1891, was 718,819 bales, being an increase of 169,688 bales over corresponding period of previous year. Of this wool, 20,102 bales came to the United States direct, freight rates from there to Boston and New York, via. San Francisco, being 1 1-2 cts. ₩ lb only, which identical rate is charged from San Francisco to Boston by rail. This is a serious matter for wool growers to contemplate and it will undoubtedly show its effect at the opening of our spring market, for which we predict low figures, particularly as the wools now on the way to this country direct will reach the Eastern markets about the time our new clip is ready to go forward."

The following tabular statement gives the wool exports for the past ten seasons of wools from Australia to the United States:

Seasons.	Bales.	Seasons.	Bales.
1881-82	11,070	1886-87	15,360
1882-83	5,794	1887-88	22,379
1883-84	14,863	1888-89	37,175
1884-85	6,221	1889-90	12,340
1885-86	20,161	1889-91	31,0.0

The above does not include importations of wools bought at the London wool sales.

The importations of Australian wools into Great Britain has increased from 931,889 bales in 1881 to 1,226,172 bales in 1890. Referring to the imports in 1891, the London *Economist* of Oct. 3d, said: "In the first eight months of this year our imports of wool from Australasia were 388,600,000 lbs. against 344,600,000 lbs. in the same months of 1890; and of Cape wools we received 79,100,000 lbs., against 69,900,000 lbs. From these two quarters, therefore, in the eight months, this country has received 53,-200,000 lbs. more of the staple than was the case last year; and the prospects are that these augmented supplies will be continued. More wools have also reached us from India and other countries, and at the same time the supplies of River Plate wools to Continental markets, which fell off in 1890, are increasing in 1891."

In 1866 a bale of Colonial (Australian) wool was worth in London $122, and in 1889 only $67, and in 1891 still less.

The outlook for wool in 1892 does not present any encouraging features for the immediate future, although there are indications that fashion is on the eve of making a change, and this time to finer grades of goods, which will call for fine or merino wools. When this desired change fully sets in, then much of California's wool will find a readier market and at much better prices.

The 1891 clip in this State will be mixed as to quality. In the northern counties of the State, pasture or feed has been fair to very good and the wools will show a corresponding favorable growth; in the central counties feed has been only fair, while in the southern counties it has been poor. In Oregon and Washington the winter has been quite favorable to sheep, and therefore no setback was met by the growing wool.

PADDED HORSESHOES.—A new system of shoeing horses has recently been invented in England. By it the iron shoes are fixed to others made of sail canvas, which are then cemented to the hoof. Shoes fixed this way have been worn quite thin without moving. The process has been patented in England.— Australasian Coach Builder and Saddler.

GOOD HEALTH.

The Human Ear.

The human ear is a much more delicate organ than most people suppose. It is extremely dangerous to interfere with it by use of earpicks, or any of the various instruments used for the purpose of cleaning it from wax. The wax is a natural secretion, and unless the ear becomes diseased it does not accumulate any faster than is necessary to protect the passage from the entrance of insects and various particles which might otherwise be forced in and tend to interfere permanently with the hearing. The greatest care is necessary in washing the ears of little children. They should be washed outside, but on the inside only so far as the finger wrapped in a soft towel will go. The practice of forcing a hair pin or any other hard instrument into the ear passage is fraught with danger of injuring the membrane and causing permanent deafness.

Earache is a malady of childhood and causes most distressing pain. The simplest remedy for it is to take a little cotton dipped in warm sweet oil and put it in the ear passage. A danger that may arise from doing so simple a thing as this is that minute particles of the cotton may be left in the ear.

To prevent this, some physicians advise making a little wad of the cotton and wrapping it in the finest and thinnest linen cambric that can be found, and dipping this in warm sweet oil. In case of intense pain, a few drops of hot laudanum or camphor may be used with the oil. When foreign bodies get into the ear they should be removed by syringing them out with warm water. To attempt to remove anything from the ear passage by forcing an instrument in is a rash thing for anyone except an aurist to undertake. The best medical practitioners refuse to treat affections of the ear or eye, but send their patients to specialists.

WONDERFUL TRAINING OF THE EARS.

It is really wonderful in regard to the acuteness to which the human ear may be trained.

At the meeting of the locomotive engineers, to be held in Cape May during August, an interesting paper will be read by H. H. Dantzer, formerly an engineer on the Reading railroad, but now a contractor in West Philadelphia. The paper will deal entirely with the wonderful manner in which engineers on railroads, steamboats and the masters of mammoth machinery ascertain accurately and instantly when anything goes wrong with the machinery under their control.

Strange as it may seem, the only reliable friend of the engineer is a well-trained ear. The greater part of Mr. Dantzer's paper is filled with incidents relating to railroad work, but the really wonderful incidents of which he treats are taken from the mammoth press-rooms in which Philadelphia abounds.

Mr. Dantzer's paper tells of many queer incidents of his experience as a railroad engineer. The master of a locomotive gets to know his engine as a mother does her child. In the darkest night, with the train dashing along at the rate of 45 miles an hour, the trained engineer hears a slight sound which is out of the ordinary. He not only becomes aware of it by reason of hearing it, but if he were deaf as a post the disorder would be communicated to him through the medium of the throttle. He would feel a slight jar which would indicate as clearly as the sound that something was out of order, and, if the occasion warranted, a stop would be made at once or the matter would be attended to at the next station.—Philadelphia Record.

MUCILAGE AS MEDICINE. — A correspondent sends us the following item: Mucilage is an excellent remedy for burns; apply it to the burn and lay on any soft blank paper. The mucilage soothes and the paper excludes the air. For corns there is nothing better than mucilage applied every night. It softens the corns so that they may be easily trimmed. A feverish patient will gratefully drink water in which gum arabic has been dissolved. The cooling draught may be flavored with lemon or orange.

LIMEWATER is an element not so much used as it would be if people realized its effect on the bones and teeth of growing children. When placed in milk, it adds a sweeter flavor even if no more than a teaspoonful is used to a tumbler of milk. It may also be used for indigestion. When the skin is broken out from poison oak, an excellent remedy is a solution of saltpetre. If strong, it causes pain when applied, but it subdues the poison.

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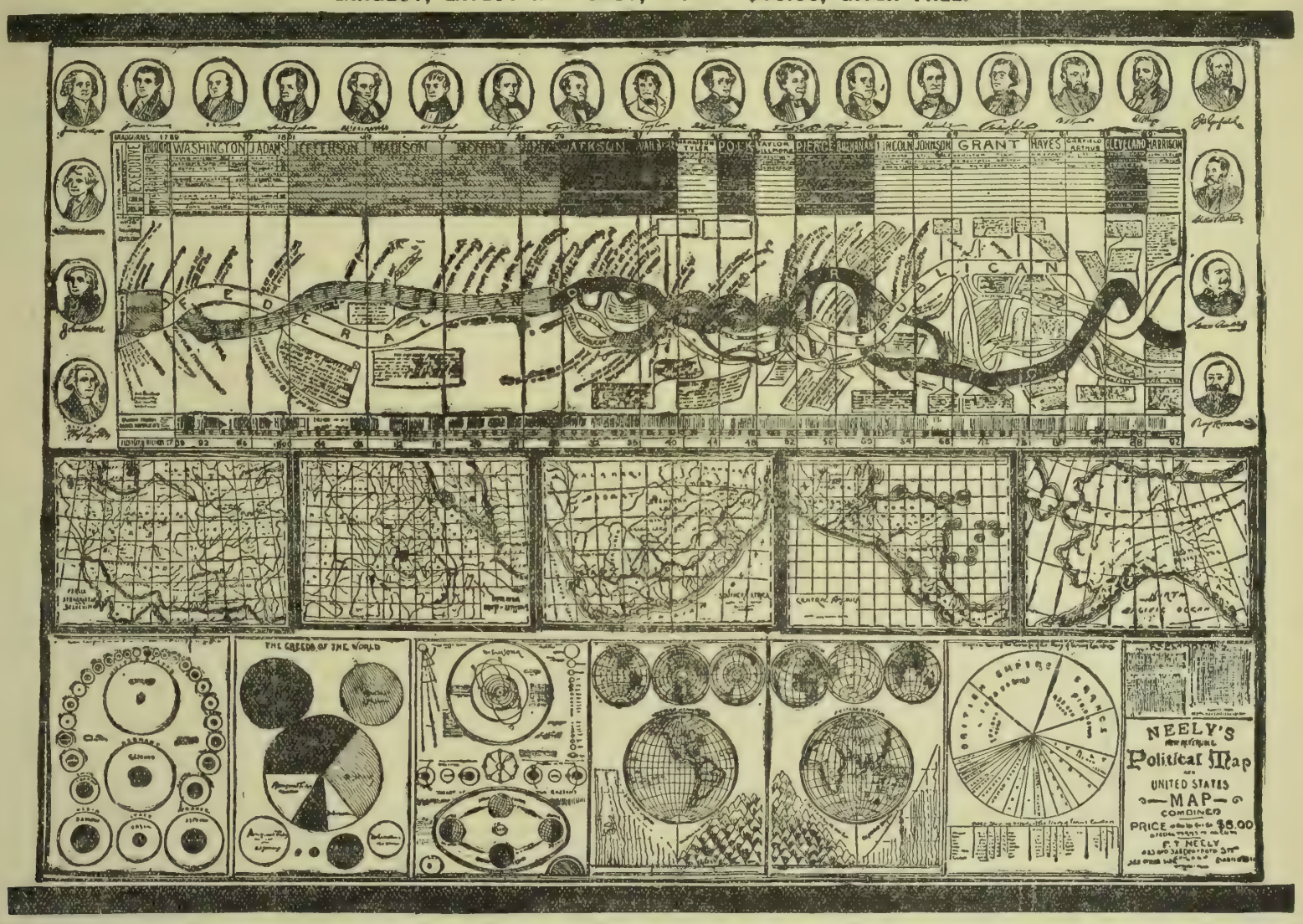
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HORTICULTURE.

Fig Trees at the California Experiment Stations.

University Experiment Station Bulletin No. 96.

The fig promises to become one of the most important fruit trees of California. But the culture of this fruit belongs chiefly to the borders of the Mediterranean, especially Asia Minor, and much less is known here about varieties and their treatment than is the case with the more common deciduous fruits. The numerous discussions upon the fig, in recent years, prove the existence of a strong and growing interest in the subject. It was, therefore, decided to stock the stations with every distinct variety of fig, and to observe the growth, hardiness, quality of fruit, and other elements of importance.

There are about 50 varieties growing at the various stations, and some additional sorts are still in nursery rows. The smallest stock is at Pomona, but it will be increased this coming season, to an equality with the stations earlier established. The following list shows the varieties now growing, and studied in the preparation of this report:

Agen.	Gros Gris Bifère.
Angelique.	Grizzly Bourjassotte.
Abondance precoce.	Hirtu du Japon.
Brianzola.	Ladora.
Black Ischia.	Monaca Bianca.
Brunswick.	Negra Larga.
Black Bourjassotte.	Osborne Prolific.
Black Marseilles.	Pasteliere.
Barnasotte Grise.	Royal Vineyard.
Brown Ischia.	Ronde Noire.
Brown Turkey.	Ronde Violette Hative.
Black Brogiatto.	Raby Castle.
White Brogiatto.	Rocardi.
California Black.	Rubrado.
Col di Signora Nero.	Smyrna No. 1.
Drap d'Or.	Smyrna No. 2.
Dalmatian.	Smyrna No. 3.
Doree Narbus.	Smyrna, Wild.
De Constantine.	San Pedro.
Du Roi.	Sanvito.
White Dattato.	Trojano.
Black Dattato.	White Bourjassotte.
Early Violet.	White Genoa.
Guigliono.	White Adriatic.
Grossale.	White Marseilles.

The first season after the figs were planted at the different stations, many differences in growth and in adaptation to climate began to be noticed. The varieties showed a greater range of variation in respect to their power to resist cold than any other semitropic fruit. The problem that naturally presented itself was this: How do the various sorts compare in point of hardiness and relative endurance? The colder districts of the State desire to grow figs, if possible, and need the varieties that are most hardy. Then, also, we may expect to produce still more hardy seedlings from hybrids of certain sorts, or by fertilizing the finer table figs with the wild Smyrna. In a few more years, when all the varieties being grown are in bearing, the comparative value of the fruits can be tested. At present the problem of hardiness requires attention.

FIGS AT THE SAN JOAQUIN STATION.

On December 17th and 18th I examined the growth of the fig trees at the San Joaquin Valley station at Tulare. Forty-two varieties are now represented there, to which the wild or Capri fig, and several new sorts imported last year, will be added. The fig trees are planted in avenue form, and in the present unsheltered condition of the station it cannot be said that there is any difference in temperature between different portions of the avenue. In the course of time, when the orchard is fully developed, the avenue will be less exposed to the wind. But the Tulare region is subject to as great a range of temperature as any other part of the San Joaquin valley. There seems to be a basin about the lake into which the cold air settles, and it is doubtful whether rows of forest trees will be of as much service here as in some other localities where the cold is due to air currents that may be broken.

The fig trees at this station were mostly planted in the winter of 1888–89. Some died, having been set in alkali spots, and were replaced. The worst situations have now been treated with gypsum, about 10 pounds having been put around each tree. Owing to the differences of soil, a very great difference in the growth of trees of the same age is manifest. This of course is complicated with the difference naturally belonging to the growth of different varieties. About 12 of the varieties of figs represented bore fruit last season (1891.) Du Roi, a new variety little known in the State, was one of the best of these, and attracted much attention.

All the fig trees received some irrigation, but not a drop of water was allowed them after August. The first heavy frosts in November took off all the leaves. The wood appeared well ripened in most cases, except, as usual, the extreme tips of "water sprouts" and late growths. It was therefore a surprise to the foreman when some of the trees showed the effects of the early December frosts (temperature 22°). Certain varieties appear to suffer, and it does not seem to be a question of alkali or cold currents; for, as previously stated, the whole tract is subject to identical conditions in this regard. Besides, trees of the same kind, one of which stands on sandy soil and the other on "alkali," seem to suffer to a similar extent.

Of the older varieties (older in point of introduction to this State), the California Black is not to be ranked as high in the matter of hardiness as was to be expected. It can only be called "medium"; the White Ischia stands somewhat better; the Dalmatian does fairly well; the Black and White Marseilles, which unfortunately are rather small for table use or for drying, do even better than the Dalmatian. The San Pedro, a fine table variety much liked by growers, suffers greatly, even branches of half an inch thickness being frozen. The two Smyrna varieties have stood the frost well. The Brown Ischia has suffered more than the Black California. The three Bourjassottes, black, white and green, together with the White Adriatic, are able to withstand the cold.

Among the newer varieties, the Du Roi, previously alluded to, is one of the most hardy. Ladora, an excellent fig, is badly frosted, but not enough to justify discarding it as yet. Col di Signora Nero is so much frozen that it must be cut back nearly to the ground next spring. One of the worst cases in the avenue is that of the Gros Gris Bifere, which is certainly not hardy enough for the station. Ronde Violette Hâtive is a fine fig, but slightly frosted, and probably safe when older. De Constantine and Drap D'Or have done well. Abondance Precoce suffers a little; Royal Vineyard ranks but medium. The most hardy fig at the station, and the only one that shows no sign of frost anywhere, is the Doree Narbus, one of the new importations. There are two trees of this variety in different parts of the grounds, one in alkali, the other (near the orange trees) in sandy soil. It has compact growth, hard, dark bark, short joints and small buds. The leaves are dark and rather small. It has not yet fruited, but if it proves to bear well and to be of fine quality, it can be recommended for frosty situations.

To sum up these observations, there are two or three sorts being tested that seem unlikely to stand the climate. Possibly ten sorts show appreciable loss of young wood. All the others, except the Doree Narbus, show some slight effect of frost upon the soft, late growth, but not, except as above noted, enough to effect their orchard value to the region.

FIGS AT POMONA STATION.

The fig experiment at the Southern California Station, near Pomona, is less advanced than any other, since trees were only planted there last spring. It was hoped that all the varieties would prove hardy at Pomona, and at first it appeared that they would do so. But this month, January, many varieties have suffered from frost. The complete comparison with Tulare and Paso Robles cannot yet be made, for the list of varieties is incomplete at Pomona. But the following sorts proved "hardy:" Du Roi, Monaca Bianca, Hirtu du Japon, Agen and Col di Signora Nero. This shows that more varieties out of the complete list of 51 will thrive at Pomona than at Tulare or Paso Robles. Twelve varieties, mostly new, and very small trees with immature wood sent to the station for growth for a year in nursery rows, were severely frozen, in some cases "nearly to the ground." This, however, is not evidence against future success with many of these varieties. The following trees suffered much from frost, and are probably unreliable in that part of the valley; Grosse Grise Bifere, Grizzly Bourjassotte, Ronde Violette Hative, and Negra Larga.

FIG TREES AT PASO ROBLES.

At the Southern Coast Range Station, near Paso Robles, where the same varieties of figs are growing, the problem is further complicated by the fact that there is much difference in the soil and location of the trees, the avenue passing through a low swale that is much more frosty, and has a more compact soil, than the rest of the tract. Most of the trees were planted at the same time as those at the Tulare station. They received no irrigation. Those in the most exposed positions were wrapped in straw to protect them. January 4th the straw was taken off so as to make a thorough examination, and put back again.

Among the figs on the high land were the Black and the White Bourjassottes, the two varieties of Smyrna, Ronde Noire, Brunswick, Col di Signora Nero, Angelique, White Ischia, Agen and Pasteliere. All did fairly well, except the White Ischia, which was badly frosted. At Tulare also the White Ischia was more tender than the Bourjassottes. The only marked difference between the two stations in this group was in the case of Col di Signora Nero, which nearly escaped frost at Paso Robles, but was very badly frosted at Tulare.

Continuing along the avenue toward the swale, under less favorable conditions, White Adriatic, as at Tulare, proves fairly hardy, and grew well. A small tree planted in 1890–91 suffered somewhat. The Dalmatian was only a little touched with frost. Drap d'Or, on quite low ground, suffered much. De Constantine, as at Tulare, made a strong growth and nearly escaped frost. A Smyrna planted in the swale in 1890 gave an opportunity for comparison; it was considerably frosted, but not nearly as much as some other varieties. The Black Marseilles, which did well at Tulare, was "cut right down" to the ground with the cold. California Black, as at Tulare, was not in the front rank, only "of medium hardiness." Brown Ischia, as at Tulare, must be placed below the Black Californian. Early Violet, which did fairly well at Tulare, was severely frosted here. Doree Narbus, the most hardy of all at Tulare, "withstood the frost," though in one of the lowest and most exposed situations, but "has grown little." Hirtu du Japon was also hardy. Grosse Grise Bifere, which was one of the most badly frosted sorts at Tulare, was also very severely frosted here. So was the San Pedro and the Monaca Bianca. The last three were on adobe soil.

The foreman, Mr. R. D. Cruickshank, writes as regards the general subject that "some varieties are on adobe, some in the swale and some on the higher and drier land," as before stated. He adds: "The kind of soil they occupy has much to do with the maturity of the shoots in autumn and their ability to withstand the frost. I notice that those on the high ground have always suffered least, while none of them have been very severely frosted this year." The thermometer went down to 18 degrees one night this season and to 20 degrees on another. The figs have been touched regularly with frost every spring and fall since they have been planted, and on the whole have not done very well: "They do not occupy a very good piece of land, and at first had a hard struggle with the gophers." For this reason it has been decided to remove from the swale those varieties that do not withstand the frost there and plant them on higher land.

The result of the experiment can be summed up in a few words. The fig is not an entire success in this region unless the location is carefully chosen. It must be high and protected from severe frosts. When the swale on the station tract is more fully underdrained, figs will do better there, but it is not the place one would choose for a fig orchard. A tract 200 or 300 feet higher would give better results. For family planting it would seem that the Smyrna, White Adriatic, Doree, Narbus and several others to which allusion has been made are here among the more hardy sorts.

CLIMATIC OBSERVATIONS.

This portion of the Coast Range is subject to greater fluctuations of temperature than has been heretofore supposed. The mean monthly temperature can never be used as conclusive evidence of any climate. Nothing could be more misleading in reference to the climate under consideration—a climate representative of many higher valleys in the California coast ranges. The station is situated 80 feet above the Salinas river, about 800 feet above the sea level and forty miles due east of Estero bay, with a high mountain chain—the Santa Lucia—between. There are many places in the district where the thermometric variations are even more sudden than at the station. The following table, compiled from Mr. Cruickshank's weather reports, will show some of the peculiarities of the climate. Especial attention is called to the great daily variation of temperature; also to the sudden changes in relative humidity. The greatest atmospheric dryness in October and December occurred when a north wind was blowing. The hygrometer was exposed on the north side of the house, so that the conditions were favorable to extreme indications, but in any case the record is an extraordinary one. So far as human sensations are concerned this very atmospheric dryness serves to soften materially the impressions of the temperature variations.

METEOROLOGICAL TABLE SOUTHERN COAST RANGE STATION.

1891.	December..	November..	October.....	September.	August	July	June.....	May	April	March..	February...	January.....
BAROMETER (800 feet above sea).												
Mean barometer	29.52	29.59	29.31	29.26	29.20	29.21	29.23	29.26	29.33	29.52	29.26	29.45
Highest barometer	29.80	29.83	29.42	29.40	29.30	29.30	29.41	29.39	29.49	29.52	29.65	29.65
Lowest barometer	29.10	29.25	29.10	29.10	29.12	29.13	29.10	29.10	29.11	28.38	28.40	29.20
Monthly range	.70	.28	.32	.30	.18	.17	.31	.29	.38	1.14	1.25	.45
THERMOMETER.												
Mean temperature (Fahr.)	42.75	51.33	60 15	68.08	75.96	75.82	70.79	60.27	57.43	52.95	49.38	44.62
Maximum temperature (Fahr.)	66	78	90	104	109	112	112	89	90	76	64	68
Minimum temperature (Fahr.)	18	24	31	42	45	48	42	42	34	30	30	22
Monthly range	48	54	59	62	63	64	70	47	56	46	34	46
Greatest daily variation	38	43	50	48	53	54	52	43	47	44	28	38
Least daily variation	10	20	21	14	14	34	23	18	17	4	2	12
Mean daily range	22.35	34.66	35 93	36.16	45.41	45	38.86	26.38	28.73	23.19	17.50	26
PRECIPITATION.												
Rainfall	3.65							.07	.77	2.35	7.29	.55
RELATIVE HUMIDITY.												
Mean relative humidity of month	62	61	58	55	44	45	62	84	71	82	77	80
Highest humidity	93	88	89	93	66	80	87	90	97	85	86	86
Lowest humidity	13	38	12	24	26	32	36	36	43	74	69	50
Monthly range	80	50	77	66	40	48	51	54	54	11	17	36

FIGS AT THE FOOTHILL STATION.

At the Sierra Foothill Station near Jackson, Amador county, the figs are planted so as to encircle a hill. Some of them are only 25 feet above the lowest point on the grounds—the bank of the mining ditch; others are nearly at the top of the hill. They occupy several classes of soil—the red (slate) and the granitic; but few are on the pure granite soil. The foreman, Mr. George Hansen, writes that the leakage of the large reservoir on the top of the hill might have reached a few of the figs, but that the finest trees are entirely out of its reach, and none received any intentional irrigation. We have here a fine practical illustration of the suitability of fig culture to the rocky foothills of similar regions.

It is worth while to note, further, that the olives occupy the warmest part of the reservoir hill. The lowest temperature on record at the ditch is 20 degrees Fahr. Twenty-five feet is a small elevation, but it is likely that it makes a difference of several degrees in such a locality. When a few trees are planted on the newly cleared land beside the ditch, for purposes of comparison, the list of hardy varieties may be lessened. At present, as the foreman writes, there is not a single variety that shows signs of having suffered from frost this season. Some trees matured late, and the wood is still green, but sound. Two kinds, Du Roi and Brown Ischia, both at the top of the hill, kept their leaves later than others, so the leaves were frozen, but that did not affect the wood. Practically, none of the 51 varieties of the fig at the station can be called other than hardy, as now planted, above the valley.

One point worth comparison with the other stations is that of growth. Doree Narbus, noted as being especially hardy elsewhere, but as of slow and poor growth, is "gigantic" at the foothill station. Other superb growers are Brown Ischia, De Constantine, Monaca Bianca and White Adriatic. The following sorts can be called first-class growers, though not equal to the first named: White Genoa, Du Roi, Early Violet, Col di Signora Bianca, Bourjassotte Grise, White Ischia, and White and Black Marseilles.

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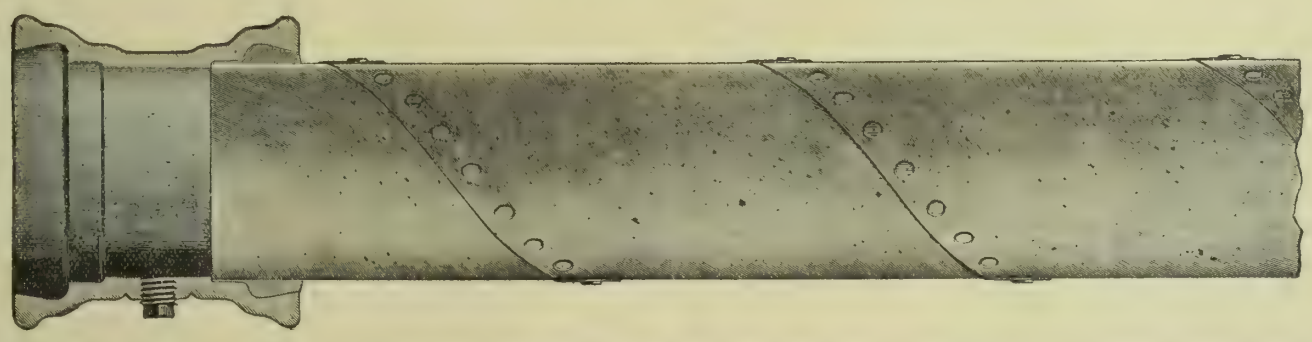
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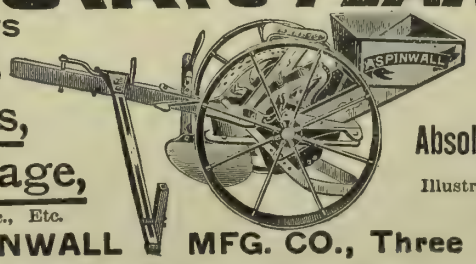


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The Grange and Its Relation to Class Legislation.

[A paper read at a recent meeting of San Jose Grange by MR. AMOS ADAMS and published by special request of the Grange.]

In the last annual address of the Worthy Master of the National Grange, in referring to what is called the sub-treasury system proposed by the Farmers' Alliance, and the land loan two per cent proposition advocated by many Grangers, he said that these measures if carried out would be class legislation which the Grange is opposed to.

Now, without discussing the merits or demerits of these propositions, the sub-treasury or the land loan bill at this time, I will call the attention of this Grange to some facts connected with the Grange movement, and we will then be better able to judge if the facts justify the Worthy Master of the National Grange in saying that the Grange is opposed to class legislation.

For this purpose let us turn our attention to the journal of proceedings of the National Grange at its session held at Atlanta in 1890, and there will be found 32 measures recommended by the Grange to Congress, to be enacted into laws, each one of which can fairly be called class legislation, and some of these recommendations are over the signature of the Worthy Master of the National Grange.

Moreover, the National Grange has had for years and has to-day a committee in the city of Washington, to urge upon Congress the enactment of laws favorable to Grangers and farmers as a class, and not favorable to mechanics or consumers generally, and our Worthy Master Brigham is at the head of that committee.

In fact the State Grange of California has for years had a Legislative Committee, which has been active during the sessions of our Legislature in having laws passed favorable to Grangers and farmers.

It was class legislation when the Legislature of California voted $10,000 to bring the National Grange to the Pacific Coast, and enabled us to grasp the hand of our worthy Bro. Brigham on the sunset side of this continent.

The statutes of the United States teem with class legislation recommended and voted for by stanch Grangers. I instance the tariff law passed by the last Congress as purely class legislation, then again subsidizing railroads and not wagon roads—subsidizing contemplated ship canals and not irrigating canals; subsidizing steamships and not sailing ships, paying a bounty for the manufacturer of sugar and not to the farmer who grows the beets from which the sugar is made. Loaning money to National banks at two per cent interest and not to farmers on cultivated lands. The eight-hour law. The law exempting Congressmen from certain legal processes during the sessions of Congress and not other government employes. The free coinage of silver. Giving to farmers a cabinet officer and not to mechanics is all class legislation, and all of these measures have found active, intelligent, earnest, devoted grangers advocating and voting for them.

The State Grange of California has for years up to the last session passed resolutions, asking Congress to make appropriations to foster the silk industry, and not to foster the potato industry in California.

Can it be truthfully said then that the Grange is opposed to class legislation?

What the Grange wants is its equal share of class legislation.

What would so paralyze the prosperity of our country, block the wheels of progress, retard the advancement of civilization as would the attempt to govern under general laws, this vast country with its varied climates and wonderful productions, stretching from the Atlantic to the Pacific Oceans, from the Aleutian Islands with their seal rookeries of the north to the Everglades in the sunny south, with its infinite variety of interests and possibilities?

Class legislation, like special and legislation of a general character, should be so formulated that equal and exact justice should be done to all as near as possible.

If the Grange is too conservative, using that term instead of one more forcible and possibly a more appropriate one, to avail itself of the ordinary legislation of the country—it would write itself up as being too pure, too exalted ever to attain a very advanced age in this practical, utilitarian era of the world, and we may soon be called upon to weep over our treasure laid up, possibly, in heaven.

The writer of this takes no stock in, nor does he believe the great body of Grangers throughout the country are so opposed to the two per cent land loan bill, that they would prefer to pay ten per cent per annum for money instead of two per cent, simply because some of its enemies choose to call it class legislation.

What! the Grange opposed to that kind of class legislation? Let me call your attention to a report the Worthy Master made to the National Grange in 1890, while acting as Chairman of the Legislative Committee. He says, "For a long series of years this National Grange has been on record in favor of free and unlimited coinage of silver, with a view to a larger volume of currency with which to transact the business of the country.

Acting upon these instructions, your committee urged the complete remonetization of silver, and its unlimited coinage.

The law enacted did not fully meet our views, but will undoubtedly afford some relief. It is an advance toward an end that will doubtless ere long be reached."

What is this but class legislation of the most pronounced and virulent type.

The law, the committee says, is an advance toward an end which compels the Government to enter the market and buy 54,000,000 ounces of silver per annum at a cost of about $60,000,000. The first and direct benefit of this law is to those who own silver bullion. This is class legislation because it discriminates in favor of silver and against wheat and fruit. And yet we fail to hear any protest from Grange or Grangers, no, not even from the Legislative Committee or Master of the National Grange.

I suppose the report recommended the unlimited coinage of silver instead of iron because silver is being used as one of the currencies of the country.

But why did the report recommend that the class of men who had silver bullion on hand, or were engaged in mining for silver ore, should have the product of the accumulations of their labor coined into dollars to the exclusion of that other class which has copper ore on hand, a metal which the Government coins into a circulating medium and makes it a legal tender, if it was not to favor class legislation, which it only condemned when it is in favor of farmers—many farmers—who, in their laudable efforts to obtain a home for themselves and their families, that they might sit under their own vine and fig tree, contracted debts in the purchase of the land which constitutes their homes, are now, and have been for a long series of years paying such exorbitant rates of interest, have at last lost their homes and are now penniless wanderers, while other farmers, crushed to the earth without hope, without encouragement, are dragging out an existence made miserable by paying high rates of interest.

What Grangers, as well as farmers who are not Grangers, want, and what they are justly entitled to, is not to be be relieved from their indebtedness, but the enactment of a law under which the Government shall loan money to farmers at as low a rate of interest as it does to those who own government bonds.

Therefore I submit that it is too late in the day, if the time ever was, to flaunt the scarecrow of class legislation in the faces of intelligent farmers, to defeat the the land loan bill, the best and only practical measure ever proposed in Congress for the relief of the farming class.

The foregoing paper was indorsed by San Jose Grange No. 10, at its regular meeting held January 16th, and the PRESS was requested to publish the same.

R. P. MCGLINCY,
Corresponding Secretary.

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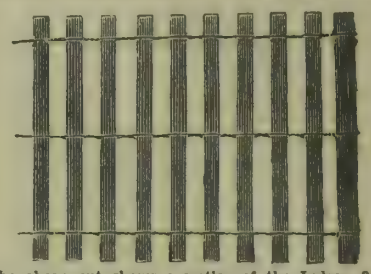
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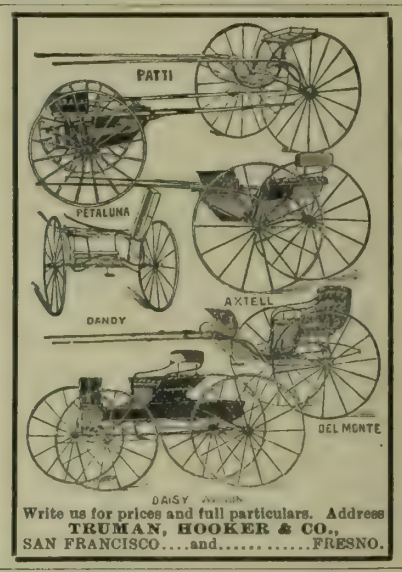
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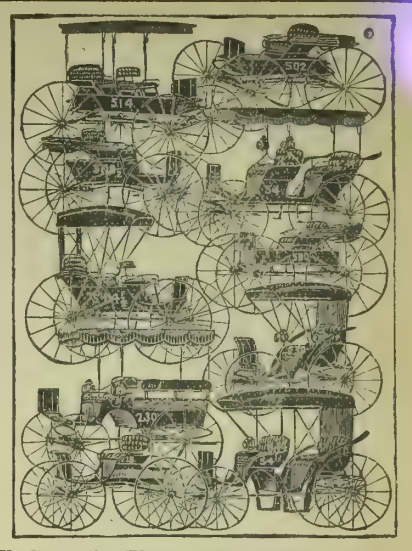
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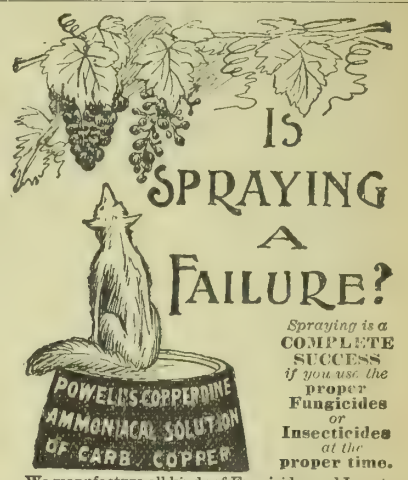
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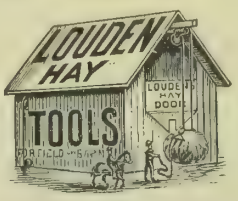

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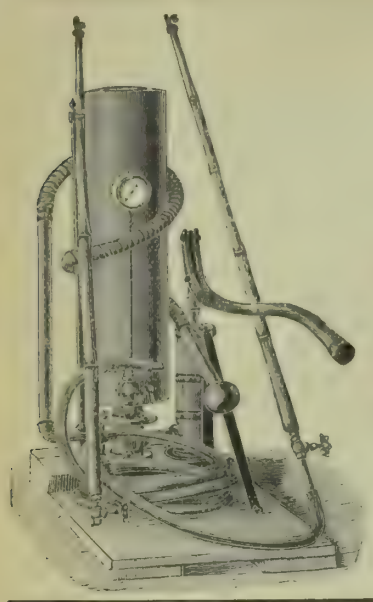
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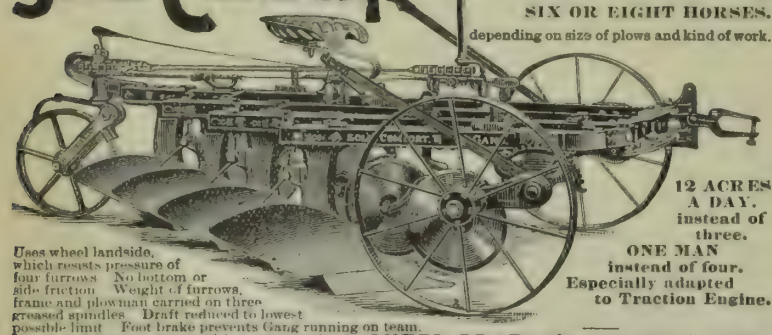
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Seeds, Plants, Etc., Continued on Pages 178 179.

POULTRY YARD.

National Poultry Association Exhibit.

The National Poultry Association exhibit at Los Angeles opened February 10th and continued three days. The exhibit was very large, and included some of the finest birds in the country. Many of the most prominent breeders at the East were in attendance and expressed themselves as highly pleased. One of the visitors, Alexander Wilson of Evansville, Ind., is reported by the Los Angeles *Express* as saying: "I was surprised to see the interest that is generally taken in poultry-raising in this city. Nearly every one keeps hens, and that, I suppose is the reason why the subject is so fraught with importance to them. There have been great strides taken in the past five years relative to poultry culture. The great object is to get the greatest number of eggs possible and the most approved breed for that purpose. The subject will be discussed in all of its bearings, and the discussion will be appreciated by the owners of hens in this city. There are a good many people in the East who have a 'fad' for hen-raising, the same as a man may have a hobby for horses or dogs. Here in California, I presume, the utilitarian idea is uppermost. That is what the society is organized for, and this is what interests every one. I am sure that all the delegates will be more than pleased with Los Angeles."

In its description of the exhibit, the *Express* of February 9th says: "A pen of Light Brahmas, owned by the Pacific Incubator Co., arrived this morning. They are perfect beauties, and their crowing apparatus are in excellent shape. Another pen of Light Brahmas from Taunton, Mass., owned and bred by Philander Williams, elicited encomiums from all the chicken lovers in the hall. This pen is claimed to be the best exhibit of Light Brahmas in the world. H. G. Keesling of San Jose sends a pen of Mottled Langshans valued at $200. It is claimed that Keesling wants $50 a setting of eggs of this species. Keesling is very proud of this breed, having originated it, and is buoyant in the hope of their getting the highest percentage. Keesling also has a pen of Black Langshans. Mrs. Purdy of Lawrence, Cal., has sent a pen of Buff Brahmas, a species introduced by her. They are beautiful birds, and it is claimed that they can outlay any other kind of fowl. There are several pens of Buff Leghorns in the hall coming from all parts of the country. To enumerate the variety and number of fowls arrived, would take the whole side of this paper. Suffice it to say that the exhibition of fowl will exceed anything of the kind ever had in this country. The value of the fowl exhibited is estimated at $100,000. Two hundred of the exhibits are valued at $20,000. In point of number and excellence the American class leads, with the Asiatics a good second and the Mediterraneans coming up in the rear. Although the fowls will be judged by breeding pens on exhibit, they will be classified as cock, cockerel, hen and pullet. They will be judged on the standard of 100 per cent. No pen getting less than 85 per cent can be considered 'in it' as prizes are concerned. A rating of 85 per cent at this exhibition will be equal to 97 per cent at the ordinary county fair exhibition."

On Friday, Feb. 12, the following officers were elected for the ensuing year:

President—Orrin Scotten, Detroit, Mich.

Vice-Presidents—H. S. Babcock, Providence, R. I.; H. A. Bridge, Columbus, O.; Sid Conger, Flat Rock, Ind.; E. R. Spaulding, Jaffrey, N. H.: David A. Nichols, Bridgeport, Conn.; Col. R. J. Hamilton, Springfield, Mass.; F. A. Mortimer, Pottsville, Pa.; J. Y. Bicknell, Buffalo, N. Y.; J. E. Diehl, Beverley, N. J.; Loring Brown, Bolingbroke, Ga.; Ross A. Smith, Charleston, S. C.; Geo. O. Brown, Baltimore, Md.; James H. Cayford, Montreal, Canada; George T. Pitkin, Chicago, Ill.; John D. Mercer, Los Angeles, Cal.

Secretary and Treasurer—George E. Peer, Rochester, N. Y.

Advisory Board—George W. Bristol, Conn.; Charles A. Sweet, Buffalo, N. Y.; Philander Williams, Taunton, Mass.; W. H. Churchman, Claymont, Del.; James E. White, Washington, D. C.

An Executive Committee and Finance Committee were also chosen.

THE PREMIUMS AWARDED.

The judges selected to judge the poultry were: Geo. O. Brown, one of the editors of the Baltimore *Sun*; A. A. Bridge of Columbus, O., and Sharp Butterfield of Ontario, who made the following awards:

BARRED PLYMOUTH ROCKS.

O. J. Albee, Lawrence, Cal., cock, first prize, score, 90¼.

J. D. Nash, Pasadena, Cal., second prize, cock; score, 88¾.

J. D. Nash, Pasadena, Cal., cockerell, second prize; score, 88.

C. T. Paul and S. Tyler each have cockerells scoring the same, but according to A. P. A. rules preference is given to the highest bird where score is the same.

H. H. Deaves, second prize, pullet; score, 88.

Same, third prize; score, 87½.

S. Tyler, Pasadena, fourth prize, B. Plym. Rock; score, 87.

LIGHT BRAHMAS.

Philander Williams, Taunton, Mass., first and second cocks, score, 72¾ and 72.

W. B. Terress, San Bernardino, first and second prize, prize cock, score, 92½ and 90¾.

Philander Williams, first and second on Light B., score, 93 and 92.

Pacific Incubator Company, Oakland, Cal., first and second on Light B., score, 92 and 91.

DARK BRAHMAS.

O. J. Albee, Lawrence, Cal., first and second cock, score, 92, 92.

Pacific Incubator Company, first on cockerel, score, 92½; O. J. Albee, second cockerel, score, 90; Rob Bowen, Pasadena, third cockerel, score, 88.

J. F. Bentler, Boyle Heights, first on pullet, score, 92¾; O. J. Albee, second, score, 91½; Pacific Incubator Company, third, score, 90.

O. J. Albee, hen, second prize, score, 90.

Buff Brahmas—Mrs. E. C. Purdy, Lawrence, Cal., first prize cockerell, first, second and third pullet, no score. These are the only birds of this kind in the United States.

SINGLE COMB BROWN LEGHORNS.

W. W. Thurston, Los Angeles, first cock, score, 92; same, second on cock, 90½.

W. W. Thurston, first cockerel, score, 93½; W. W. Thurston and O. J. Albee both score same for second prize.

W. W. Thurston, first and second prize on hen, 92½ and 92½.

O. J. Albee, first and third on pullets, score, 93¾ and 92.

George H. Case, Boyle Heights, second on pullets, score, 92½.

INDIAN GAMES.

E. C. Thurber, Alhambra, first cockerel; James Fullerton, Orange, second cockerel.

E. C. Thurber, first on cock; first, second and third on hen.

L. Tyler, Pasadena, first on Pullets; James Fullerton, second on pullets, G. W. Knox, Los Angeles, third on pullets.

White Plymouth Rock, Niles & Co., first on cockerel, first on Pullet; Pacific Incubator Co., second on cockerel.

SILVER WYANDOTTES.

S. Tyler, Pasadena, first and second on cockerel, score, 90½ and 90; A. E. Olhausen, third cockerel, score, 88.

S. Tyler, first, second and third hens, score, 91, 91 and 90½

S. Tyler, first and second on pullets, score, 92½ and 92; James Mitchell, St. Helena, Cal., third pullet, score, 90.

S. Tyler, first on breeding pen.

BLACK SPANISH.

Robert Raven, Pasadena, first prize, hen and pullet, score, 97.

ROSE-COMBED BROWN LEGHORNS.

Cock—J. Edmundson, Pasadena, second, 89.

Hen—J. Edmundson, Pasadena, first, 93, and second, 92½.

Pullets—J. Edmundson, Pasadena, first, 90½, and second, 89½.

SINGLE-COMBED WHITE LEGHORNS.

Cock—Mrs. R. Dunne, Garden Grove, first, 91; James J. Brown, city, second, 90.

Hen—Mrs. Dunne, Garden Grove.

BUFF COCHINS.

Cockerel—E. E. Purdy, Lawrence, first.

Pullets—E. E. Purdy, first, second and third.

Hen—E. E. Purdy, first.

Pearl Guineas—S. Tyler, first.

Parrot—C. B. Goodell, first.

WHITE WYANDOTTES.

Cock—O. J. Albee, Lawrence, first, 91½.

Cockerel—C. E. Conklin, city, second, 88½.

Hen—Mrs. McFadden, Santa Ana, first, 93; O. J. Albee, Lawrence, first, 93; second, O. J. Albee, 92½.

Pullets—C. E. Conklin, city, first, 93½, and second, 91½.

FRIZZLES.

Cock—Mrs. Kitten, city, first.

Hen—Mrs. Kitten, city, first.

MOTTLED LANGSHANS.

Cock—H. G. Keesling, San Jose, first.

Cockerel—H. G. Keesling, San Jose, first.

Hen—H. G. Keesling, San Jose, first.

Pullet—H. G. Keesling, San Jose, first.

BUFF COCHINS.

Cockerel—Pacific Incubator Company, Oakland, Cal., first, 93, second, 92½.

Pullets—Arthur E. Olshausen, city, first, 92½, second, 90½, and third, 89½.

WHITE-FACED BLACK SPANISH.

Cock—S. Chase, city, first, 92; Robert Rowan, Pasadena, second, 90½.

Cockerel—Robert Rowan, Pasadena, first, 92½, second, 90½.

Hen—S. Chase, city, first, 93½: Robert Rowan, Pasadena, second, 92½.

Pullets—Robert Rowan, first, 96, second, 94.

HOUDANS.

Cockerel—Pacific Incubator Company, Oakland, Cal., first, 90¾; James T. Brown, City, second, 90½.

Hen—James T. Brown, city, first, 92½, second, 92.

Pullet—George Bacon, city, first, 88½.

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A. C. GODFREY—Oregon.
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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING FEB. 9, 1892.

468,555.—ADJUSTING DEVICE FOR CABLE GRIPS, Anderson & Fairchild, S. F.

468,540.—ORE SEPARATOR—Henry Cane, Spokane Falls, Wash.

468,765.—CAR COUPLING—F. A. Fox, S. F.

468,655.—MACHINE FOR ROLLING HOLLOW RODS—J. S. Griffin, Roslyn, Wash.

468,658.—PENCIL ATTACHMENT—J. H. Hamill, Globe, Ariz

468,344.—STUMP PULLER—A. Hopkins, Centralia, Wash.

468,544.—CRUSHING MILL—F. A. Huntington, S. F.

468,664.—FILTER—E. M. Knight, S. F.

468,665.—CARPENTER'S SQUARE—L. C. Labady, Tacoma, Wash.

468,430.—WHEEL PUMP—Thos. Powell, Stockton, Cal.

468,364.—BOOT CLEANER—J. B. Prickett, Forest Grove, Or.

468,694.—PROPELLING VESSELS—J. M. Robinson, Vacaville, Cal.

21,338.—DESIGN FOR KEY TAG—C. McIntosh, Tacoma, Wash.

The following brief list by telegraph, for Feb. 16, will appear more complete on receipt of mail advices:

Allen S. Brown, Los Angeles, Cal., ventilator and drip tray; Joseph Brumbaugh, Gold Hill, Oregon, ore crusher; John Downs, San Francisco, sewer gate; George W. Forbes, Gubserville, Santa Clara county, cultivator; John H. Howard, Pasadena, cooking steamer; Edmund R. Mallett, San Francisco, swimming apparatus; Kelly McFarland, Clackamas, Oregon, coupler for caps and fuses for giant powder; Adolph Somer, Berkeley, viscid fatty compound; George A. Stevenson, Los Angeles, elevated railway structure and double traction motor for elevated railways; Charles W. Tremain, Portland, Oregon, steam stamp; Houghton Sanger, S. F., electric arc lamp; A. J. Painter, Pasadena, Cal., motor for street cars; L. A. Steiger, San Jose, Cal., interlocking brick paving block; Frank Walker, Los Angeles, Cal., automatic flushing apparatus.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

More Concerning the New Enemy of the Tussock Moth.

STATE UNIVERSITY,
BERKELEY, Feb. 15, 1891.

TO THE EDITOR:—The insect mentioned in the RURAL PRESS of Nov. 7th, as a new enemy of the Tussock moth, proves to be a beetle, known to science as *Perimegatoma variegatum*. I have had opportunity to carefully study the insect, both from material sent me by Mr. Radcliff of Watsonville and from some collected here at Berkeley. It makes a very important addition to the list of our beneficial insects.

Perimegatoma variegatum was first described in 1875 by Dr. Horn, in the transactions of the American Entomological Society. It is probably a native insect, but had escaped the observation of entomologists before. In the *American Naturalist* of 1882, Prof. Riley says that it injures insect collections, and another species of the same genus has been supposed to feed on the *Icerya*.

This would be a valuable insect to export to the Eastern States, where the Tussock moth is quite as injurious as it is here.

C. W. WOODWORTH.

Thinning Fruit Blossoms.

PLYMOUTH, MICH.

TO THE EDITOR:—Much is said in your paper about the necessity of thinning fruit. Would it not be better to thin out the surplus fruit buds or blossoms after the fruit is formed than to wait till much of the vitality of the tree is expended in growing the surplus fruit? "A stitch in time" will thus "save nine."—J. S. TIBBITS.

Thinning by removing blossoms would be too dangerous, because out of a heavy bloom it often happens that none too much fruit sets. In fact, it is not safe to thin until the natural "drop" has occurred and you see how much is left. With some fruits, some thinning can be done by twig thinning and pruning. The regular thinning must be done after the fruit is surely started on its course.

Meeting of Pioneer Horticulturists.

The California State Horticultural Society invites all pioneer horticulturists to attend a meeting which will be held at San Francisco on Friday, Feb. 26, at 1 o'clock P. M. in the hall of the State Board of Horticulture, 220 Sutter St. S. F. Those who laid the foundations of the present great horticultural industries of California are passing away, many of their important undertakings and accomplishments are not upon record. It is important in view of the great present and still greater future extension of these industries, that their early history should be better understood For this reason the Horticultural Society issues this invitation to all who were engaged in California horticulture previous to 1865, to meet for discussion of the early deeds in which they were participators.

It is also contemplated that such a reunion will be very pleasant to all who attend, and may result in other similar meetings in the future. Gen. John Bidwell, of Chico, has signified his interest in this meeting and will preside during its deliberations, if possible. Every Horticultural Pioneer is cordially invited and is respectfully urged to be present.

FOR SALE.

One half breed Norman Stallion, nine years old, weight, 1700 pounds. Will be sold cheap. Can be seen at Mrs. Thalman's residence, Pinole, Contra Costa Co., Cal.

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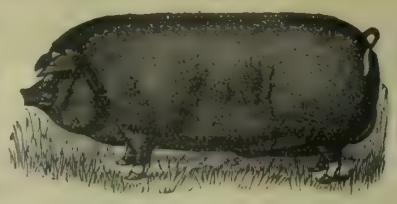


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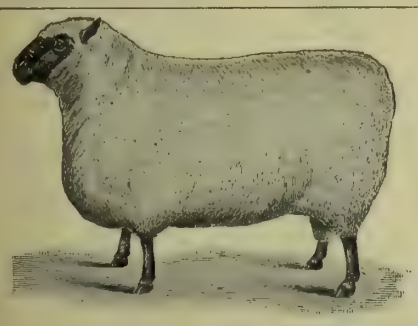
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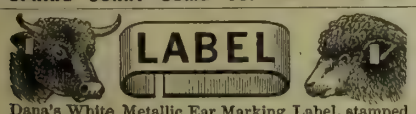
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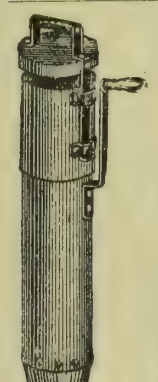
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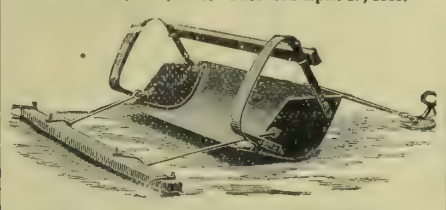


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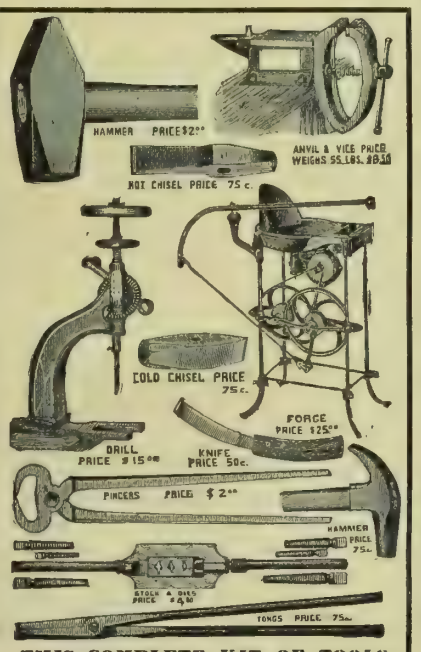
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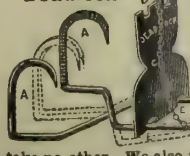
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Capital paid up and Reserve Fund	**800,000**
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 17, 1892.

The weather continues to be all that farmers can desire for crop purposes, yet confidence in the general result will be more or less "shaky" until the spring months assure us of well distributed rains in the rural districts. The acreage seeded to grain is not only the largest on record, but the weather so far has been uniformly favorable for the growing plant. This information is not confined to any particular section, but covers every locality in the State. While the rains have been well distributed and the precipitation ample for present requirements, the large deposits of snow on the mountain ranges give assurance of a liberal supply of water for irrigation purposes well into the summer, and at the same time give reasonable hopes of "staving off" the dreaded north winds until after harvest. Other crops, outside of grain, are reported in most excellent condition, with the outlook favorable for large outturns. Money continues easy, with still larger supplies of funds looked for after assessment day.

British Grain Market.

LONDON, Feb. 15.—The Mark Lane *Express* says: English wheat has recovered 6d, but trade has been slow. Foreign wheats are less depressed. The Continent is buying freely of California, Argentine and India at 6d, advance. California sold at 39s 6d and Red Winter at 39s 8d. Flour is quiet, and American is in fair demand, with prices 6d per sack better. Corn is weak—New American, 20s 9d. Barley and oats are firm.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April	May	June
Thursday	.....	7s0⅞ d	7s 8½d	7s8½d	7s07½d
Friday	7s08d	7s09 d	7s09 d	7s09 d	7s08½d
Saturday	7s09½d	7s09½d	7s09½d	7s09½d	.....
Monday	7s10½d	7s10⅝ d	7s11 d	7s11½d	7s11½d
Tuesday	8s	8s01½d	8s01½d	8s01½d	8s01½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	39s	39s	39s⅛	Steadier.
Friday	39s	39s	39s	Rather firm.
Saturday	39s3d	39s3½	39s3d	Upward tendency.
Monday	39s3d	39s3d	39s6½	Improving.
Tuesday	39s6½	39s9½	40s	Strong.

To-day's cablegram is as follows:

LIVERPOOL, Feb. 17.—Wheat, quiet but steady. California spot lots, 8s 1d to 8s 2d; off coast, 39s 6d; just shipped, 39s 9d; nearly due, 40s; cargoes off coast, quiet but steady; on passage, a pause in the demand but no alterations yet, white wheat continuing firm; Mark Lane wheat, firm; English country markets, generally dearer; French, firmer.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	171	171½	176¼	168	165½
Friday	172½	172⅝	172	169½	167
Saturday	176½	173⅛	173⅝	170⅛	168
Monday	178½	178	176⅝	173	169⅝
Tuesday	177	176¼	175	172	168¾

The following is to-day's telegram:

NEW YORK, Feb. 17.—Wheat, $1.06½ for March, $1.05¾ for April, $1.03¾ for May, $1.01¾ for June and 99¾c for July.

CHICAGO, Feb. 17. Wheat, 92¼c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	166½	165	.....	....	142½	142½
Friday	168½	169	.....	....	144½	143½
Saturday	170	169½	148½	147½	145½	143½
Monday	171	169½	.....	....	144½	144½
Tuesday	171½	170½	.....	....	144½	144½

The following are to-day's recorded sales on Call:

Informal Session—Buyer season—500 tons, $1.70½; 100, $1.70¾; 200, $1.70⅞ ₰ ctl. Seller 1892—100 tons, $1.43½ ₰ ctl. Regular Session Buyer season 100 tons, $1.70¾; 1700, $1.70½; 1100, $1.70⅝; 100, $1.70¾. Seller 1892—100 tons, $1.43¾ ₰ ctl. Afternoon Session — Buyer season 200 tons, $1 71¼; 100, $1.71⅝; 100, $1 71¾. Seller 1892 100 tons, $1.44½; 100, $1.44¼; 100, $1.44¾ Buyer August—200 tons, $1.47½; 100, $1.47½ per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892 H.	L.
Thursday	102¾	101¼	94½	94½	....	....
Friday	103½	102½	....	....	....	....
Saturday	101	100	....	94½	....	....
Monday	102	101	94½	94½	....	....
Tuesday	101½	101¼	94½	....	....	....

The following are to-day's recorded sales on Call:

Informal Session - Buyer season—100 tons, $1.00½; 100, $1.00¼; 100, $1 01; 500, $1.01½; 100, $1.01¾; 100, $1.01¾ ₰ ctl. Regular session—Buyer season—400 tons, $1.01½ ₰ ctl. Afternoon session Buyer season—500 tons, $1 01½; 500, $1.02 ₰ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 15.—All the Eastern seaboard markets report good action, but no better prices. Manufacturers confess to the possession of liberal orders, but they look for soft spots in the market and they do not intend to risk the extra cost for material for big lines of goods. They have been on the right side of quotations for a long time and the seller's side is not propped up by the abundant existence of foreign clips. All the millers are making the Australian blend, as they are compelled to maintain a uniformity of the previous output. Sales at New York aggregate 1,700,000 lbs., of which 1,000,000 lbs. were of Donskoi. Boston sold 2,272,500 pounds of domestic and 621,000 foreign; fleeces and unwashed are unchanged. The quality of Australian wools in late arrivals runs less even than before. Philadelphia reports fair trade in good worsted mill-wool, and fair to steady market for other.

Eastern Hop Market.

NEW YORK, Feb. 15. — The situation is weak in prices, with an actual break at the close on export orders. A few brewers bought sparingly until Friday when a concession brought fair business in their grades. Pacifics are quoted stronger than State. Futures ruled weak, with some recovery at the close. March California, 23c was bid; April, 23½c; May, 24¼@24¾c, bid and asked; June, 24¼@25c; July, 24½@26c; August, 26c asked; 91s, 20@25c; common to prime Coast, 20@25½c; others unchanged.

NEW YORK, Feb. 16.—In hops spot business is moderate. The export and brewers' trade is dull. Prices are unchanged. A vague sort of a rumor is in circulation that a local firm has secured control of the bulk of the supply of California prunes in this market and is working to get a tighter grip upon the market for the goods.

Eastern Raisin Market.

NEW YORK, Feb. 15.—For raisins there is no wholesale call, and grocers seem fairly well stocked for present wants. The market is no lower, 3-crown bags being quoted at 5c; C boxes, $1.10@1.20.

A leading commercial paper refers again to the favorable prospects of the California raisin trade, based on importation statistics, and adds: Since the publication of those statistics, the returns of shipments from California have been given out, and the figures suggest that California has already made great strides in the direction of supplying the outlet that was formerly a field for foreign raisins. As a matter of fact, it would seem practically demonstrated that California has produced enough raisins to supply an outlet equal to that which foreign goods found in this country when the latter had the field almost exclusively, and it is suggested that, weather conditions permitting, there will be enough raisin grapes grown there the coming season to bring the supply of California raisins fully up to the crop of last year and the importations from Europe combined.

Eastern Dried Fruit Market.

NEW YORK, Feb. 15.—Prunes move fast enough to maintain confidence. Large sizes are scarce, sixties to seventies, in bags, 7¾ cts.; seventies to eighties 7¼ cts.; eighties to nineties, 6¾ cts.; nineties to one hundred, 6¼ cts. Evaporated peeled peaches are offered at 18 cts. In unpeeled there is better trade, though the range is wider 5¼@5⅛ cts Apricots—Weak, sacks, 6¼@8 cts.: fine boxes, 9 cts.

CHICAGO, Feb 16.—California dried fruits rule about steady, and though not active there is a fair showing of business. The demand runs to raisins and large prunes and choice grades of peaches and apricots. Ordinary grades of the latter descriptions are slow. Prunes, 40 to 50 to the lb, in sacks, new, 9¼c; 50 to 60, 8½c; 60 to 70, 8c; 70 to 80, 7½@7¾c; 80 to 90, 7@7¾c; 90 to 100, 6½c; 100 to 120, 5@6c; ungraded, in sacks, 7@7¼c. Apricots, new, choice to fancy, sacks, 9@10¼c; fair to good, 6@7½c. Peaches, peeled, boxes, 17 to 18 to the lb, 16@17c; peeled, sacks, 14@15c; unpeeled, 5@9c. Nectarines, sacks, 6½@7c. Pears, sacks, 5@8c.

Miscellaneous.

NEW YORK, Feb. 15.—Light amber honey is firm at 7½c. Beeswax is quiet and unchanged. It is now too late for sales of comb foundations.

Lima beans—The large supply here deadens the market; spot is slow, $1 75.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 15, '92, were as follows:

Flour, qr. sks.	85,667	Bran, sks	7,568
Wheat, ctls.	112,2 3	Buckwheat "	26
Barley, "	14,855	Middlings "	2,968
Rye, "	30	Chicory, bbls	70
Oats, "	1,672	Hops, "	....
Corn, "	3,669	Wool, "	16
*Butter, "	617	Hay, tons	1,992
do bxs	135	Straw, "	187
do bbls	....	Wine, gals	296,740
do kgs	....	Brandy, bxs	12,980
do tubs	....	Raisins, bxs	1,047
do ½ bxs	83	Honey, cs	....
†Cheese, ctls.	391	Peanuts, sks	....
do bxs.	48	Walnuts "	77
Eggs, doz	59,152	Almonds "	25
do " Eastern.	....	Mustard "	720
Beans, ctls	9,568	Flax "	....
Potatoes, sks	22,977	Popcorn "	....
Onions, "	1,319	Broom corn, bdls	107

*Overl'd, — ctls. †Overl'd. — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to Feb. 14, '91.	July 1, '91 to Feb. 13, '92.
Flour, ½ sks	200,747	331,258
Wheat, ctls.	867,505	1,128,861
Barley, "	205,470	22,080
Oats, "	251 5.7	326,284
Wool, bales	5,798	5,968
Hops, "	368	388
Rye, sks	....	3,293
Potatoes, sks	36,211	55,497

Cereals.

The Liverpool *Corn Trade News* states that the latest reports indicate that the condition of wheat in India is 15 per cent below that of last year, indicating a shortage of at least 38,000,000 bushels as compared with last year. This foreshadows a crop of 217,000,000 bushels against 255,000,000 bushels last year.

The reciprocity treaty with Great Britain, covering the British West Indies, has been negotiated, and makes a reduction of 25 per cent on all breadstuffs and provisions from the tariffs of each separate colony. An exception is made of Trinidad, where the tariff on flour is not to exceed 75 cts. per barrel.

A writer in the San Francisco *Call* says that wheatgrowers pay far too little attention to a factor in their business which is as important as the foreign harvests. That is, the rate of ocean freights. The freight market is very fluctuating, and the freight, whatever it may be, comes out of the farmer's pocket. A few weeks ago freights to the United Kingdom stood at 50 shillings, that is, the California wheatgrower paid to the ship-owner $12 for carrying a ton of wheat to Liverpool. Now freights are 20 shillings, which reduces the charge paid by the farmer to the ship-owner to $5. The farmer gets, or should get, just $7 more for his wheat than he could do in December. It would seem that it would pay the farmer to bestow a little attention on the course of foreign shipping. As a general rule, the vessels on which we rely to carry our wheat to market sail out of a British port with a cargo of assorted goods for Australia; load in Australia with a cargo of coal for San Francisco, and fill up here with wheat for Cork or orders. But if anything interrupts this combined voyage, the nominal price of freights rises or falls. When the great strike among the coal miners in Australia in 1890 stopped coal shipments to San Francisco, ships lying in Melbourne, Sydney and Auckland cleared in ballast and went anywhere their owners fancied there was a chance for a cargo; our supply of shipping fell off, freights rose, and the California farmer got so much less for his wheat.

The following is the preliminary report received from the local Government in India on the crop of the season 1891-92:—"The area estimated to have been sown with wheat in the Punjab up to November 30, 1891, is 7,153,400 acres, being 1.1 per cent above the area shown in the final forecast last year, and 12.4 per cent above the estimate of last year's first forecast. The increase has occurred entirely in unirrigated areas in which it amounts to 4.7 per cent. "*Bombay Presidency.*—The information for this report is generally up to December 5th, but sowings continue; hence the information is incomplete. "*Gujarat.*—The area is 312,000 acres, or an increase of 21 per cent over the corresponding forecast of last year. "*Gujarat States.*—The area is 238,000 acres, but the information is incomplete. "*Deccan.*—The area is 899,000 acres. In spite of an increase of 2.7 per cent over the corresponding forecast of last year, this year's area will be below that of last year, except in Khandesh and North and East Nasik, where the condition is good. "*Karnatak.*—The area is 240,000 acres or a decrease of 38 per cent below the corresponding forecast of last year. "*Karnatak States.* The area is 64,700, or 44 per cent below last year's corresponding area. "*Sind.*—The area is 361,000 acres, or a decrease of 7.5 per cent below the corresponding forecast of last year. "In Khairpur the area is 30,000 acres; the decrease is due to want of moisture. Sowing in progress." *North Western Provinces and Oudh.*—The first report received from the local Government:—"The rain in June and July was generally light and afforded great facility for plowing the fields for *rabi*; in August it was continuous, but in September and October it fell with sufficient intervals for *rabi* plowing. Land was sufficiently moist at the time of sowing, and germination was excellent. Prospects very good on the whole. The area is 4 per cent more than last year.

The local wheat market has not only ruled strong the past week, but made quite an advance. The closing is strong. The higher prices were generally looked for and which were indicated in our writings in November and December, 1891, but the prevailing impression was that no decided improvement here could be expected until after the first Monday in March, for in February, or up to assessment day, many holders would let go rather than pay taxes on their holdings. Receipts of wheat from Oregon and Washington continue light. Our advices from up north indicate that over three-quarters of the surplus has been marketed. With higher prices for wheat abroad, there is a gradual strengthening in ships at this and neighboring ports, but the most of the foreign market's advance has gone to wheat

In grain futures, trading on Call has been fair It is said that there is quite a short interest, which, if correct, may result in still better prices, providing the bulls do not let the bears settle with money consideration and not with the actual grain.

Barley has been marked up under steady buying. There is still some inquiry for seed, but the large bulk of purchases is for feed. Bright grades are scarce, and any marked demand is met by higher asking prices. Receipts are lessening, particularly from coast ports. The lighter receipts cause a steady call on the reserve stock, which will show a decided falling off by the close of the month. It is claimed by many well-informed dealers that present low ranges for barley are due to holders forcing sales so as to avoid paying taxes.

Free receipts of oats and a more general desire of holders to sell before assessment day, have created an easier tone to the oat market, with lower prices quoted. The demand for feeding is reported fair. It is claimed that a lessened acreage has been seeded to oats in this State.

Corn is steady, with a fair home and export demand ruling. It is claimed that an increased acreage will be planted this season. So far, the weather has been favorable to the planting.

Buckwheat and rye are unchanged.

Feedstuff.

Ground barley and middlings are strong, with higher prices ruling for the latter. Feedmeal and bran are firm. The consumption for feeding continues quite large, with the bulk of the demand coming from feeders, who are fattening stock for market.

The market for hay is in somewhat of an anomalous condition. While the supply in this State is light, yet the market is easy. Probably the latter condition is due to the favorable outlook for the hay crop, with confirmed advices of a large increase in the acreage devoted to it. Range and pasture feed continues to improve.

Fruit.

Apples show more strength, with very fancy placed readily at outside quotations. Receipts from all sources show a decided falling off, while the demand holds up quite well.

It is quite generally claimed that the season for all kinds of deciduous fruits will open earlier this year than usual, provided similar weather to that we are now enjoying holds in next month.

The orange market continues glutted with undesirable sizes and also with frosted. To sell these kinds, very low prices must be accepted. Choice oranges are in free demand, and are readily placed at $1 a box over our outside quotations. Fancy Navels of desirable sizes sell at from $4 to $4.50 a box for Riverside and Duarte. Advices from the southern part of the State continue to report free shipments to the East. There is an intimation in the correspondence of a leading firm in this city that some growers are holding their choice to fancy oranges in expectation of getting better prices later on.

Raisins show a stronger tone, with a slight advance reported to be obtainable for choice to fancy. The supply in the State of the last two grades is light.

The dried fruit market exhibits a better tone, with an advance in the more choice grades of prunes and peaches. The large grades of prunes are about out of market.

Vegetables.

Potatoes are a drug in the market, with lower prices ruling under continued heavy receipts. To warm, growing weather can be attributed in part, if not altogether, the generous receipts at this port. In the writer's tour on the wharves and among dealers, it was noticed that sprouting is becoming quite general, which will necessitate assorting. The acreage to be devoted to potatoes this season, it is claimed, will show a falling off.

Under free receipts of onions, there is an easier tone at lower quotations. The rush of onions to this market is largely due to the soft weather causing them to grow. The demand for hard and good keepers is reported to be free for the season.

Warm, growing weather is causing a rapid growth in garden stuff, which will cause an early season. Already we note a shading market for earlier garden truck, such as asparagus and rhubarb. String beans are in better supply. Cucumbers were received yesterday from A. F. Tompkin, Saratoga, They sold at $4.00 a dozen.

Dairy Produce.

The butter market continues strong under a good demand and only fair receipts. The market is well cleaned up of fair to good butter, and for these grades the range in prices is close to the range for choice. Improved pasture and more creameries established have given us liberal supplies for the season of giltedged grades. To points up north shipments continue free, but with growing weather in Oregon and Washington, that outlet will soon be closed.

Live Stock.

For both bullocks and mutton sheep, the market shows continued strength, with still higher prices looked for at an early day; even now bullocks that cut up without much wastage are readily placed at a slight advance on current quotations. Hogs are in better demand for the block. Lambs are scarce, but with a continuance of present favorable weather the dropping season ought to be well under way soon. The crop will be quite large. For small calves the market shows a stronger tone.

Miscellaneous.

From reliable advices up to Feb. 17, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.	
San Francisco	244,169	310,223	*105,728	46,112	
San Diego	21,708	13,749	3,921	....	
San Pedro	2,414	6,433	1,234	....	11,457
Oregon	24,300	34,750	35,982	....	
Puget Sound	16,685	14,154	....	....	
Totals	309,276	379,309	146,868	57,569	

*Engaged for wheat, 1892, 56,072; 1891, 43,834. †For new crop loading, 1,746.

With free receipts of Californian and a large falling off in the outside demand, eggs have settled to lower figures, closing the week under review weak. It now looks as if still lower ranges will rule in the near future.

The poultry market has held fairly steady. Wild game is in good supply, with condition good.

There is an increasing consumption of hog product, but as yet neither hams nor bacon show any advance.

Grass seeds continue in free demand. Clover continues in light supply.

Mustard seed continues to meet with a fair to free export demand.

Contracts for next season's hops continue to be reported at from 12 to 13c. The market for spot parcels is strong, with choice grades hard to get.

The wool market is featureless. All information at hand does not point to any material change in prices from those ruling in 1891. Advices received from the East do not warrant the belief that there will be any change in the tariff.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 17, 1892.

BEANS AND PEAS.		**FLOUR.**	
Sago, ctl	1 75 @ 2 05	Extra, City Mills	5 00 @ 5 25
Butter	2 50 @ 2 60	Do Country Mills	5 00 @ 5 25
Pea	2 35 @ 2 70	Superfine	3 15 @ 3 45
Red	1 75 @ 2 05	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	5 @ —
Small White	2 25 @ 2 65	Do Choice	7 @ —
Large White	2 10 @ 2 45	Do paper shell	7 @ —
Lima	1 70 @ 2 10	Almonds, soft shl	11 @ —
Pid Peas, blk eye	1 35 @ 1 65	Paper shell	12 @ 14
Do green	1 70 @ 2 50	Hard Shell	6 @ 7½
Do Eastern do	2 55 @ 2 75	Brazil	6½ @ 8
Do NLes	1 30 @ 1 45	Pecans small	12 @ 14
split	3 85 @ 4 15	Do large	15 @ 17½
BUTTER.		Peanuts	3 @ 4
Cal. Poor to fair, lb	17½ @ 26½	Filberts	11½ @ 14
Do good to choice	30 @ —	Hickory	7 @ 8
Do Giltedged	— @ 32½	Chestnuts	11½ @ 16
Do Creamery rolls	— @ 32½	**ONIONS**	
Do do Giltedge	32½ @ —	Silver Skin, Ch'e	1 00 @ 1 15
Eastern	20 @ 32½	Fair to Good	75 @ 90
CHEESE.		Cut	50 @ —
Cal. choice mild	13½ @ 15	**POTATOES**	
Do fair to good	10 @ 12½	Early Rose, ctl	25 @ 40
Do gilt edged	15½ @ —	Burbank Seedling	30 @ 45
Young America	12 @ 16	Do do Salinas	80 @ 1 05
EGGS.		Do do Oregon	60 @ 85
Cal. ranch, doz	21½ @ 2½	Do Humboldt	75 @ 95
Do do selected	23 @ 24	River Reds	25 @ 40
Do store	20 @ —	**POULTRY**	
Eastern	— @ 20	Hens, doz	5 50 @ 8 00
FEED		Roosters, old	5 50 @ 7 00
Bran, ton	19 00 @22 00	Do young	6 00 @ 9 00
Feedmeal	27 00 @ —	Broilers, small	4 00 @ —
Gr'd Barley	23 00 @24 00	Do large	5 00 @ —
Middlings	25 00 @27 00	Fryers	6 00 @ —
Oil Cake Meal	25 00 @27 00	Ducks	6 50 @ 9 50
Manhattan Food ₰ cwt.	7 50	Geese, pair	1 75 @ 2 50
HAY		Turkeys, Gob'r	12 @ 15
Wheat, per ton	13 00 @ —	Turkeys, Hens	14 @ 16
Do choice	14 50 @ —	Do Dressed	15 @ 19
Wheat and Oats	12 00 @ —	Manhattan Egg Food ₰ cwt	11 50 @ —
Wild Oats	11 00 @ —	**PROVISIONS.**	
Cultivated do	12 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Barley	11 00 @ —	Medium	11 @ —
Alfalfa	10 00 @ —	Light	12½ @ —
Clover	11 00 @ —	Lard	9 @ 11
Straw bale	50 @ 60	Cal. Sm'k'd Beef	11½ @ —
GRAIN, ETC		Hams, Cal salt'd	10 @ —
Barley, feed, ctl	95 @ 1 03½	do Eastern	12½ @ —
Do Choice	1 05 @ —	**SEEDS.**	
Do Brewing	1 05 @ —	Alfalfa	7 @ 8
Do do Choice	1 10 @ —	Clover, Red	12 @ 13
Do do Giltedge	1 15 @ —	White	2) @ —
Do Chevalier	1 05 @ 1 40	Flaxseed	2 80 @ 2 90
Do do Giltedge	1 45 @ 1 50	Hemp	3½ @ 4
Buckwheat	1 70 @ 2 10	Mustard, yellow	3 25 @ 3 75
Corn, White	1 27½ @ 1 32½	do Brown	3 00 @ 3 25
Yellow, large	1 22½ @ 1 27½	**WOOL.**	
Do small	1 26½ @ 1 30	**SPRING, 1891**	
Oats, milling	1 45 @ —	Humb't & Men'cino	20 @ —
Feed, Choice	1 42½ @ —	Sac'to valley	16 @ —
Do good	1 32½ @ —	Free Mountain	19 @ —
Do fair	1 25 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain	15 @ —
Black Oat	1 35 @ 1 75	Cala'v & F'th'l	16 @ —
Do Oregon	1 25 @ 1 40	Oregon Eastern	1s @ —
Gray	1 30 @ —	do valley	21 @ —
Rye	1 60 @ 1 72½	So'n Coast, def	11 @ —
Wheat, milling, Gilt edged	1 73½ @ —	So'n Coast, free	13½ @ —
Do Choice	1 72½ @ —	**FALL, 1891**	
Do fair to good	1 71½ @ —	San Joaquin	9 @ 12
Shipping, cho'ce	1 71½ @ —	Mountain	10 @ 15
Do good	1 68½ @ —	Humb't & Men'cino	14 @ 18
Do fair	1 65 @ —	**HONEY.**	
Common	1 60 @ —	White Comb, 2-lb	10 @ 13
Sonora	1 60 @ 1 72½	do do 1-lb frame	12 @ 14
HOPS.		White extract'd	6½ @ 7
1891 Choice to Ex	24 @ —	Amber do	5½ @ 6½
Fair to Good	20 @ —	Beeswax, lb	22½ @ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes 4c per lb., and for 25-lb boxes, 8c to 1c per lb.

APPLES.		Do do fancy	8 @ —
Sun-dried, ¼'s, com'on	2½ @ 3½	Sun-dr, pl'd, prime, bl.	11 @ —
Do do prime	3½ @ 4	Do do choice	12 @ —
Do do choice	4 @ 4½	Do do fancy	13 @ —
Do sliced, common	3½ @ 4	Evap, peeled, in boxes, choice	15 @ —
Do do prime	4 @ 4½	Do do choice	16 @ —
Do do choice	4½ @ 5½	Do do fancy	16 @ —
Evap, bleached, ring 50-lb boxes	7 @ 8	**PEARS.**	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl, com	2½ @ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	6 @ —
Do do choice	6 @ 6½	Do ring do	10½ @ —
Do bleached, prime	7 @ —	**PLUMS.**	
Do do choice	7½ @ —	Pitted, sun-dried	4½ @ —
Do do fancy	8½ @ 9½	Do evap, boxes, choice	— @ —
Evap, choice, in boxes	9½ @ 10	Do do do fancy	— @ —
Do fancy, do	10 @ 10½	Unpitted	2 @ 2½
FIGS.		**PRUNES.**	
Sun-dried, black	3 @ 3½	Cal. French, ungraded	5½ @ —
Do white	3½ @ —	Do graded, 60 to 100	6 @ —
Do do washed	— @ —	Do do 40 to 60	8 @ —
Do do fancy	— @ —	Fancy sell for more money.	
Do do pressed	— @ —	**RAISINS.**	
Smyrna boxes	— @ —	London Layers, choice ₰ bx	$1 50@ —
Do sacks	— @ —	Do fancy, do	1 75@ —
GRAPES.		Layers, ₰ bx	1 25@ —
Sun-dried, stemless	3 @ 3½	Loose Muscatels, common, ₰ bx	1 00@ —
Do unstemmed	2½ @ 3	Do choice, do	1 20@1 30
NECTARINES.		Do fancy, do	1 50@ —
Red, sun-dried	3½ @ 5	Unstem'ed Muscatels, in sacks, ₰ lb	4@ 5
Do Evap., in boxes	6 @ —	Stemmed do do	5@ 5½
White, sun-dried	5 @ 6½	Seedless do do	6@ —
Do evaporated	6½ @ 7	Do do ₰ 20-lb bx	1 15@ —
PEACHES.		Sultanas, unbl, bxs	1 15@1 40
Sun-dried, unpeeled, common, bleached	3½ @ —	Do bleached, in bxs	1 30@1 60
Do do prime, do	5 @ —	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do choice, do	6 @ —		
Do do fancy	7 @ —		
Evap, unpe'd, choice	7 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 17, 1892

Limes, Mex	7 00 @ —	Do Eastern, bbl	3 75 @ 5 00
Do Cal	75 @ 1 00	Beets, sk	— @ 1 00
Lemons, box	1 25 @ 3 50	Carrots, sk	35 @ —
Do Sicily	5 50 @ 7 00	Okra, dry, lb	15 @ —
Oranges Seedlings		Parsnips, ctl	— @ 1 25
Riverside	85 @ 1 50	Peppers, dry, lb	8 @ 12½
Los Angeles	65 @ 1 25	Do green	20 @ 35
Do Navels—		Turnips, ctl	50 @ —
Los Angeles	75 @ 1 25	Cabbage, 100 lbs	60 @ —
Riverside	1 25 @ 3 00	Garlic, lb	2 @ 3½
Duarte	1 25 @ 3 00	Squash, Marb, bx	6 00 @10 00
All kinds of oranges free from frost sell at an advance of $1 per box on the above quotations.		Do Summer, lb	20 @ 25
		Pumpkins, ton	7 00 @ —
		Tomatoes, box	1 50 @ 2 25
Apples, box	60 @ 1 00	Asparagus, lb	15 @ 20
Do choice	1 25 @ —	Do choice to ex	20 @ 27½
Do extra choice	1 75 @ 2 25	Peas, green, lb	8 @ 12½
		Rhubarb, lb	15 @ 18
		String Beans	17½ @ —

Live Stock.

BEEF.		MUTTON.	
Stall fed	7½ @ —	Wethers	10 @ 10½
Grass fed, extra	7 @ —	Ewes	9½ @ 10½
First quality	6½ @ —	Lamb, yearling	11 @ 12½
Second quality	6 @ —	Do Fall	15 @ —
Third quality	5½ @ —	**HOGS.**	
Bulls and thin Cows	2½ @ 3½	Light, ₰ lb, cents	4½ @ 4¾
VEAL.		Heavy	4½ @ —
Range, heavy	5½ @ 7	Feeders	4½ @ —
Do light	8 @ 9	Stock Hogs	3½ @ —
Dairy	8½ @ 10		

Talks With Practical Men.

The city of Petaluma has recently taken rapid strides in regaining her former prestige as a shipping point. Petaluma creek has been dredged and Mr. John McNear is now completing a basin provided with locks adjacent to the city, for large sized vessels to enter. A silk factory is now being constructed; the woolen mill will be enlarged to double its present capacity and the machinery is now in place to start a new boot and shoe factory. A RURAL PRESS reporter made a visit last week to this locality to see the late importation of fine horses from England by Mr. Skillman, and large importation of Shropshire sheep from England by Mr. Mecham.

He spent several hours in the pretty little city in talks with different citizens and makes the following report of some of the more interesting interviews:

W. H. Worth.

In a talk with a reporter, Mr. W. H. Worth, proprietor of the Petaluma Agricultural Works said, speaking of his new gas engine: "While other gas engines are open on the sides, with the fly wheel on one side, pulley and belt on the other, close up to the sides, so that you cannot get at the connecting rod, mine is open in front with the crank shaft turning toward you, leaving the boxes and connecting rod so that you can get at them. I claim further, that there are only about one-half as many parts in my machine, and the sparking device is a wiping motion and no springs inside of the machine; therefore I claim convenience, simplicity and durability in my gas machines."

Mr. Skillman.

"How many horses," asked a RURAL PRESS reporter of Mr. Skillman, the well known importer; "have you brought to the Pacific Coast?" "Over 60 head," replied Mr. Skillman, "stallions and mares all registered and thoroughbred." "Your importation for 1891 and 1892 were largely of Suffolk Punch. Do you regard them as a draft horse of high merit?" "In my opinion the Suffolk Punch which has a distinctive pedigree for 150 years, is one of the best, if not the best, breed for a draft horse for general purposes. They have strong prepotency, always a sorrel in color, compact, a solid bone, fine constitution, and together with the Norman are the only breeds whose legs are free from the long, shaggy hair. "Among the stallions you brought out this year are two very fine large stallions known as "Shire." "The Shire horse is a notable breed of horses in many localities and are very popular as carriage and draft horses. I am of opinion that my importation this year was in many respects the best lot of horses ever brought into this State.

Mr. H. Mecham.

The breeding farm of Mr. H. Mecham, lying six miles north of Petaluma, was visited a few days ago by a reporter of this paper, who was most hospitably received by the proprietor and shown about the place. Seventy-eight head of lately imported Shropshire sheep were in a field adjacent to Mr. Mecham's beautiful home, feeding on the California grasses, and apparently thriving as well as upon their native heath in England. In a field adjoining were about 80 ewes, which had increased their number by 40 lambs since January 1st of this year. It is conceded by sheep growers that Mr. Mecham has achieved great success as a breeder of sheep and established a distinct herd of Merino sheep that has given him a national reputation. He sold last year 900 head, and had orders for 3000 more that he was unable to fill. Mr. Mecham has been breeding sheep for 30 years, and in connection with breeding has been importing sheep more than two-thirds of that time. His principal class has been Merino, but four years ago he tried the Shropshire, and he is now firmly convinced that these two breeds are superior to all others for all purposes of profit. Talking with the reporter, he said: "For small flocks of sheep for farmers and near cities, where mutton and lambs are a good deal of an object, I regard the Shropshire as far ahead of any other sheep for an all-around sheep for profit. The Merinos I consider more valuable for running in large herds. There is no other sheep that compares with them in this respect. There has never been any other sheep that compares with them for profit." Concerning his recent importation of 78 head, Mr. Mecham said that they were specially selected for him by a well-known expert, without limit of price, and that he regarded them as one of the best, if not the best flock ever imported in his line. Returning to the qualities of the Merino and Shropshire, Mr. Mecham said: "The reason why I regard them as the best is that I have crossed all other classes of long-wool mutton sheep and have found the cross too radical. In some places on the body the wool would be long, while in other places it would be short. The Shropshire, being a middle class wool, appears to mix and make an even fleece. In fact, their fleece is nearer a Merino fleece than any of the mutton breeds, the Shropshire being as well wooled over the body, head and legs as the Merino. The Shropshires are very compact, wide and deep through the shoulders, short legged, and very hardy. The cross between the Merino and Shropshire makes a very hardy mutton sheep, and produces fine lambs for the market, which mature earlier than the Merino. When I bought my Merino sheep," continued Mr. Mecham, "20 years ago, among the lot were two rams without horns. One of them proved to be an extraordinarily fine one, shearing 35 pounds in 12 months. In looking over this ram I thought I could see a great advantage if I could breed a Merino sheep without horns. I have bred from that ram and his offspring ever since and I do not have now over one ram in 30 that has any sign of horns. My sheep are now a great deal larger and stronger in constitution than when I commenced. My rams produce from 20 to 25 pounds of long white wool, 12 months' fleece."

Interview with L. C. Byce, Manager of the Petaluma Incubator Co.

"Mr. Byce, I see you are running a full force in your manufacturing department. Do you have a good demand for incubators and poultry devices this season?"

"Yes, the demand is on the increase all the time, and if I could get some skilled labor in this line, I should increase my force of men, as I have added to my help in the office."

"Is the volume of poultry-raising increasing in California?"

"Yes, decidedly so, and there is a large number of Eastern people, who are late arrivals, going into the poultry business, and, in this connection, my bills for postage amounts to from $50 to $100 per month, and will average over $60 per month."

"As a rule, have the men and women who have embarked in the poultry business made a success?"

"Yes, especially those who have followed out the latest methods of feeding and caring for fowls, viz., feeding cut bone with the meat on direct from the butcher and cutting clover very fine and mixing it with meal, using the same thrift and sagacity in feeding that men do in caring for horses and cattle—in fact, this system is claimed by our most reliable men to decrease the cost of feeding fully one-half."

"Have any improvements been made of late in artificial hatching of eggs?"

"The Petaluma Incubator Co. have many improvements that lessen the labor of taking care of incubators, and have increased the percentage in hatching five per cent at least."

"Mr. Byce, I believe it has become a settled question that hatching eggs by artificial heat has proved a practical success, but the chief trouble seems to be in the artificial 'mother,' or, as generally known, the 'brooder.'"

"That is true. The great difficulty in the past has been the 'brooder,' but the defect in this system has been surmounted by our Petaluma Brooder, which has been in use for the past three years (there being now over 8000 in use), and the complaints are so few that we believe we have an unqualified indorsement and an efficient and practical brooder."

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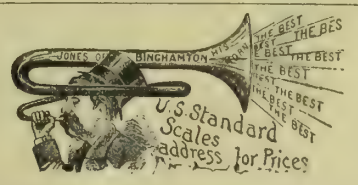
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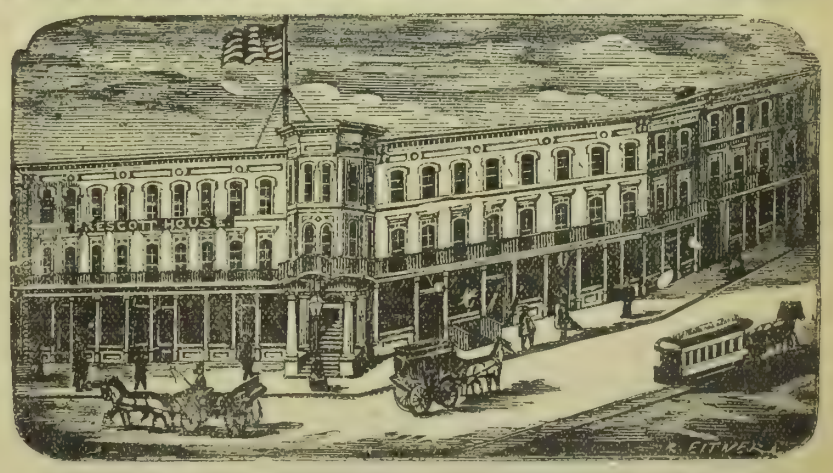
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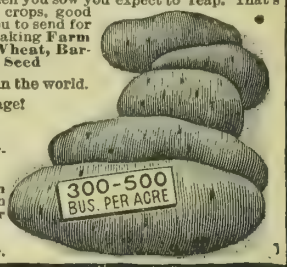
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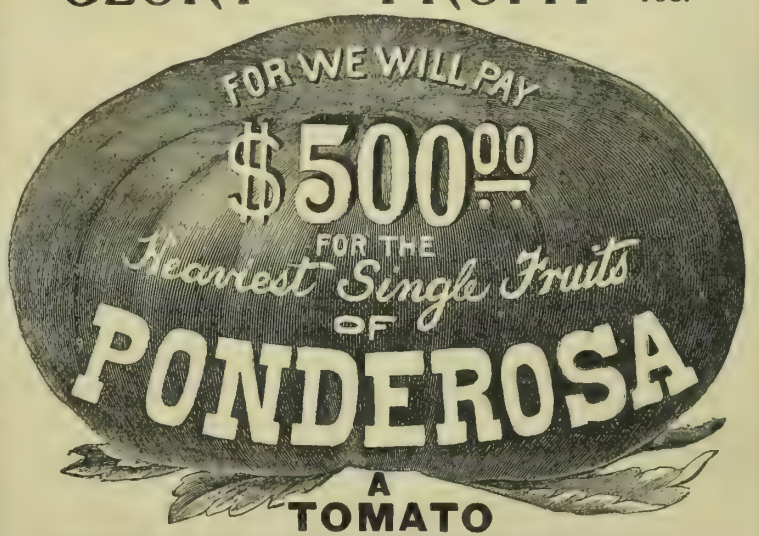
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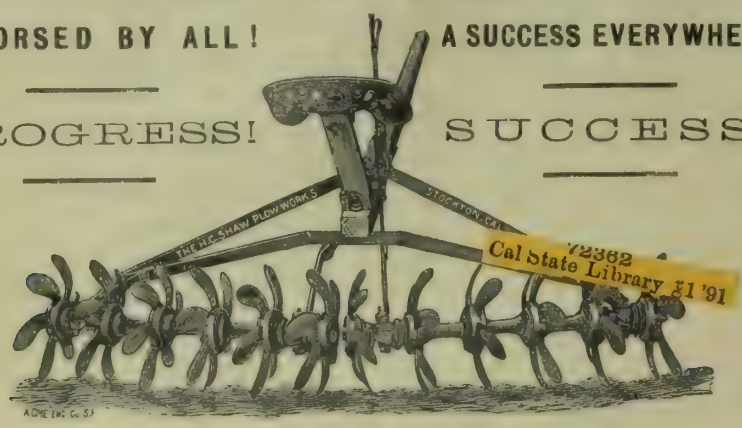
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TESTIMONIALS.

GRANGEVILLE, CAL., Dec. 25, 1891.

H. C SHAW PLOW WORKS.—Dear Sir: Your favor of the 22d, asking me how I liked the Triumph Spading Harrow I used on the "Oothout Vineyard and Orchard," received. In reply would say that I have used almost all the modern implements, but as a pulverizer and cultivator combined I never saw anything to equal them.

Yours truly, H. H. CLARKE.
Formerly Supt. and Manager of the "Oothout Orchard and Vineyard," Fresno, Cal.

FRESNO, Cal., Dec 19, 1881

H. C. SHAW PLOW WORKS.—Dear Sir: The "Morgan Spading Harrow" which I purchased last season I am well pleased with and I can recommend it as being a first class implement for orchard and vineyard work.

Yours truly, A. V. MORSE.

FRESNO, Cal., Dec. 10, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Last winter I purchased a ten-foot Triumph Spading Harrow, and am pleased to say that I found it a most satisfactory tool. I used it for both my nursery and my orchards and found that it left the ground in better shape than any cultivator I had ever used. For pulverizing rough and cloddy ground I don't believe there is an implement superior to it in the market.

Yours truly, GEO. C. ROEDING.
Manager for the Fancher Creek Nursery, Fresno, Cal.

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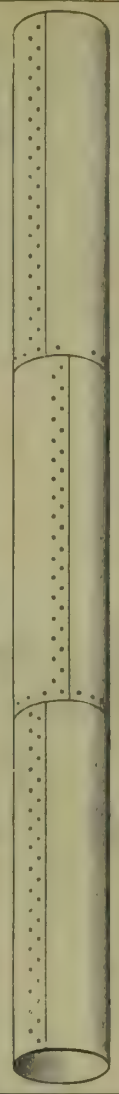
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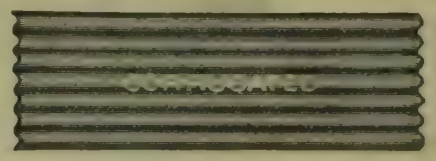
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CALIFORNIA STATE

PACIFIC RURAL PRESS

Vol. XLIII. No. 9. SAN FRANCISCO, SATURDAY, FEBRUARY 27, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Great Southern Citrus Fair.

The State Citrus Fair for the Sixth Congressional District, which includes Alpine, Fresno, Inyo, Kern, Los Angeles, Mono, Monterey, Orange, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Tulare and Ventura counties, will open in Hazard's Pavilion, Los Angeles, on Wednesday, March 2d. While the district tributary to this fair is immense, and covers about half the area of the State, it is the counties south of the Tehachapi mountains which make most of the display. Still, we have enumerated all the counties, that any of our readers, in any of them, who have citrus fruits may understand that the lists are open to them. Very liberal premiums are offered, and there is every inducement for all citrus regions in the district to bring forward their best products and display them in the best style.

The prospects for the Fair, as we learn from local advices, are very fine. Applications for space have been freely made, so that at the close of last week there were more applicants than the whole number of exhibitors at the last fair, and the territory to be represented will be much wider. Both counties and localities which refrained from showing last year will have notable displays on this occasion. The management of the fair this year is in the hands of an Executive Committee consisting entirely of fruit growers, only one of whom, namely, Mr. E. F. C. Klokke, is a resident of Los Angeles. The others are E. W. Holmes of Riverside, chairman of the committee, who is at once well known as a citrus fruit grower and a journalist; George W. Ford, a veteran citrus and walnut grower of Orange county; F. J. Smith, one of the best known and most active of Pomona's young men, and John Scott, Horticultural Commissioner of the county, who hails from Duarte, and has had an active hand in enterprises of this sort. The same may be said of all the members of the committee.

Los Angeles journals are well filled with prophecies of the coming charms of the Fair. We read in the *Herald* that Hazard's Pavilion will be decorated on a scale of magnificence never before attempted. All the vast dome of the building will be covered with a fretwork of wire netting, interlaced with ivy and oranges securely fastened in place. Down the middle of the dome will run a row of incandescent electric lamps. At the front end of the building, over the stage, a huge arch will be constructed of iron, wire and cloth covered with palms, ivy and other evergreens. In this, several hundred electric incandescent lamps will glitter, and the vast arch of green will be lighted up by splashes of orange color in designs wrought out in the living fruit. The pillars will be covered with cloth and vines, and the galleries festooned with vines and foliage. For the purpose of decorating the hall, some 8000 or 10,000 square yards of wire netting, some thousand yards of cloth and several tons of ivy and foliage will be required. The question of the colors to be used in decorating was submitted some time ago to Mr. Charles H. Ward of the firm of Marshall, Field & Co. of Chicago, who returned answer that the only suitable colors to be used at a citrus fair were the light and dark greens which appear in the foliage of the citrus trees, and the colors of the orange and lemon, and no other colors except those will be allowed in the building. Wherever other colors occur in the interior of the building, they will be covered up. Thus, when the work of decorating is completed, the interior of Hazard's Pavilion will be one vast bower of green, lighted up here and there by the colors of the live fruit, and brilliantly illuminated with many hundred electric lights.

Such a forecast of the decorative sights, added to the surety of the highest excellence in the fruit displays, which will be grouped amid such environment, should prove a strong attraction to draw Californians and visiting tourists strongly toward the southern part of the State next week. To our northern fruit growers, here is a chance for a most delightful recreation for the family before the hard work of another summer begins. Let all who can afford the time and the expenditure give themselves this recreation, accompanied as it is with the opportunity of learning much of Southern horticultural production. Such knowledge will be of great practical value to many of our northern readers.



MULTNOMAH FALLS.

THE Senate has passed the bill to protect foreign exhibitors in the World's Fair from prosecution for exhibiting wares protected by American patents and trade-marks.

Fungus Proof Apricots.

We suggest that apricot growers who have collections including a number of varieties take notice as to how different varieties are affected by the shot hole fungus, and report in due time which varieties are worst injured and which if any are little affected. We are led to make this suggestion by an item in a South Australian exchange which describes how Mr. Westerman Smith advances the proposition that, instead of trying to combat the shot hole fungus of apricots, it would be better to grow varieties that are nearly free from attack, such as Oullin's Early Peach and Princess Orange. The first he had growing for five years, and the latter seven years, and nearly free from disease, which has been present in the orchard three years. Over 85 per cent. of clean fruit was yielded by the two varieties, without any cost for fungicides. Of the 20 sorts of apricots cultivated, only two or three were any good.

One of the varieties named by the Australian observer is hardly known in this State and the other is not on record at all. But if these resist there are probably others known to our readers which are also resistant. Our observation is that there is considerable difference in the severity of the attack, both with apricot and plum varieties, but we have not looked into the matter as closely as we shall in the future. We trust others will do the same and see if a test can be made of varieties satisfactory in season, size and bearing which do not yield to the shot hole. It would be a consumation greatly to be desired.

Multnomah Falls.

We print this week the last of a series of pictures published from time to time during the past three months, illustrating the magnificent scenery of the Columbia river gorge. The picture in this issue represents the Multnomah Fall, on the south bank of the Columbia river, in Oregon, almost immediately west of the summit line of the Cascade mountains.

The fall is a double one, and is one of the most beautiful in the world. It has perhaps but one superior, and that is the well-known fall in Yosemite valley. The stream represented issues directly from the glaciers of Mt. Hood, flowing northward, close to the summit of the Cascade mountains, pouring its entire volume into the Columbia river over the cliff which forms its south bank. The picture represents only the upper fall, a leap of 461 feet, while the lower, scarcely less picturesque, flows out of the basin directly from the rustic bridge shown in the cut.

The fame of this view is world-wide, and trains on the Union Pacific Road, which pass within 200 feet of it, stop to allow the passengers to enjoy the magnificent spectacle.

SALE of ELLWOOD.—Announcement is made of a sale by Ellwood Cooper of his famous ranch, including olive orchards, etc., to an English syndicate for $200,000. The local representative of the English company is Dr. Harold E. Sidebotham, who says that it is the company's intention to colonize the tract with English emigrants and endeavor to keep its products up to the standard which Mr. Cooper has established, there being no intention of making any change in the productions.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.—ED.

A Winter Trip to Shasta and Siskiyou.

SAN FRANCISCO, Feb. 16, 1892.

TO THE EDITOR:—The present prospect for crops in these two northern counties bids fair to exceed last year's product which was not particularly encouraging to wheat growers, but exceptionally good for the orchardist. There is no denying the fact that grain does not do as well in the upper Sacramento Valley as below Red Bluff. The farmer sows twice as much seed to the acre, and yet the crop comes up scattering, and there is usually considerable shrinkage of the heads. Corn also has an uncertain yield in this soil, the stalks lacking nothing in body and height, but the ears proving more or less blasted. There are certain valleys in this section, however, where cereals are grown with more than average success. The writer has never seen finer fields of wheat and oats than are raised around Fall river and in Scott Valley. There are also many acres of river-bottom land at Redding, Anderson and Cottonwood, where the luxuriant stretches of grain are a delight to the eye.

In the middle of January the farmers were steadily at work plowing and sowing between the light showers of rain. On the Bonny View tract just out from Redding, some fields were already green with sprouting wheat, which grew to the very trunks of the stately white oaks. These picturesque lowlands following the river are not equally good for fruit, the water being often within three feet of the surface. The first year or two the trees do remarkably well. After this the roots become water-soaked, and soon the entire orchard is withering or dead. This has been the fate of many of the young orchards planted hereabouts in 1887, when Shasta's horticultural resources first came to the front.

On the other hand, fruit trees set out on the first bench a few feet above the bottom lands, have done uncommonly well. The soil of these higher locations has a gravel drainage, though water can be found anywhere within 10 to 14 feet of the surface. The largest orchard tract in Shasta county is in the immediate neighborhood of Anderson. Here are 1500 acres of bearing peach, apple, pear, plum, prune, almond and apricot trees, and 500 acres more in preparation for the planting of prunes. For some reason the quince does not do well in Shasta county. Almonds on the contrary have so far proved a good investment. It is well known that the almond tree thrives where the cherry and plum do well, though there is always the uncertainty of its bearing quality. An orchardist naturally wishes to be assured of his crop, and therefore the almond is usually rejected by him. As a consequence California does not raise enough almonds to supply the home market, though the varieties produced here compare well with the best imported ones.

A prominent fruit grower, Mr. Edward L. Frisbie of Redding, has looked into the almond problem to good purpose. He has brought to profitable bearing, 2000 almond trees near Anderson, whose crop last season exceeded his highest anticipations. Speaking of this flourishing young orchard, he says:

"The essential question is always to adapt your fruit to your location. I know the almond requires dry, porous soil, with some elevation and hot summers. I was assured we had just these requisites at Anderson, and so ventured the experiment and am not sorry I did so. At the same time I planted 150 acres to Royal apricots which have also produced well, though I was told repeatedly they could not be cultivated successfully in this climate. I never irrigate my trees. The Bartlett pear and the winter Nelis are particularly good here. The Bartlett ripens a month later in Shasta county than it does in Napa Valley, which is a great advantage in the disposal of the crop. There are excellent grapes raised around Anderson and Igo and in Happy Valley, but in many parts of the county the intense heat of the summer burns them before they are ripe enough to pick. At present the general tendency of our fruit growers is to set out prune orchards. I am convinced they are one of our surest crops. We have a variety which originated here, and is in every way equal to the French prune. This "Anderson prune" ripens six weeks earlier in the season than the French prune. There are thousands of acres of good fruit land in this section now uncultivated or used to poor advantage in the growing of grain. We already have a cannery, though much of our fruit is dried for shipment."

Four years ago Mr. Fred H. Deakin of Yokahama, became enthusiastic on the subject of olive planting on the bench lands in Redding. Some acres of these high tracts were thereupon cleared of the thickets of manzanita and scrub oak, and set out to several of the best varieties of the olive. For the first two years the trees made excellent growth, but upon the property changing hands they have since been neglected. They have, however, held their own against all odds, and even added a few inches annually to their branches, thus proving an undeniable adaptability to this red, gravelly soil. A Redding Picholine seven years old, bore a heavy crop last season, which has been marketed as first-class pickles. In fact there is no longer any question that many of these foothills about Redding and Shasta City, can be profitably utilized for olive and fig culture.

The venerable fig trees planted by Shasta miners more than 40 years ago, are still in noble bearing, the fruit being large in size and of delicious flavor. A winter visitor to the historic Weiser place, a mile this side of Shasta City, sees a picturesque illustration of the inconsistency of the climate of California. Beyond the famous Shasta Palms and next to the old vineyard of Mission grapes, there are patches of snow on the ground beside young pines and wide-spreading fig branches, with several orange trees resplendent in their lustrous green and pendulous golden balls.

Mr. R. Bostwick has oranges growing on his beautiful orchard slope within the town limits of Redding. An orange picked here in the middle of January proved to be perfectly ripe and of faultless color and flavor. There is something infinitely piquant in this plucking of oranges within sight of an arctic zodiac of peaks!

These snow covered summits, however, do a peculiar work for horticulturists in northern California. Without the high altitude and frosty pine-laden breath of these colossal ranges, this coast could not produce such apples as are found in the Siskiyou foothills and valleys. As an old Maine farmer declared, "They have the true *appley* flavor." While at Mott, the hotel table was daily furnished with the finest apples I had seen in the State. They were of splendid size, firm and juicy, and of the richest red color imaginable. These Siskiyou apples are rapidly gaining prominence, and San Francisco and Sacramento fruit buyers come up in the fall to secure all the surplus crop. It is estimated that as many as 130 carloads of apples were shipped from the different portions of this county the past season, while hundreds of acres are being newly planted to young trees. One who has seen and eaten these apples, must give northern California the credit of disproving the oft-repeated statement that this State cannot rival the East in the production of first-class apples.

NINETTA EAMES.

Development of Humboldt County.

BRIDGEVILLE, HUMBOLDT CO. Feb. 16.

TO THE EDITOR:—Since there is so much talk going the rounds about tapping Humboldt county by a road from Crescent City, another from Red Bluff and latest that the Southern Pacific will buy the Donohue system and extend to this county, I will indulge my fancy and try and portray the change which railroad facilities would make on a large stock ranch.

A ranch most widely known in this vicinity is the Geo. W. Charles ranch. It was purchased by Messrs. Charles and Richardson, from the pioneers Messrs Bent, Ward and Sherwin. They stocked up the ranch with cattle, and their band ranged from 500 to 1000 head. At length the county began to settle up and the Government caused a survey to be made in 1871, when from that time the large ranches began to acquire title to their lands. Later, Mr. J. Richardson died and his partner acquired his interest. Mr. Charles tried sheep raising later with marked success. In addition to managing his ranch, he yearly drove bands of mutton and beef to San Francisco, and was regarded as one of the best stock traders in Northern California. In 1880 he built a fine residence and spared no expense in improving the grounds, etc., and he had a large orchard laid out, which has since matured and is bearing well.

Several years ago Mr. Charles was drowned at Alder Point in crossing Eel River, since bridged by the longest single span in the State.

Since his death, the ranch has been in litigation, and has but lately been settled. During the interval, the ranch was not stocked, and the grass is so high in spring it would make good hay. Out of the 8000 or 10,000 acres, nearly one-half is suitable for cultivation, and the soil is adapted to wheat, oats, and cereals generally, though the price for threshing was until last season six cents, last season it was five cents, but it will probaply be reduced to four cents this year on account of competition. Grain has sold from 1 ½ to 2½ cents.

There is a large tract of this land lying north and east of the village of Blocksburgh, with a rich black loam, and I presume there are 1506 acres in one body, level or slightly rolling, that can all be farmed. This side of the range, is within a couple of miles of the 320 acres where Eureka and Eastern capitalists have started planting out an orchard, the soil and lay of the land being very similar, though neither tract has any prestige over the Hanson farm or some other adjoining places.

There is considerable bottom land near the residence and orchard which is very fertile. Some idea of the location can be gained, as the Blocksburgh race track is situated on one of the numerous level strips, and in days of yore, has been the scene of some of the best of races.

Railroad facilities would bring all this tillable land to the front, it would enhance the utility of the land and the prices would keep pace with the times. This ranch like many others, is well watered, but at present these fine privileges are only used by stock. However, the day is not far off when the way will be worth as much as the land itself.

Work is progressing favorably in the fruit colony under the efficient management of Dr. Hall, lately from the East, the fencing and plowing is being done by contract, and both are nearly completed. He intends to plant 40 acres in orchard this season.

J. W. Rockwell and Steve Henry, wholesale butchers of San Francisco, have just driven out a fine band of mutton sheep. T. W. Burn's lease of the McClellan ranch expires this spring. There is a fine stock ranch for rent, stocked and well-fenced, in this section.

John Vance, Mayor of Eureka, died on Jan. 23rd. He was a rustler of the first water, who came to this county 40 years ago flat broke. In all his vast undertakings he backed his own judgment. In him the workingman ever found a friend, not one who gave the tramp a dime, but who gave employment to those who stood in need of assistance and were able to work. I have no intention to laud the dead or censure the living, and I ask no one's pardon for saying that John Vance was the most public spirited man of our county. It is a stubborn fact that the logging and milling business antagonizes the country farming and stock industries. The farmers needed the improvement of the bar to extend their industry, the country wanted good wagon roads and finally a railroad. The milling interests have contested all the wagon roads, and now they are making frantic efforts to defeat the bonding question, which means good roads, a tide of immigration, and at length a railroad. In John Vance the rural districts ever had a warm friend. He took a broad view of our county's prosperity and he was not owned by any steamship company that caused the country and its roads to be misrepresented, in order to corral all the travel by sea. He stood out prominent as a lumberman who favored good roads and a railroad. His funeral was the most largely attended of any ever held in the county.

There is a growing sentiment in favor of cutting up the stock ranges and paying more attention to farming. Mr. Biar Curless intends to dispose of some 400 acres of farming land, and devote his entire attention to sheep. The Martin ranch will probably be put on the market in tracts suitable for orchards. The price of land here, like other sections, is governed by the quality of land, and how badly the owners wish to sell; if a tract can be purchased for just what it is worth at the present time to graze stock, no better investment can be found in the State.

ED. ROBERTSON.

HORTICULTURE.

A Fruit Grower's Lessons.

Leon Leighton, a fruit grower and nurseryman of Shasta county, makes the following points in an article written for the Anderson *Enterprise*. Our readers will no doubt be interested in comparing his experience with their own.

A few animadversions upon matters relating to fruit-growing may not be out of place at this time of year. I have been in the business more or less for some four or five years, and during that time I have "a good many things found out."

One is that it don't do to put much dependence in what we may call floating statements, either as to methods of management or the degree of profits. I look upon fruit-raising as a stable, established business, that will, one year with another, bring a fair profit and no more. It is now subject to the same pernicious skinning schemes of the dealers and speculators that other farm products are, such as wheat or beef. Perhaps the skin is not so thoroughly removed as it is in the case of beef, but the profits are quite as thoroughly absorbed by the middlemen who handle the fruit and the railways which transport it as in the case of other products. If the producer can make a good square living and some profit he would feel satisfied, for the average producer of other farm products does extremely well if he lives well.

The man who has soil adapted to the growth of standard fruits can hardly go amiss in planting such fruits as will flourish in his soil, having regard also to the climate.

The idea which I at one time held that citrus fruits and the olive would do to plant in this climate, I have long since abandoned. We have enough other fruits without them. The peach, prune, pear, fig and vine are sufficient for the main body of an orchard with us. Nut trees may do well, and the apple, limited with us to a side issue, should be the one great fruit in the higher altitudes.

The atrocious or neglectful treatment which young trees sometimes receive, precludes the possibility of success. As nurserymen, many queer things come under our notice. After giving the most explicit directions as to the proper care of young trees to our patrons, we have had them completely disregard our instructions; something like this, viz.:

Case I.—By planting peach and almond trees in ground so wet that water seeped from the surface. Result; many of the trees never leafed out, and all in that part of the soil which was waterlogged died. I will remark here that the ground in which these trees were planted was not plowed until after the trees were planted and dead. Second result, the planter declared something was the matter with the trees and wanted us to replace them. Now this man was told, positively and repeatedly when he took his trees from the nursery, not to plant peach or almond trees in soil in which water stood, for if he did the trees would die.

Case II.—A man of means took a large number of first-class prune trees, planted them on fairly good soil, cultivated them well, but left them exposed to the ravages of rabbits, etc. The rabbits, by traveling some half mile, had access to alfalfa and did not damage the trees fatally, but no shade was provided to keep the sun's fierce heat, as reflected from the hot earth, from scalding the tender bark of the young trees near the ground, and the borer beetle finished the trees by depositing his eggs at that place, the soon-hatched borer rapidly cutting the tree clear around beneath the outside bark, and the tale is told to the careless and ignorant manager only when the tree dies. This party was told that prune trees should be protected from rabbits and borers, and from the sun, by standing two shakes, one, so it would shade the south side and the other the west side of the young tree. This party concluded that his trees were on the wrong root, i. e., the nurseryman was to blame. The nurseryman knows though that thousands of prune trees of all ages and sizes are flourishing upon that same root (peach), and have never shown a sign of debility unless the soil was unadapted to that root.

Case III.—A fruit tree of choice variety was planted near to and so that it was shaded in the afternoon by a large oak tree. Result; tree died without any cause apparent to the owner. He did not know that the roots of the big tree absorbed all the moisture from the soil, leaving none to keep the young tree alive. He said that tree was shaded from the heat of the sun and that the borers did not attack it.

Case IV.—Sold to a party some trees of a certain variety known to be true to name. Without waiting for the trees to fruit, he blows around that they are some other kind, when all that he would have to do to prove that they are true to name would be to visit the orchard near the nursery during the fruiting season.

Case V.—While talking with a certain party, a California squash bug (*Coreus tristis*), described on page 300 of "Cooke's Injurious Insects," came walking along. This party immediately pointed him out and exclaimed, "thanks,

a good bug. He is one of them parasites. We never kill them. They go around all over the vineyard and orchard and clean out all these injurious insects." Imagine my astonishment, that an old fruit raiser should take that vile pest for a friend. It is supplied with a beak and punctures the bark and sucks the juice of squash vines and squashes figs and other soft and juicy fruits, rendering them worthless, and in the case of squash vines, destroying them. I consider it a bad pest, and from the rapidity with which it increases, a dangerous foe.

Case VI.—Bought some apples of a peddler. The apples were raised near his home. Asked him if the codlin moth had reached that locality yet. He said "no." Upon opening the sack found that many of the apples had been infested by the larva of the moth. They were what he called wormy, but he did not know that the worms and the codlin moth were different forms of the same thing.

Case VII.—An article appears in one of the county papers denouncing the peach root as a stock for any fruit tree, even for itself, and strongly hinting that its frequent use was the cause of about all the fruit tree failures that happen. The plum was the root lauded as the only proper one for the prune, apricot and peach. I think I know the author of the article. If I do, I know that he has to go but a few miles from home to find prune and apricot trees on plum roots dead and dying. Almost invariably the case with the apricot. I suppose that the Almighty, when he made trees, gave them such roots as were best for them. He also made some roots better adapted to certain conditions of moisture than others. I find that the peach root is better adapted to the conditions of moisture which prevail in most of our soils than the plum root, and certainly trees on it flourish better. On loose soils, where water never stands, the almond root is good. It stands drouth better than any other root I know of. On wet, heavy soils, in which water stands in winter and spring, I would plant the pear exclusively. The plum root will endure such conditions better than the peach or almond, yet not so well as the pear. Peach budded on plum is liable to outgrow the stock and strangle to death, as it were.

Mr. Thissell's Points on Early Fruits

The following paper was read before the Winters Horticultural Society, at the meeting last Saturday afternoon, by Mr. G. W. Thissell of Pleasant Valley:

In presenting a paper on the planting of fruit, I take it as granted the majority of us are planting for the dollars and cents there are in it, and when we talk of planting 20 acres in Pleasant Valley, or in any location, to fruit, there are many things to be taken into consideration. One of the most important ones is the market to be supplied.

The land I have selected to be planted lies across the valley, reaching well up on the hillside. This would contain some of the latest land in the valley. The fruit selected is for supplying the Eastern market, and I have selected the following fruit, because it would be ripe and gone before the same kind grown in other localities could come in competition with it. There is no rule that I know of that can be laid down to go by in selecting fruit to plant, better than the following:

Having selected the location and the land, then select the market. Having done this, then post yourself in regard to the fruit desired in that market, and select from the list of fruit accordingly. The fruit selected and planted should be especially adapted to the soil and location chosen. Last, but not least, to make a success, plant no fruit that is not prolific.

I would not dare to advise anyone what variety to plant. There are so many new varieties being introduced that the fruit we would plant this year perhaps next season we would want to graft over. However, there are some leading varieties that will hold their place in the market for many years to come. On 20 acres of land in Pleasant Valley I would plant Clyman plums, ripening June 1st, 5 acres; Tragedy prunes, ripening June 8th, 5 acres; Abundance plum, ripening June 15th, 2½ acres; Peach and Columbia plum, ripening July 4th, planted alternately, 1½ acres; Alexander peaches, ripening June 10th, 1½ acres; Shoemaker peaches, ripening June 10th, 1 acre; Early St. John peaches, ripening July 4th, 1 acre; Thissell's and Wigen's Seedling apricots, two varieties on same stock, ripening June 8–10th, 1½ acres; Early Royal apricots, ripening June 15th, 1 acre.

The Dairy.

Dairy Tests for the Columbian Dairy School.

At a meeting of the Executive Committee of the Columbian Dairy Association, held in Chicago, a committee was appointed, consisting of three from the Executive Committee of the Columbian Dairy Association, one delegate from each of the cattle clubs, who agree to furnish their quota of cows for working dairy; one delegate from the American agricultural colleges and experiment stations; and one delegate from the manufacturers of a dairy machinery.

The committe of thirteen appointed a sub-committee of three, who formulated the following rules of dairy tests for the Columbian School.

First—There shall be two breed tests, one of which shall be for four months, one month of which shall be devoted to cheese-making and shall be carried on in conjunction with with the Columbian Dairy School; the other shall be for several days, thirty days, and be under the charge of the same committee as the four months' test, but the milk may be handled by breeders. The rules governing the four months, test shall be as follows:

First—Each cattle association competing, shall furnish twenty-five registered cows of the breed represented by them; provided, however, that the Red-Polled and Brown Swiss Association may be allowed to compete with an entry of fifteen cows each.

Second—No cows of any breed shall compete which shall not be recommended by the association representing the same; provided, however, that in case any association representing any dairy breed shall fail or refuse to either furnish the number of cows required, or to recommend those offered by others for competition, then such breeeds may be represented without endorsement of said association.

Third—All cows competing shall be on the grounds at least thirty days before the competive test begins.

Fourth—No cow shall be substituted for another during the tests.

Fifth—No tonic, stimulant or other drug shall be given the cows during the tests, except in case of sickness and in case a cow is sick enough to require a stimulant or other drug during the test, her milk shall not be saved during the time or for three days after the drug is so given.

Sixth—Each cow shall be weighed at least thirty days prior to and at the beginning and close of the several tests, and proper records made of same.

Seventh—An accurate account shall be kept of all food given to the cows for the thirty days before and during the tests to arrive at the costs of dairy products so made in the tests, and charged to the cow, at actual market value, but owners shall be at liberty to feed such kinds of food as they choose; provided, however, that only ordinary dairy foods shall be fed to cattle.

Eighth—The cows shall be milked at stated periods during each 24 hours, but in no case more than three times per day.

Ninth—All cows shall be milked in the presence of a testing committee, or some person authorized by such committee. The milk from each cow shall be weighed as soon as drawn, and then thereafter, immediately, a weighed sample of the milk shall be taken for analysis. The milk from the cows of the same breed may then be mixed and a weighed sample of such milked milk be drawn for analysis.

Tenth—The milk shall then be delivered to the dairy school, and thereafter in the presence of the testing committee, the milk of each breed—being kept separately—may be handled under any improved accurate method of separating the cream from the milk, or making cheese or butter under approved methods, provided, however, that all the handling of the milk and its products shall be the same method for all competitors alike. In each case, the skimmilk, the buttermilk and the butter or cheese shall be analyzed under the supervision of the testing committee.

Eleventh—No foreign substance shall be put in the milk or butter during the test, except clear water or ice or salt, provided, however, coloring matter may be used in the dairy products of any breed of cattle competing, by the request of the managers of that breed; if so used, a statement of the fact shall be made in the award, and the cost of such coloring matter shall be charged to the animal producing the butter or cheese.

Twelfth—All analyses shall be under the supervision of the testing committee; but each breed of dairy cattle competing may be represented by a chemist or expert at their own expense, who may have the privilege of witnessing the analysis. and who, upon approving the accuracy of any test, shall sign such approval at the time the analysis is made. If, however, such chemist or expert claims inaccuracy or mistake in the analysis or test, the question involved shall be settled by a further analysis. In case such chemist or expert shall be absent at any analysis, then his absence shall be recorded and it shall be construed as his approving the test.

Cows Should be Tested.

All sorts of tests to ascertain the butter value of milk is of such importance to the owner of cows, that he cannot afford to overlook or neglect any of the means offered for the purpose. A dairy record of the quantity of milk, the cream gauge indications from time to time, the influences exerted by food, all have a deep interest claiming his study. The churn for determining the actual amount of butter that a cow's milk yields is without doubt most practicably adapted to the needs of the average farmer. The oil test is easier and a shorter cut, and while no butter comes from the process, the proportionate presence of the fats of butter is shown by the action of the chemicals correctly; therefore it is a valuable help to the dairyman or cow owner in weeding from his herd the cows that are not profitable.

Not only is it of the highest importance that the capabilities and characteristics of the cows should be positively known in order that intelligent action may govern in their treatment and as to their disposal, but the owner owes himself and his interests an obligation that falls far short of fulfillment when he fails or neglects to ascertain the real butter capacity of his cows. Butter yield and the fat in butter form the basis of value in all milk. Those having experience of selling thoroughbreds where the blood lines exert a factor of value are very familiar with the importance of the butter tests. Most buyers who are in the market for high-priced animals, want tested cows or their progeny, and when the facts are favorably demonstrated, price becomes secondary. The time has gone by when pedigrees alone, because of the names of fashion and popularity, will insure the highest prices, and it is not often a breeder who is well informed, will purchase a bull for his herd that has not a tested cow for his dam, and his value for breeding purposes is received by the number and proportionate powers of his tested ancestry. The owner of a herd of pedigreed cattle who offers them to the buying public—untested—stands a poor chance of naming prices for them, that will do strict justice both to himself and his customers, regardless of customers, regardless of the purity of his intentions.

The judgment of the eye is very misleading, and the untried cow—supposed to lack in butter properties, and for which a low price is asked in accordance—may be the best in the herd, and would command, readily, the highest price.

The difference is all between guesswork and certainty, and in these days of advanced methods, when it is so simple and easy to be certain, it seems a wonder—and criminally negligent—that dairymen, farmers and breeders should be so blind to their interests as to accept so much by faith, and guess that a cow's milk is rich because it looks so to the eye. The climax of reform will be reached when all dairy cows shall be tested. It will also be the dawn of great surprise to the dairy world.—Indiana Farmer.

Entomological.

Cankerworms.

[A lecture by Prof. J. H. Comstock, at the Stanford University, Feb. 18th, 1892.]

The most important insects for the fruit growers of the Santa Clara valley to study at this time, are those known as the cankerworms. These are very serious pests which, when allowed to multiply, completely strip orchards of their foliage early in the season. There are two species of cankerworms, one known as the spring cankerworm, and the other as the fall cankerworm. These insects are very similar in appearance and quite similar in habits. I have observed only one of them in this State, that is the fall cankerworm. This, however, is thoroughly established in the Santa Clara valley, and doubtless occurs in other parts of the State. It is one that must be fought or the orchards will be destroyed. Fortunately, it is an insect that can be controlled, and as it is one that spreads slowly, individual efforts are well repaid.

The cankerworm first attracts attention in the larval state. They hatch from the egg about the time the leaves first expand. In an infested orchard, the buds are eaten into; later, minute holes are made in the young leaves, and still later, when the worms are larger, the entire leaves are consumed. When full grown, a cankerworm measures about one inch in length. It is what is commonly known as a looper or measuring worm; sometimes they are called inchworms, these names being suggested by the peculiar way in which the insects walk. The larvæ vary in color from greenish yellow to dark brown, with paler stripes along the sides. When not feeding, they are apt to remain motionless, either stretched out, with the body closely applied to the limb, or raised at an angle of 45 degrees from the limb, in the latter case appearing as a little twig. Both color and attitude protect them from observation. These insects spin a silken thread wherever they go. If an infested branch be suddenly jarred, they will drop from it and hang suspended by this thread. This habit of dropping from the tree when they are jarred, doubtless explains the way in which the species is commonly spread. They fall upon passing vehicles, upon plows, harrows, or upon people passing through the orchards, and thus are carried to other parts of the same orchard or to neighboring orchards.

The cankerworms become full grown when about four weeks old. They then cease eating and descend into the ground. Here, each makes a little cocoon from two to six inches below the surface of the ground. This cocoon is made of buff-colored silk, mixed with earth. In about 24 hours after the cocoon is made, the worm becomes a pupa. The length of the pupa stage varies greatly with different individuals. Thus, in the case of the fall cankerworm, the one that is common here, some of the adults will appear in October, while others will not appear until the following spring. Between these two dates, the insects are constantly appearing.

In the adult state the sexes differ greatly. The male is a moth with large, although delicate, wings, and is able to fly a considerable distance. The female, however, is wingless, and is forced to crawl over the surface of the ground to the trees upon which they lay their eggs. The eggs are laid in clusters upon the smaller twigs and branches of the trees. The eggs of the fall cankerworm are cylindrical and placed on end, side by side, in a compact cluster. Those of the spring cankerworm are oval in outline and laid in irregular masses.

The fall cankerworm is so called because in this species the majority of adult insects appear in the autumn. In the case of the spring cankerworm, although some adults may appear in the autumn, the great majority appear in the spring. As the females are wingless, this species spreads very slowly. The female, when it leaves its cocoon, crawls to the nearest tree, climbs it and lays her eggs upon it. Thus, almost the only method of spreading the species is that of distributing the larvæ by passing vehicles or other means, as indicated above.

The methods of fighting this insect, most commonly employed, are based upon the fact that the wingless female must climb up the trunk of the tree in order to lay her eggs. Various devices have been invented to prevent the female from getting access to the tree. That most commonly used is a band of paper fastened closely about the tree and smeared with some sticky substance. Printers' ink is most commonly used, as this dries very slowly. The wingless female, in attempting to climb the trees, reaches this band and is unable to cross it. Most of them become stuck to it and thus perish. In order to be efficient, it is necessary that the band should be closely applied to the trees, so that in case females lay their eggs on the trunk below the band, the young worms cannot crawl under it, and thus gain access to the trees. It is also important that the bands be placed upon the trees before the insects begin to emerge from their cocoons, that is, as early as October, and that the ink upon them should be kept fresh throughout the remainder of the season and winter, until after the insects have ceased emerging in the spring. This involves so much labor, that I am inclined to believe that the most practicable way of fighting the pest is to spray the trees with Paris green early in the season. This should be done as soon as the leaves expand, so that the young worms may be destroyed before they have done much injury. It should be remembered, as stated in a previous lecture, that the foliage of the stone fruits is very susceptible to injury by the arsenites, and hence, in the case of peaches, prunes and like fruits, the Paris green should not be used stronger than one pound to 350 gallons of water.

PATRONS OF HUSBANDRY.

Executive Committee Meeting.

A special meeting of the Executive Committee of the State Grange was convened Feb. 12th, at the request of the Dewey Publishing Co., who desired to discontinue existing arrangements for the publication of a supplementary Grange edition of the RURAL PRESS, unless larger patronage or special remuneration could be extended to meet the necessary outlay of the same.

There not being a full attendance of the committee, the meeting was adjourned to Feb. 23d, when there were present E. W. Davis, Chairman, Thos. McConnell, Geo. P. Loucks and B. F. Walton, members, and A. T. Dewey, Sec., also visiting Patrons I. C. Steele, P. M.; D. Flint, P. M.; S. T. Coulter, P. M.; Wm. Johnston, P. M.; W. L. Overhiser, P. M.; J. D. Huffman, Lect.; A. P. Martin and W. B. Ewer.

The subject of an official organ was discussed, and it was resolved that the existing engagement with the PACIFIC RURAL PRESS be discontinued. The RURAL PRESS will publish its P. of H. department in its regular and entire edition, containing news and matters of general interest to all Patrons throughout the State, and it will continue to be a medium of communication between the Grange and the public.

STATE GRANGE CANVASS.

The Executive Committee on Wednesday devoted much of its time to planning for a general canvass of the State, and the visitation of the officers of the State Grange, Past Masters and Deputy Lecturers at special meetings, to be called by nearly all the subordinate Granges in the jurisdiction. It is proposed in each instance to hold a closed meeting, to be opened in ample form at 10 A. M., unless otherwise arranged. Open meetings will be held on the same day at 2 P. M., at the discretion of each subordinate Grange; each Grange, at its first meeting, to discuss this matter and appoint committees, who will arrange for music, make proper announcements in the local papers or otherwise, and attend to other details necessary to make the meetings as perfect a success as possible. Let extra exertions be made to notify all who may be willing to attend at both closed and open meetings, and make these meetings and their objects and interests widely known.

The appointments are as follows:

E. W. DAVIS, W. M., S. T. COULTER, P. M., and WM. JOHNSTON, P. M.:

Roseville Grange.....Monday, 10 A. M., March 7th.
South Sutter (Nicolaus P. O.).....Tuesday, March 8th.
Wheatland.....Wednesday, 10 A. M., March 9th.
Yuba City.....Thursday, March 10th.
North Butte.....Friday, 10 A. M., March 11th.
Gridley.....Saturday, 10 A. M., March 12th.

DANIEL FLINT, P. M., B. F. WALTON and HON. C. P. BERRY:

West San Joaquin.....Monday, 10 A. M., April 4th.
Woodbridge.....Tuesday, 10 A. M., April 5th.
Lodi.....Wednesday, 10 A. M., April 6th.
Stockton.....Thursday, 10 A. M., April 7th.
Waterloo.....Thursday evening, April 7th.
Lockeford.....Friday, 10 A. M., April 8th.
Washington.....Saturday, 10 A. M., April 9th.

D. FLINT, P. M., and S. T. COULTER, P. M.:

Alhambra.....Monday, 10 A. M., April 11th.
Valley.....Tuesday, 10 A. M., April 12th.
Danville.....Wednesday, 10 A. M., April 13th.

A. P. ROACHE, W. O.:

Temescal.....Thursday, 10 A. M., April 14th.
Eden.....Friday, 10 A. M., April 15th.
Dixon.....Saturday, 10 A. M., April 16th.

J. D. HUFFMAN, Lecturer, and W. L. OVERHISER, P. M.:

Vaca Valley.....Monday, 10 A. M., April 18th.
Grimes.....Wednesday, 10 A. M., April 20th.
Antelope.....Friday, 10 A. M., April 22d.
Orland.....Saturday, 10 A. M., April 23rd.

J. D. HUFFMAN. W. L., WM. JOHNSTON, P. M., W. L. OVERHISER, P. M.:

Millville.....Monday, 10 A. M., April 25th.
Anderson, Tuesday and Wednesday, 10 A. M., April 26th and 27th.
Red Bluff.....Thursday, 10 A. M., April 28th.
Nord.....Friday, 10 A. M., April 29th.
Chico*.....Saturday, 10 A. M.. April 30th.

*May picnic was for one week. E. W. Davis, W. M., will also attend.

A. P. ROACHE, W. O, I. C. STEELE, P. M., and J. D. HUFFMAN, W. L.:

Glen Ellen.....Monday, 10 A. M., May 9th.
Bennett Valley.....Tuesday, 10 A. M., May 10th.
Petaluma.....Wednesday, 10 A. M., May 11th.
Two Rock.....Thursday, 10 A. M., May 12th.
Sebastopol.....Friday, 10 A. M., May 13th.
Santa Rosa.....Saturday, 10 A. M., May 14th.

J. D. HUFFMAN, W. L., and DON MILLS:

Potter Valley.....Monday, 10 A. M., May 21st.
Kibesillah.....Tuesday, 10 A. M., May 23d.

J. V. WEBSTER, P. M., I. C. STEELE, P. M., and B. F. WALTON:

American River.....Monday, 10 A. M., May 16th.
Enterprise.....Tuesday, 10 A. M., May 17th.
Florin.....Wednesday, 10 A. M., May 18th.
Elk Grove.....Thursday, 10 A. M., May 19th.
Sacramento.....Friday, 10 A. M., May 20th.
Grass Valley.....Saturday P. M., May 21st.

A. P. ROACHE, W. O., and HON. C. P. BERRY:

Eureka Grange.....Monday, 10 A. M., May 23d.
Pilot Hill.....Tuesday, 10 A. M., May 24th.
Magnolia.....Wednesday, 10 A. M., May 25th.
Placerville.....Friday, 10 A. M., May 27th.
Plumas.....To be announced later in season.

E. W. DAVIS, W. M., A. P. ROACHE, W. O., S. GOODENOUGH, W. C.:

San Jose.....Saturday, 10 A. M., April 2d.
Hollister.....Monday, 10 A. M., April 4th.
Watsonville.....Tuesday, 10 A. M., April 5th.
Salinas.....Wednesday, 10 A. M., April 6th.

B. F. FRISBIE, S. G. D., and J. D. HUFFMAN, W. L.:

Selma.....Saturday, 10 A. M., March 5th.
Tulare.....Tuesday, 10 A. M., March 8th.
California.....Thursday, 10 A. M., March 10th.
Merced.....Saturday, 10 A. M., March 12th.

J. V. WEBSTER, P. M., W. L. OVERHISER, P. M., and HON. GEO. STEELE:

Carpinteria.....Dates to be supplied.
Arroyo Grande.....Dates to be supplied.
Creston.....Dates to be supplied.
Paso Robles.....Dates to be supplied.
San Miguel.....Dates to be supplied.
Bradley.....Dates to be supplied.
San Antonio.....Dates to be supplied.
San Lucas.....Dates to be supplied.

TO BE SUPPLIED LATER:

Franklin, Pescadero and Plumas.

Any changes rendered necessary in the above announcements, on account of sickness or other cause, should be communicated to the Secretary by letter or telegraph immediately.

Done at San Francisco this 24th day of February, 1892, by order of the Executive Committee of the California State Grange.

A. T. DEWEY, Sec'y. E. W. DAVIS, Chairman.

This is undoubtedly the most important official Grange canvass ever undertaken in this State. Every Patron should give it earnest and active support and secure rich results in the advancement of this sterling, progressive and beneficial farmers' organization.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Who will organize the first Grange in California in 1892?

During the next ninety days you may expect some of the best Grange speeches you ever heard. If the Order does not make some progressive strides, we—personally and collectively, shall be mistaken!

There ought to be at least twenty-five new Granges organized in this State this year. There is one dollar per name for each *charter member*, to those who will send in a charter list. Some of our good sisters can make more money in organizing granges than they can in raising poultry. Try it, Sisters!

Keep watch for revised list of county Deputies. It will soon be published!

California has had a splendid rain. Just what was needed! In fact the "Doctor" had ordered it just in the nick of time. Now look to the garden, the orchard, the vineyard and the home! But don't forget the grange! While everything about you is growing, budding, blooming, don't fail in your *duty* to the grandest of all—your own subordinate grange! Strengthen all its surroundings! Help make it the greatest power for good in all the neighborhood! Work for it in FAITH, strengthen your HOPE, practice the CHARITY which it teaches and reap the reward which, in FIDELITY, it is sure to bestow.

Why don't we get the figures from the Census Bureau, on the subject of agriculture? Can you tell why?

It is claimed by *Farm and Home* that a celery grower in Rhode Island netted the fabulous sum of $2,084.44 from one acre of ground in one season. 100,000 bunches of celery was sold. Does truck farming pay?

Have you noticed the fiery opposition that is being made to the Anti-Options Bill? Do you know the reason why the "Sharps" are opposed to that Bill?

Are you satisfied with your home on the farm? If not, why not? Tell us in the RURAL! If you think farm-home-life the most honorable, enjoyable and profitable, please tell us why!

Stand by the Grange! It is your friend! It has a history noted for progress, conservatism, honesty and purity. Say a word for it!

The Committee on Woman's Work means business Help them all you can, please.

Grange Memorials to Congress.

The Executive Committee of the State Grange has ordered sent to every subordinate Grange an official circular, closing as follows:

Herewith you will receive several memorials prepared by the Legislative Committee of the National Grange, transmitted through and with the approval of the Executive Committee of this State Grange upon the following bills for legislation in the National Congress, to wit: Free Delivery of Mails in Rural Districts; Pure Lard Bill; Gambling in Farm Products; and Pure Food Bill, and would recommend that you appoint a committee to circulate the same among the Patrons, farmers and others, and forward the same to John Trimble, 514 F St., Washington, D. C. We have performed much labor in this connection, and have incurred considerable expense in the matter, all of which will be wasted unless the subordinate Granges promptly respond.

By order of Executive Committee,
A. T. DEWEY, Sec'y. E. W. DAVIS, Chairman.

Patrons' Relief Association.

G. P. Loucks introduced the following, which was adopted:

WHEREAS, the Patrons' Relief Association of the Pacific Coast has lately been duly instituted in accordance with the resolution of authority adopted at the last session of the State Grange, therefore be it

Resolved, That the officers and deputy lecturers of the State Grange of California be recommended to use all reasonable efforts to advance the thorough organization of said association throughout the jurisdiction of the State.

S. H. JACKMAN AND J. R. DENMAN, Masters of Sacramento and Two Rock Granges, respectively, were in S. F. Feb. 24th.

FARMERS' ALLIANCE.

The St. Louis Industrial Convention.

Judging from the Associated Press dispatches the gathering at the St. Louis Industrial Convention this week was an immense one. On Sunday evening, Feb. 21, a monster meeting was held at which Rev. de la Matyr of Ohio preached. Some 6000 farmers and working men were present. On the same evening the California delegation to the Convention adopted the following resolution, which will create somewhat of a sensation in political circles:

WHEREAS, There are certain parties in the city of St. Louis booming Leland Stanford for the Presidency of the United States:

Resolved, That the delegates from California emphatically declare that the people of California are not looking for a Cæsar, a Cromwell, a railroad monopolist, nor a millionaire, but rather for a Cincinnatus, and when he is found we will know him by the character he bears and the work he has done.

It was developed also, that numbers of persons were in St. Louis working in Senator Stanford's behalf. The idea was that should the Californian be made the third party's standard-bearer he would stand a chance of indorsement in the other national bodies later on.

Before Benjamin Terrill of Texas called the meeting to order the big hall was lively with discussions. The National Committee of the People's party, sixty-nine of the biggest guns of the political army, was gathered on the stage of the Music Hall, and the main body of the hall and galleries were filled with groups of delegates and spectators.

Chairman Taubeneck was authorized to appoint a committee of ten to canvass for funds.

The committee was having a hot wrangle as to whether it should record itself as ordering the arrangements made for a national nominating convention when a halt was demanded by Marion Cannon, president of the California Farmer's Alliance, and it was decided before doing anything further to wait the action of the convention. If that body decided to take action looking to the nomination of a presidential candidate the People's party would go ahead on its own hook immediately.

At 2:25 P. M. Terrill called the convention to order without the formality of an address. The proceedings were opened with prayer by Rev. Mr. Basher of Millageville, Ill. Miss Alice Mitchell of the National Woman's Alliance sang "The Star-Spangled Banner" and the audience joined in the chorus.

President Polk of the National Alliance was introduced by Terrill.

President Polk said that the farmers had assembled here to perform a solemn and responsible duty. On Wall street and the boards of trade money was 1½ per cent. In many small towns in the West money was from 10 to 20 per cent. This had to be righted. The farmers paid over 70 per cent of the taxes, and if money can be borrowed in New York on cotton and wheat at 1½ per cent, why cannot the same thing be done in the West? He computed the gain in wealth of the New England States as compared with the producing States of the West and South as five to one of the former against the latter. He entered a solemn protest against these unequal conditions. In closing, Polk said: "We want relief, we demand relief, and I repeat now what I have repeated from Maine to California, we must have relief if we have to wipe the old parties from the face of the earth."

President Polk was followed by Powderly and Ignatius Donnelly, both of whom made addresses.

Marion Cannon of California was selected for temporary chairman, and Messrs. Steele of Illinois and Hayes of Pennsylvania as temporary secretaries.

On Tuesday there was more or less confusion attending the permanent organization. The report of the committee on credentials recommended the seating of 246 delegates from the Farmers' Alliance, 53 Farmers' Mutual Benevolent Association, 82 Knights of Labor, 97 National Farmers' Alliance, 25 National Citizens' Alliance. 97 Colored Farmers' Mutual Benevolent Association, 27 National Citizens' Independent Alliance, 63 Patrons of Industry, 25 Patrons of Husbandry, a total of 677. The Farmers' Alliance was given 25 delegates-at-large, and thirteen minor detached organizations and individuals were given representation of 58.

Ignatius Donnelly moved an amendment that Miss Frances Willard, Lady Somerset, Clara Hoffman and F. H. Ingalls be seated as delegates representing the National Women's Christian Temperance Union. Both amendments and the report were adopted.

President Polk of the Farmers' Alliance was elected permanent chairman.

Miss Frances Willard and Ben Terrill of Texas were elected vice-presidents.

John W. Hayes of the Knights of Labor was made secretary, and Warwick, a colored delegate from Virginia, assistant secretary.

The platform committee was a very large one and chosen with some difficulty.

Then Willetts, National Lecturer of the Farmers' Alliance, moved that the convention demand the passage of the subtreasury bill, as a means of relief for the people, instead of petitioning Congress to enact the proposed antiop-tion law. The lecturer for the Knights of Labor moved to lay Willetts' motion on the table, and this was done.

Kelly of Kansas offered a resolution that the appropriation bill pending in Congress for a permanent census bureau be indorsed, if provision is made for continuing the investigation of farm mortgages as a permanent part of the work of the bureau. This was carried by an emphatic vote.

A resolution asking Congress to pass a bill for the free and unlimited coinage of silver was set aside until the committee on platform could report. The convention is still in session as we go to press.

A pure man or woman is not any more tarnished by the tongue of Slander than is pure gold tarnished by the heat of the furnace!

Jerry Simpson at Work.

His Bill to Promote and Encourage Agriculture.

Hon. Jerry Simpson has introduced in Congress the following bill which represents nearly, if not fully, the principles of government loans and land as laid down in the Ocala demands. It aims to protect the homestead and can not be made to serve the speculator or large land holder. The amount of loan and number of acres are limited:

A bill to provide for the relief of the agricultural population of the United States and to promote and encourage agriculture.

WHEREAS, The agricultural interests of the country are now greatly depressed, and consequently the farmers, farm laborers and those dependent upon them are impoverished, and the present financial and economic conditions are such that many crops are grown at an actual loss, compelling the farm owners to mortgage their homes and farms to greedy usurers at exorbitant rates of interest, and many of their homes are passing into the hands of great landed proprietors or financial corporations; and

WHEREAS, It is the duty of the representatives of the people, the law makers of the nation, to recognize existing conditions and to provide remedies for existing evils; and

WHEREAS, Immediate action is demanded to alleviate this depressed condition and give prompt relief to the agricultural classes, besides providing for the encouragement, greater development, and future prosperity of that great industry: Therefore be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that any citizen of the United States, or any person who has declared the intention of becoming a citizen, who owns and resides upon any tract of land containing not less than 10 and not more than 320 acres of land, and who has at least one-half of said tract of land in actual cultivation, shall be entitled to apply for and receive from the Treasury of the United States a loan, in amount not to exceed one-half the assessed value of said tract of land and the improvements thereon.

SEC. 2. That all loans under this act shall be for a period of not less than five nor more than ten years, at the option of the borrower, and shall bear interest at the rate of two per centum per annum from the date of the loan.

SEC. 3. That the Secretary of the Treasury is hereby authorized and directed to establish in his department a "bureau of loans," to be under the charge and direction of a Commissioner of Loans, who shall be appointed by the President by the advice and consent of the Senate, and who shall receive a salary of five thousand dollars per annum. Said bureau shall have charge, under the Secretary, of all business relating to the loans herein provided.

SEC. 4. That the Secretary of the Treasury shall cause to be prepared by the law officers of his department a blank form of mortgage, with instructions as to the proper manner of filling the blanks in said form. Said mortgage shall contain a clause binding a mortgagor to keep the land mortgaged free from all claims for taxes, and the improvements insured in some responsible company for the protection of the Government. The Secretary shall also have prepared such other blanks as may be required under this act.

SEC. 5. That the President shall appoint, upon the recommendation of the Secretary of the Treasury, a loan agent for each congressional district of the United States, composed wholly or in part of agricultural lands. Said loan agent shall be an actual resident and qualified voter in the district for which he is appointed, and shall receive a salary of two thousand, five hundred dollars per annum and necessary traveling expenses, and shall give a good and sufficient bond for the faithful performance of his duties

SEC. 6. That upon the receipt of any application for a loan, as provided for in this act, said application shall at once be transmitted to the loan agent for the congressional district within which the applicant resides, and said agent shall be supplied with copies of the blank form of mortgage as provided for in this act

SEC. 7. That it shall be the duty of said loan agent, upon the receipt of any application, as herein provided, to examine into the title and assessed valuation of the tract of land upon which the loan is asked, for which purpose there shall be furnished him an abstract of the title from the proper recording officer of the county in which the land is situated, and a copy of the last two preceding assessments, and a certificate of the actual residence and cultivation required by this act. The fee for obtaining said abstract and certificate shall be paid by the owner of said land.

SEC. 8. That when said loan agent shall be satisfied that the title to the land upon which the loan is asked is in the applicant, free from all incumbrances, and that the applicant is an actual bona fide resident thereon and cultivator thereof, he shall ascertain from the two last assessments the maximum amount that can be loaned thereon under the provisions of this act, and shall then prepare in duplicate, two of the mortgage blanks herein provided for, and have the same executed by the applicant before some duly qualified officer. One copy of said mortgage shall be forwarded to the commissioner of loans, and he shall cause the same to be placed on file and recorded in the bureau of loans, and the other copy shall be filed and recorded in the proper office in the county where said land is situated, said record to be made at the expense of the mortgagor.

SEC. 9. That upon the receipt of any mortgage as hereinbefore provided the commissioner of loans shall immediately draw his warrant for the payment of the sum named in said mortgage, out of any money in the treasury not otherwise appropriated, and a draft for the same, payable in coin certificate, legal tender notes, or other lawful currency, s all be sent to the mortgagor.

SEC. 10. That the interest on all loans made under the provisions of this act shall be paid annually at the office of the loan agent for the district, and he shall transmit the same to the Treasurer of the United States. The failure to pay interest for two consecutive years shall entitle the government to foreclose, and all proceedings for foreclosure shall be attended to by the loan agent and conducted according to the form of procedure in district where the loan is made, and all lands reverting to the government by foreclosure shall be added to the public domain and held for sale to actual settlers at the amount loaned thereon, with ten per centum added thereunto.

SEC. 11. That to enable the Secretary of the Treasury to carry into effect the provisions of this act he is authorized and directed to issue, as fast as may be required, in denominations of one, two, five, ten, twenty, and fifty dollars, United States notes of full legal-tender value, to any amount necessary to provide for the payment of all loan contracts that may come under this act, which certificates or notes, when issued, are hereby appropriated for the purpose of loans upon farm mortgages, said notes shall be a full legal tender for all debts, public and private, except such national obligations as may be, at the passage of this act, specifically made payable in coin

SEC. 12. That all laws and parts of laws in conflict with this act are hereby repealed.

SEC. 13. That this act shall take effect from and after its passage.

FRUIT MARKETING.

Proceedings of the Fresno Convention.

The general convention of fruit producers, the first steps for the assembly of which were taken by the Fresno Farmers' Institute, at its meeting at Fowler, was held in Fresno last week Thursday and Friday. As has already been stated, the meeting was held under the auspices of the State Board of Horticulture, and will, we presume, be included in the series of excellent meetings held by the Board.

The sessions began in Armory Hall at 10 A. M., on Feb. 18. Vice-President L. W. Buck, of the State Board, was Chairman; D. M. Pyle, of Kern, and J. H. La Rue, of Fresno county were Vice-Presidents and B. M. Lelong, Secretary.

OPENING ADDRESS.

Chairman Buck, in opening the meeting, delivered the following address:

Fellow Citizens—In November last a State convention of fruit growers was held at Marysville, and among other matters discussed was the subject of a plan for the profitable disposition of our dried fruits. A committee was appointed to devise ways and means through which an organization might be effected, composed of N. H. Motheral of Tulare, P. W. Butler of Placer, D. Lubin of Sacramento, John Markeley of Sonoma, and G. M. Gray of Butte. This committee has been actively at work, and at its request the State Board of Horticulture has called this convention, representing as it does the chief industry and the leading fruit sections of the State, for the purpose of considering the advisability of organizing into one organization to better control and market their products, and such other business as may come before the meeting.

For years the fruit interests of this State have been jeopardized by the extortionate freight rate charged by the railroads, and by the too frequently unscrupulous dealings of middlemen who have had the handling of the fruit product. The fruit producers have been made to suffer from a most unfortunate competition, which has antagonized growers and reduced profits to a disastrous minimum. A traffic association has been formed with headquarters at San Francisco, and it is to be hoped that they will aid us in this movement and for securing proper concessions.

A resolution was adopted at the Marysville convention, by a unanimous vote, requesting the Southern Pacific to so reduce the rates on fruit products as would encourage the producers in their disposition, and thus increase a demand for all fruit products. We have received an answer in which the company says that a meeting of the different roads will be held in April, and that the subject matter will be considered then. We should lose no time in adopting such measures and persist in our demands for cheaper rates till we secure the desired result.

The transportation companies have thus far been very short-sighted in not aiding the producers by giving them a rate reasonable enough to insure them a profitable return for their products, and thereby aid in the general prosperity of the State. They have always been of the opinion that it pays them better to handle our products at higher rates and thereby limit the production and a demand for it, than an increased production at cheaper rates. Neither can they be made to see the rapid strides and growth of our industry, which is being impeded by the exorbitant rates charged.

Withdraw the horticultural industry from the maintenance of all transportation companies and in five years they would go into bankruptcy. Exorbitant rates have unfortunately caused fruits in some years to sell at higher prices than consumers could well afford to pay, and in a year of increased production prices have necessarily ruled low, and after the transportation bills have been paid the producer's share has been very meagre.

You, as producers, must now put your energies together to remedy this evil, which may in a measure be attributed to the producer's fault in not foreseeing and acting at the proper time. Yet this fault cannot be altogether attributed to them, but to the lack of encouragement by transportation companies and also by lack of cooperation and the faulty methods at hand for the profitable disposition of their products.

There have been various attempts to remedy the evil and notwithstanding the perceptible progress made, there still remains yet much to do to attain the results aimed at. Whatever course you may pursue, it should be with the aim to remove the cause of adverse conditions and to be no longer at the mercy of transportation corporations and middlemen.

AN ORGANIZATION PROPOSED.

The first work taken up was a discussion of the advisability of organizing a State Cooperative association. Just how this was to be done, called forth various opinions. A resolution, in the following language, was given:

Resolved, That we recommend the forming of a State Fruit Growers' Cooperative organization, incorporated under the laws of the State of California, and that branches be located where needed; also the establishment of a fruit exchange at some central point.

In the discussion of the resolution, Mr. Motheral spoke ably, and pointed out what was needed, but did not know, and said he did not care, how it was done, just so it was done. He said that unless some better mode of marketing the fruit be brought about, the fruit growers would have to go out of the business. The sharks, he said, are getting the profit for carrying the produce to market. There must be some center, some power that can combat and contend against the organizations which oppose the fruit men.

There were several others who spoke in various parts of the hall, indorsing what Mr. Motheral said.

J. H. Harding of Oleander read a paper, in which he said that the thing most needful was some means for closing up the gap between the producer and the consumer—to change fruit and raisins from luxuries to necessities.

The proceedings began to show that some local issues were becoming prominent, and speeches were made by John S. Dore, the chairman, and others, restating the great issue, which should not be obscured.

Mr. Motheral, at this point, offered the following, in lieu of what had gone before on the subject:

Resolved, That a committee of eleven be appointed to formulate a plan, in conformity with the plan of the committee, for effecting a State organization of fruit growers.

This motion was carried, and the committee was appointed as follows:

N. W. Motheral, Hanford; D. M. Pyle, Bakersfield; D. Lubin, Sacramento; Mr. Baker, Tulare county; Alex. Gordon, Fresno; John S. Dore, Oleander; Mr. Veter, B. N. Rowley, Mr. Agee of Solano, and P. W. Butler of Placer.

PENDING THE REPORT OF THE COMMITTEE,

Other subjects were taken up. Chairman L. W. Buck stated that it had been requested that the roll of counties be called to see how many were represented. It was found that Los Angeles, Kern, Sonoma, Sacramento, Santa Clara, San Francisco, Butte, Alameda, Tulare, Sutter, Merced, San Joaquin, Solano, had each, one or more delegates.

Captain Norris being called upon said that there was one matter he would like to bring before the convention—the taxation of fruit trees and vines. After discussion by several members, Mr. Block offered the following:

Resolved, That it is the sense of this meeting that a constitutional amendment should be submitted, exempting trees and vines from taxation, and that the men to be elected to future legislatures be required to pledge themselves to vote for such an amendment.

The motion was carried. Further subjects being brought up for consideration, Mr. Briggs spoke of the mistake there was a possibility of making in describing the difficulties and discouragements of the situation, lest we should deter immigration and injure ourselves abroad.

Mr. Block of the State Board of Horticulture, a man who has grown gray in the work of fruit-raising and shipping, spoke most earnestly on the subject, showing how necessary it was that the truth should be given. We do not want a disappointed people who are not prospering, he said; it was that state of things that brought on anarchy and crime.

Mr. Gray of Chico made the speech of the day, showing dispassionately and logically the condition of the fruit farmer; that it was not all bad, that the production was great and the sureness of the crop to be depended on; but the marketing was so badly mismanaged that financial distress and discouragement was taking the place of hope and prosperity, and the large crowd present was a silent argument that the vital interests of the people were involved.

THE COMMITTEES REPORT.

The committee appointed at the session being ready to report, Mr. C. J. Berry, secretary of the committee, read the following:

Mr. Chairman and Members of this Convention—Your committee begs leave to make the following report:

The fruit growers of the State of California in convention assembled hereby

Resolve, To form a Fruit Producers' Association, and that a fruit exchange be opened at some central location in this State, or elsewhere, with branches where necessary; and that a corporation be organized under the laws of the State of California, said corporation to be known as "The Fruit Producer's Association of California."

Resolved, That a committee of eleven be appointed by the chairman to effect this organization.

Resolved, That a stock subscription be opened, and we invite this subscription at once.

Resolved, That the capital stock of this corporation shall be $250,000 and that each share shall be $1, and the subscription of stock shall be limited to one share for each acre of trees and vines owned.

D. LUBIN, Chairman.

Mr. Harding moved that the convention accept the report. This motion was carried. He next made a motion that each article be discussed seriatim before being adopted.

Mr. Motheral asked that David Lubin, chairman of the committee, be asked to offer some explanations of the work of the committee, which he did in a lucid and convincing manner.

Dilatory speeches were made by some, but they produced no impression.

J. S. Dore replied with a brief but emphatic speech that showed the danger of delay, and was followed by Mr. Motheral and T. C. White, who spoke plainly upon the immense labor in calling together such a body of people as had now gathered from all over this State for this purpose.

The motion was then put and carried with but one dissenting vote.

In accordance with a clause of the report the permanent committee was appointed as follows:

N. W. Motheral, of Hanford, chairman; C. C. Agee of Solano, J. S. Dore and Alex Gordon of Fresno, D. M. Pyle of Bakersfield, T. C. White and J. H. Harding of Fresno, Joseph Routier of Sacramento, H. P. Stabler of Sutter, C. F. Wyer of Solano.

This committee was given power to fill vacancies. The former committee was then discharged.

A motion was carried to adopt a resolution to the effect that the convention ask for a reduction, from the railroad, of the rate on fruit of at least 25 per cent.

The executive committee being ready to organize, the convention, which had been the matter of so much interest to the entire State, was adjourned sine die.

The officers of the executive committee of the Fruit Producers' Association are N. W. Motheral, chairman, D. M. Pyle, secretary. This committee proceeded with its work immediately upon the adjournment of the convention and prepared the following outline of an organization which will be published as a special

ADDRESS TO THE FRUIT GROWERS OF CALIFORNIA.

The horticulturists and vineyardists of this State are in a condition which, if continued, will seriously affect the prosperity of their vocations. The soil yields abundantly, and the ultimate receipts of prices paid by the consumer would seem to warrant a remuneration for the toil of and the capital invested by the producer. But between the producer and the consumer the values are, in the main, absorbed by high rates of transportation and the handling of our products by many persons.

It is proposed that the producers come in immediate relation with those who buy their fruits, and by such means provide that the profits heretofore realized by others shall be retained by those who, in all justice, are entitled to them. The time has come when organization is necessary.

It is proposed to form a corporation under the laws of the State for the purpose of marketing the fruit product of shareholders. The details of the work will be provided for by the shareholders hereafter. The company will receive the fruit, provide agencies for its sale and distribute it to such points as the exigencies of the market may demand, to the end to prevent a surplus in the market and the producers from being their own competitors. It can in a great measure fix the price of fruit, and by being a compact body and speaking for the fruit growers obtain concessions in the rates of transportation which individuals cannot do. It can also aid in establishing a uniform grade of fruit and a uniform method of preparing for the market, a most important factor in obtaining the best fruits.

Each producer by himself is weak; together he and his brethren are strong.

This is the opportune moment for action and we appeal to the fruit producers of California to unite for once in a hearty support of this effort to better their condition.

The powers and objects are set out as above as follows, which, of course, may be more or less modified so soon as the corporation is formed to meet the views of the stockholders.

The capital stock shall be $1,000,000 and shares of the value of $1 for each share.

The first payment shall be 10 per cent. of the value of each share, and other payments as the directors may determine.

The amount of stock to be taken by each shareholder shall be based upon the acreage of trees or vines in bearing condition owned, or the acreage of production owned by him when the land is owned by another.

Each share of stock shall represent one acre of bearing trees or vines.

Each member shall ship or provide for the handling, by the corporation, of all the product of the acreage represented by his stock, except otherwise by the consent of the Executive Committee of the company.

The place of business shall be ————.

The Board of Directors shall be composed of eleven members of the corporation.

No one shall be a stockholder unless he be a fruit grower, and when any number of fruit growers are incorporated for the purpose of preparing and marketing their fruits, such corporation may become a shareholder to the number of shares represented by the acreage of fruit of each shareholder.

Please sign the following subscription and return the prospectus and subscription list.

N. W. Motheral, Hanford; C. F. Wyer, Winters; C. C. Agee, Winters; John S. Dore, Fresno; Alex Gordon, Fresno; D. M. Pyle, Bakersfield, T. C. White, Fresno; J. Routier, Sacramento; C. J. Berry, Tulare; J. H. Harding, Fresno; H. P. Stabler, Yuba city, committee.

The plan of the subscription is as follows:

The undersigned, each for himself, subscribe the number of shares noted opposite our respective names, to the capital stock of the corporation referred to in the foregoing prospectus to be hereafter formed; and we agree to pay the first payment of 10 per cent of the par value of our stock into the hands of the treasurer of said corporation upon the the completion of the corporation and published notice of the call for the same; and the remainder as may be called for by the corporation.

Having completed the work before them, the committee adjourned to meet March 4, at which time a call will be issued for a convention to meet at an early day. The widest publicity will be given to the plan as it is outlined, and when the convention gets together a permanent organization will no doubt be effected, and the plan can be put into operation in time to handle this year's crop.

THE HOME CIRCLE.

Whittier's Birthday.

John Greenleaf Whittier's 84th birthday, at Newburyport, last month, was a most interesting occasion. The poet, in the hospitable Quaker home of Joseph Cartland, his cousin, wandered here and there about the room, greeting every guest informally and pleasantly. The parlor of the house was filled with cut flowers and birthday gifts from loving friends. Among other graceful gifts was an exquisite basket of 84 English violets, from the loving hands of Mrs. D. Lothrop ("Margaret Sidney"). The poet greeted all cordially. He reads but little of late. He noticed in a particular way on this occasion only the tribute of Rev. M. J. Savage and the poem by "Margaret Sidney" (Mrs. D. Lothrop), which we give as follows. Margaret Sidney's poem was suggested by Mr. Whittier's "Slave Songs," which voiced New England's protest against slavery, so much admired in this same edition.

JOHN GREENLEAF WHITTIER.

1807–1891.

I.

To be near the heart of Christ
Was his creed;
White as truth the life
That all men may read;
Strengthful of soul,
Yet lowly in meekness;
Dreading no hate of men,
Scorning all weakness,
He sounded the warning note,
When it cost to be brave and true;
Sang freedom for the slave,
Then almost death to do.
Unbind every shackle;
Loosen each chain;
Bid every slave go free!

II.

He led, when to follow
Was loss and disgrace;
But he sang as he led, with a
Light on his face.
Glorious years have rolled on;
Since, groaning in anguish,
The black man—our brother—
Was suffered to languish
Under whip and the chain,
In goading despair;
To-day—not a slave,
He breathes the free air!
While the singer and prophet,
Whose song broke each chain,
Lives in afterglow of
His fiery strain.
All honor to Whittier, whose pen in its might
Wrought the downfall of slavery with letters of light.

Daisy Plume's Valentine.

Outside, the freezing glitter of a full moon lighted up the wintry world. On the distant hills the cedars and the hemlocks seemed to interlock their waving branches; while the icicles pendent from a thousand leafless boughs made faint music at every breath of air. All nature was cold. In Israel Plume's snug little farmhouse, however, there was no lack of either light or warmth.

Daisy Plume had kissed her old father good night, and gone up to her own room to finish packing, for with to-morrow's earliest beam she was to start upon her first pilgrimage to the great city.

A low, clear fire burned upon the red-brick hearth; two tall candles, on the white-draped toilet table, diffused a pleasant brightness throughout the room, and Daisy sat in a little rocking-chair, putting an array of dainty laces into a silk-lined box; while her elder sister, Huldah, stood by the bed folding dresses, and laying them leisurely into the tray of the old-fashioned hair trunk which had gone with Daisy's father and his second wife—Daisy's mother, not Huldah's—upon their unpretending wedding trip.

"I suppose you'll have a splendid time," said Huldah, sighing.

Aunt Penrose had never thought of inviting *her* to come to New York with Daisy; yet Huldah never once dreamed of being jealous of her beautiful younger sister. It was quite natural and right, in her eyes, that all the good and pleasant things of this world should be awarded to Daisy.

"You'll be sure not to forget us, Daisy," said Huldah with a sort of unaccountable yearning tugging at her heart-strings, and the sound of unshed tears in her patient voice.

"Forget *you*, Huldah!" And the skirt Huldah had so carefully folded was sent flying half across the floor, as Daisy pounced upon her, with first a shake and then a kiss. "What do you take me for, you dear, cross, fault-finding, old Huldah? As if I ever should forget you and my home!"

"There, there, child!" gasped Huldah; "don't choke me to death! And Hiram Walters, too, dear; he thinks a deal of you."

Daisy laughed, and shook her yellow curls.

"Now that is too ridiculous, Huldah. I wonder if Hiram Walters thinks I am going to be contented to settle down to a mere farmer's wife, with nothing to do but to feed chickens and count the pans of cream on the dairy shelves?"

"Oh, Daisy!"

"And oh, Huldah! Do you suppose I never had any ambitious imaginings? Just wait a little, and I will show you what a country girl can do! Why, Aunt Penrose knows a young man, the son of one of those New York millionaires, who has seen my photograph at her house, and—but, of course, that's all nonsense. Only I can tell you that Hiram Walters and the red farmhouse are not by any means foregone conclusions."

"But he loves you, Daisy."

"Well, and I like *him*, after a boy-and-girl fashion, and I always shall like him. But that is no reason I should cramp my whole existence to match the pattern of his humdrum life. Now, Huldah, don't look grave; you know I don't set up for a pattern of perfection—only a faulty human girl."

Huldah shook her head; she could not find it in her heart more definitely to scold the pretty pleading creature who clung to her so beseechingly.

It was hardly daylight the next morning, when the crisp sound of sleigh bells at the door warned Daisy that the moment of departure had come, and she ran merrily downstairs.

"Papa, you haven,t got your fur cap and gloves on. Aren't *you* going to drive me to the depot?"

Israel Plume looked a little embarrased.

"Well, Daisy you see, it's a stingin' cold morning, and I had a tough spell of rheumatiz last week, and—"

"Never mind, papa, dear," interrupted Daisy, "perhaps it isn't best. Good-bye, dear. And, Huldah, don't let him forget the woolen muffler round his throat when he goes out."

She went into the porch, hiding the pang of disappointment that her charioteer was to be only Simon the farm hand.

"It's too bad, Simon," said she, "to take you all the six miles to the depot this cold morning with your asthma."

But, to her amazement, it was not Simon that sat at the right hand of the little red cutter, but Hiram Walters.

"Don't be angry with me, Daisy," he pleaded. "But I did so long to drive you over, and your father was very kind about it and didn't object. It will be so long before we see each other again, Daisy!"

"Angry! I am not angry, of course," said the girl, apparently busy in arranging the robes round her slight form, only I am sorry to give you the trouble, Hiram."

"Daisy!"

"Well, of course it *is* a trouble."

"Daisy," he said, tremulously, "do you remember last Valentine's Day, when I stood under your window, waiting for the sun to rise, and you to draw back the white curtains? And when I first caught sight of you, with your long hair turned to light in the eastern sunshine! O Daisy, Daisy! I knew that I had won the right and privilege to be your faithful valentine all the rest of the year. And you can talk of 'trouble' after that! Daisy, I shouldn't think it a trouble to walk from here to Oklahoma for you, if it could save you a pang or do you any good. We are valentines, Daisy, and I shall stand under your window in the city streets next 14th of February, come what may, save sickness or death to prevent me."

"What nonsense!" cried Daisy, with a light laugh. "Of course, we all know that it is nothing on earth but an old-fashioned custom, forgotten long ago, except in just such out-of-the-way nooks and corners as this."

"*I* have not forgotten it, Daisy, and I never shall."

Daisy did not answer him; she only nestled her hands closer into her muff and gazed dreamily out upon the snowy landscape, now tinted with pink and silver from the first rays of the morning sun.

"It is very, very pretty here," she said, musingly. "I wonder how it will seem when I come back."

"Oh, Daisy, you will come back the same? You will not change?"

"You tease me, Hiram!" she uttered, a little impatiently. "How can we any of us tell what is going to happen to us?"

The young man said no more, but drove on in silence, and not until the train which bore Daisy Plume away had disappeared, shrieking, into the gorge of the hills, did he remember and realize how much he ought to have said—how little he had had the courage to utter.

"But one thing is sure!" he muttered to himself. I will be her valentine this next year, please God!"

So Daisy went to her aunt in New York and bewitched the city people by her carmine bloom and innocent freshness and artless country ways, as unexpected and refreshing as it would have been to find a tuft of buttercups in City Hall Park. And she had not been there a month before she found herself a belle in the Penrose's set after the most approved and head-turning fashion.

"Isn't it nice?" cried Daisy. "Oh, if I could only be a girl of seventeen forever, and have hot-house bouquets sent to me, and wear pink and blue silks, and dance away my life to Strauss's waltz music! It is like having strayed my way into Aladdin's Palace. I don't think I ever knew what it was actually to live before I came to New York."

"My dear," said Aunt Penrose, sagely, "don't talk nonsense, but let Aimee dress your hair with the oleander blossoms to-night. Mr. Davenport has told me that he would call."

Mr. Davenport! The fresh color flooded Daisy Plume's cheeks at the name, for Mr. Davenport was no other than the identical modern Crœsus who had shown first his good taste by falling in love with the little photograph, and then his constancy by correspondingly admiring its original. Were her bright dreams coming true after all? Should she walk on carpets of *moquette* and wear great diamond drops in her ears, and trail the scented folds of camel's-hair shawls after her? Daisy was only an average specimen of human girlhood, as she herself had asserted, and the temptation was very strong. How could Hiram Walters and the red farmhouse expect a second thought after this new cavalier hnd entered the lists? Daisy's eyes sparkled brighter than ever, and her cheeks rivaled the oleander blossoms she liked to wear in her golden hair, as the weeks crept slowly on.

How was it, then, that she blushed and felt vaguely guilty whenever she thought of Hiram Walters and the little border of clove pinks he had planted under the south windows, because she liked pinks, and the old balsam tree he had cut down because she thought the river view obstructed by its black-green layers of shade? Daisy did not analyze her feelings. Perhaps because she dared not.

"Daisy, you are not going to that party to-night!" remonstrated Aunt Penrose. "You took cold at the Rink yesterday, and your throat ls bad. I know it by the husky sound of your voice."

"Oh, auntie, yes," pleaded Daisy. "Mr. Davenport is to be there—and Madeline Clymer."

"Pshaw, child! Madeline Clymer can't very well run away with George Davenport, even if you are not there to keep guard over him."

"But I want to be there, auntie, all the same. And the new white dress with the low corsage is *so* pretty and these flowers he sent are just exquisite. No other adjective in the language would apply to them. Only to-night, auntie, because it is St. Valentine's Eve, he was reading me some of the sweetest verses I ever heard about it; and he says—do you think he can really mean it?—that he shall pace up and down the pavement for an hour before daybreak for the mere chance of seeing me at the window the first of all!"

"Humph!" said Aunt Penrose, momentarily beguiled into forgetting her fears of diphtheria and its attendant horrors. "How about the milkman and the police"

"Oh, auntie, you needn't laugh! You know what I mean. Last year—"

Here Daisy checked herself abruptly as she saw, in the mirror of her memory, the radiant, upturned face of Hiram Walters in the chill February dawnlight, and recalled his parting words.

"But of course he has forgotten all about them," thought Daisy. "Men talk about heartbreaks, but they are only silly words. Hiram Walters is a great deal too sensible and commonplace to break his heart for a silly little chit like me."

Daisy had never looked prettier than she did that night in the white crepe dress cut *decollete*, revealing the slender, swanlike throat and the ivory-white shoulders, rising from a foamlike edging of tulle, while great, luminous pearls glimmered in her ears—they had been a part of Aunt Penrose's bridal *parure* twenty years ago—and a bunch of white jessamine swung its perfumed stars amid her yellow hair.

George Davenport thought he never had seen so fair a vision in all his life, and Miss Madeline Clymer was simply scornful.

So Daisy Plume went home on the night of the 13th of February. Starlight and bitter cold it was, with the air tingling as if it were filled with innumerable stinging particles, and the cold pavement seemed to strike to Daisy's very heart, as her little white-slippered feet danced from carriage-step to threshold.

"Home at last!" she cried. "Oh, I am so glad. I believe I shall never be warm again."

Was it but a chance utterance or a prediction springing from the deeps of Fate?

Up and down, up and down the sounding pavements two watchers paced, each keeping his own vigil, unmindful of the presence of the other. Once or twice Hiram Walters glanced half-defiantly at Mr. Davenport's stately figure, wrapped in a fur-lined mantle, and wondered within himself if this was one of Daisy's fine city lovers.

"He shall not outwatch *me!*" he thought.

Meanwhile, behind the yellow satin curtains of the tightly closed casements the two young men watched so closely, the lights were flickering with sickening pallor, and people came and went for this thing and that and the other, while the old, gray-haired physician sat by the bedside, and Aunt Penrose wrung her hands and asked hysterical questions, which no one had the heart to answer. On the other side of the pillow, visible and yet invisible, stood the waiting specter, Death.

Suddenly the languid eyelids lifted; the eyes shone dimly up, like forget-me-nots peeping through April snows.

"Am I *dying*, aunty? Oh, don't let me die yet! I must go back to Huldah and papa and Hiram—"

And Death came to be pretty Daisy's valentine as she spoke, and the last word upon her lips was Hiram Walters' name. Could he but have known it!

But Hiram Walters will live widowed to his life's end.

"Death took her from me," he said, "and Death will, one day, give her back. And I can wait."—A. O. Conner in N. Y. Ledger.

A Delayed Proposal.

It was nearly five o'clock, and the early spring twilight was fast fading. It had been a warm day, and Miss Nancy Wheelock had opened each of the windows in her little parlor exactly six inches. The air was filled with early spring sweetness, and flowers bloomed in the two little windows. The white muslin curtains, stiff and clean from a recent washing, rustled gently and lazily in the tiny breeze that had sprung up within the last half-hour.

Miss Nancy sat by a window in her high-backed rocker, her long, slender hands crossed in her aproned lap. She felt the peace of it all, and a delicious sense of comfort stole over her. She leaned her head back, and thoughts of old times and thoughts of present times became strangely mingled. Suddenly her glasses fell off, and she woke up. It was almost dark and perfectly quiet. An old clock on the mantel struck six. She started up, smoothed back her soft hair, and walked with a quick, springy step into the kitchen, where she hastened about preparing the toast and tea. She was in the midst of her preparations, when the latch of the door which led into the kitchen clicked and lifted. A rough, ungainly hand, holding a letter, was thrust into the opening. Next followed a frowzly gray head, and old John Lane, the carpenter, said "Good even-in', Miss Wheelock, here's a letter for you that's just come." Miss Nancy dropped the toasting fork with the toast right into the fire, and the nicely browned slice was turned to a crisp in a minute. Poor Miss Nancy was pale with fear; she had not had a letter for three years. The last she had received had announced the death of her only brother. Who could have written? She was actually trembling. She took the white missive with a hasty "Thank you, John," and sank into the nearest chair. The gray head disappeared, and she was left to face the news alone. At first she dared not open it, and it was a good half-hour before she mustered sufficient courage to take a pin and run it evenly along one of the short ends. She drew the folded sheet slowly out; then placed the candle directly in the center of the table, and drew her chair up to it. She then

laid the letter out flat, and shutting her lips firmly together commenced reading.

"Dear Nan." She started. What could it mean? It has been years, years since she was called "Nan." As a girl it had been her nickname, and had suited her well. But now Miss Nancy was forty-two, and had lived alone in her little house for eighteen years. In all that time no one had called her "Nan," and here it was written! Her tense expression relaxed, and she continued the reading:

"I don't suppose you remember me, but I remember you, Nan. Don't you recollect one evening when you and me walked home from the church picnic, and you had on a pink dress, and looked mighty purty. And don't you think it might be that you'd remember how I told you I loved you, and you said you was glad. And then you kissed me, Nan, and I ain't never forgot it, and I ain't never goin to forgit it, nuther. Since then I've been most round God's world, Nan, and it's a big place and a lovely. I've thought on you always, Nan, and I've got 'nuff money to marry. So if you think you could remember them old times, I'm ready to take care on you. Do you think you can remember, Nan? Truly yours, BENJAMIN CRANE."

Miss Nancy read it through five times in quick succession, stopping every now and then to wipe away the big tears that would fill her eyes, still so blue and pretty. After the fifth reading, she carried the letter into the parlor, sat down in her old seat, and leaned her head back against the cushion. But this time she did not go to sleep. No, she thought of Benjamin Crane, whom she had last seen 20 years ago. Her mother had been living then, and had said: "Ben Crane is a good fellow, Nan." She thought of his six feet two, and his broad shoulders, and then the idea crept in somehow it would be a comfort to see him. When she realized what she had thought, she blushed, and thought of it again. This time she didn't blush. She remembered well the picnic and the walk home. She remembered just how many frills the pink gown had. She remembered everything. She thought a while longer, then rose and got pen, ink and paper. Seating herself at the kitchen table again, she pulled the candle nearer and put on her gold-rimmed glasses. Then she read Benjamin Crane's letter for the sixth time. She lingered over the last sentences, "I'm ready to take care on you. Do you think you can remember Nan?" Then she wrote:

"Dear Benjamin" (somehow she couldn't say Ben), "I remember everything. Yours truly,

NANCY WHEELOCK."

She directed the envelope and enclosed the letter. Then she sat still a long time thinking. The clock in the parlor struck ten. She put away the paper, pen and ink, and took the candle in one hand and Benjamin Crane's letter in the other and went up to her little bedroom. She had forgotten to eat her supper, but she never knew it.—Florence Louise Call in American Cultivator.

Gudbrand's Good Luck.

A Paraphrase.

[Written for the RURAL PRESS by MAUDE MANSFIELD S. PEASLEE.]

In the spring of the year Gudbrand brought home Elsa, his sweet blue-eyed bride to the house he had so hopefully built on the mountain's sunny slope. Around it spread wide green fields. He had been so lonely, "for," he said, "a man's but half a man till he gets him a wife."

Everything flourished. Fair, pretty children played round their door, and Gudbrand was much envied by all his neighbors.

One evening pretty Elsa said: "My dear Gudbrand, we scarcely need to keep both the cows that stand in the shed. To-morrow will be market day. You might take one of them to town. Perhaps you could get one hundred thalers for old Brindle."

"Why, so I will. You are a good thoughtful little wife," cried her husband.

The next morning he took Brindle down the mountain-side and went whistling to the market, where no one would buy.

"Well, we'll go back," he cried, and climb the hill again. On the way he met a man who rode a prancing horse. They soon agreed to make exchange, and Gudbrand, mounted on the horse, went gaily on until he met a man who led a fine fat pig. He gave his horse away for the pig, which he afterward changed for a goat, which was soon replaced by a goose.

He was soon persuaded to give the goose for a rooster, which, being hungry, he sold for two shillings to buy some bread. His neighbor met him at the door and asked his luck. On hearing the story, he felt so sure of Elsa's anger that he laid a wager of one hundred thalers with Gudbrand that she would make him smart for it.

"Thor's hammer, man," he cried. "I'm glad I'm not in your shoes."

Gudbrand laughed aloud, quite certain of Elsa's kindness.

The neighbor accompanied him to the door to listen without. Elsa's welcome was all Gudbrand had expected.

"Thank God, my dear husband, you've come back at last. What befell you and the cow?"

"I changed her for a horse," he said.

"That's well! Now we can ride to church. Go, children, go, and put him in the stall."

"But wait," he cried, "I changed him for a pig."

She planned at once to feed on sausage meat.

On hearing of the goat, she spoke of milk and cheese, while from the fleece she hoped for woolen clothes.

The goose she'd roast, and of its downy feathers make a pillow.

The crowing cock, she cried, was just what most she wished, and when she found that it had bought him food in need, she rejoiced that he had not suffered hunger.

"Come in, my friend, come in," cried Gudbrand, proudly. "Have I fairly won the hundred thalers?"

The neighbor laid the money down. "I'd barter Norway's crown," he cried, "for such a wife as thine."

YOUNG FOLKS' COLUMN.

The Boy's Stratagem.

[Written for the RURAL PRESS by MINNIE W. EDWARDS.]

"The old red barn," as it was familiarly called by all the farmers located near it, was made of large iron plates rivited together, so red with rust and remnants of former paint, as to give color to its name, and was a landmark for all the country round, besides being a relic of '49 and spring of '50. The iron which formed it was used in "early times" in the construction of a house in San Francisco, and had originally come from the then far distant States "round the Horn," now stands in the Norton's ranch, through which the weekly mud-wagon, called stage by courtesy, would be dragged up the hill by its weary horses, and all the passengers would alight to stretch their tired, cramped limbs, and sample "Poppy" Gales bad whisky, (sad truth to tell!) The barn was inhabited in one corner by a family, while the horses' stalls were on the other side, all the other available space being occupied by mother hens and their broods, who thus managed to pick up a living between the family table and the horses' mangers.

But now all is changed, and in place of the cumbersome stage, the frequent shrill whistles of the locomotives, and the long, well-laden freight trains from the prosperous farming region northward, show that progression is rapidly reaching everywhere, though doubtless had the old barn been able to express itself, it might have mumbled something about the "good old times," and rattled some of its loose iron plates in a dismal way, in place of a sigh; but they did rattle now, anyway, and quite startled Phillip and Ross, who were enjoying themselves wonderfully well by burrowing into the loose hay with which the barn was filled; spinning yarns, and altogether having a good lazy time.

"Oh, its only the wind, I guess," said Ross, who, a school friend of Phillip Norton's, was spending a portion of the summer vacation with him. "Did you take it for a ghost?" queried Phil, "tho' 'the natives' do call this place haunted."

"Do they really?" asked Ross, "tell me about it."

"There isn't much to tell, only that once, long ago, when there were no houses anywhere around here, people used to live in this old barn—see that stove-pipe hole cut in the iron over there? and once some Digger Indians were on a raid for chickens while the men were away, and one of the woman folks shot at them and killed one, just by chance of course, I suppose. So they say around here that his spirit "haunts" the barn, but we've never been troubled, and never think of it—such nonense!"

A little more chatting and the boys were certainly drowsy, all was so tranquil; while overhead were the heavy buzzing of some bumble-bees, and the twitterings of the swallows which darted in and out of some openings in the roof. They were quickly gliding into dreams when a sudden streak of bright sunlight on the wall, and a quick slamming of the back door awoke them completely, and before they could speak, "Whist now," said a gruff voice with a rich brogue, "phat air ye afther banging the dure so, d ye want the whole counthree to be hearing of us?'

"No, it just schlipped von mine hand out, und der vind dit plow it," replied another voice.

O, no mather, Dutchy, come along, now; tin to one there's nobody round, for the maisther and the mon have gone up to the mills afther lumber, and won't be afther comin' back a day, and Oive been sphying all over for thim pesky byes, but say thim Oi cuden't, so we have a foine opporchunity to tork about this job.

It may be imagined that the aforesaid "pesky byes" were considerably startled, but were boylike and fearless enough to want to learn about the "job," so, nudging each other, they quietly sat up, prepared to hear every word that was uttered the other side of the hay.

"Maype I petter see dere vas nopody dere," was heard in Dutchy's voice.

"Af coorse there's niver a body there," responded he of the brogue, but the boys heard the crackling of hay under the Dutchman's heavy feet, and drew noiselessly back into their burrow, as there was nothing else to do, hoping in that way to escape being seen, and so fortunately it happened, and "Dutchy" returned to his companion satisfied that they could freely discuss their plans.

"D'ye say thim two ind stalls?" ("That's old Irish Jim," whispered Phil to Ross). Well, ivery noight that noice mare ye saw on the flat, and her two-year-old colt, are put there, and whin Oi were here hilping thim plant spuds, Oi heerd the ould man say he wouldn't take two hundred and fifty for her, and the colt is wurth about one hundred and fifty, so d'ye moind, now's our chance, wid nobody but thim byes and the madam and the haythen cook, so the coast's clear."

"Is it?" mutters Phil.

"Vell," broke in Dutchy, "let's yust go down and take dem out dot flat and go oup countree."

"Ow, ye idjot ye! d'ye want a toight cravat 'round yer Dutch neck? That mare's well known all 'round here and we'd be afther bein' sthopped afore we'd got anywhere."

"Vell, vell, I titn't know dot," apologized Dutchy, and so Jim proceeded with his plans.

"After we've resthed here we'll go ask fer a boit at some of the places round, thin slape under thim threes near the bridge till about noine, whin ivery body'll be quiet, thin crape saftly up here, get on the craythurs and go out the back road yonder so's the dratted dogs won't hear us, and then 'll roide in grand sthyle into Healdsburg, sell the horses and git off before the boss is back wid his lumber."

"Yah, dat is goot," Dutchy says, "put yer know apout dem ghosts vat vas here."

"Arrah! Ghosts is it? Niver a one did Oi iver say that Oi cuden't flatten out wid me foine phist!" laughed the Irishman; so Dutchy said no more.

"Now let's rest for a toime, and thin we'll go for our supper, an' it's yerselfll be afther thanking me for giving ye a chance to turn an honest penny."

The boys looked at one another at this novel idea honesty, and were very anxious to be out of the barn, especially as the quiet was growing painful after the exciting talk they'd overheard, and both were inwardly planning all sorts of schemes to thwart the horse thieves, and were greatly relieved when the two tramps gathered themselves up and went out the back door, while somewhat later, after discussing ways and means, the boys went out the front door and up to the house just in time for supper.

Phil had decided the neighbors were too distant to depend upon, and the Chinaman too cowardly, and while he thought it best to say nothing to his mother for fear of frightening her, he perhaps had an idea of Ross' and his own ability to frustrate the thieves' plans.

At supper table Phil asked his mother if she had any old white rags or sheet, or anything.

"Why yes," replied Mrs. Norton, "but what for?"

"Oh, just for a lark," said Phil, "a sort of surprise."

"Well, I trust it will be a pleasant one, my son, and I'll give you an old sheet and a couple of old pillowcases. Will that do?"

"Just the thing," says Phillip. "We'll have a regular sheet and pillowcase party," with a meaning glance at Ross.

"What are you up to, anyway, boys? No harm, I trust. I always feel nervous when your father's away—not that there seems to be anything to fear, but we are so far away from everybody!"

"Well mother, that's rather hard on us. Don't you even think *I* could take care of you if it were necessary," responded Phil, and as his mother looked with motherly admiration at the tall, muscular figure and bright face of her sixteen-year-old boy, she fondly admitted she could gladly trust herself to his care.

Supper was over by six, and the boys off, and just as Mrs. Norton had become interested in her book, Ross put his head in the door with an "Oh, Mrs. Norton! Do you know where that piece of phosphorus is that Phil says has been here so long?"

"In the washhouse on the shelf in a bottle of water in an old cigar box, tho' what the father wanted it for I can't tell any more than I can what you want it for, tho' you're sure it's no harm, Ross?"

(*Concluded next week.*)

DOMESTIC ECONOMY.

Tough Meats.

[Written for the RURAL PRESS by MRS. M. B. P.]

Often, especially in small places, the meat is so tough and flavorless that the cook needs to exercise much skill and ingenuity to render it agreeable to the taste. An economical cook will frequently buy the coarser cuts in preference to better, because they are much cheaper, and when properly cooked are just as nutritious.

These cuts are generally plainly stewed, but a skillful cook can make a variety of pleasing dishes from them. To me there is a real pleasure in taking a coarse cut of meat and by careful cooking transforming it into a tender, attractive dish. To do so requires thought, care and time, and the exercise of good judgment.

Below are given a few methods for cooking the coarser cuts which will render them pleasing and nutritious.

Grenadines of Beef.—Take a round steak and cut it into neat well-shaped pieces. In a flat-bottomed iron pot lay a few thin slices of fat bacon. On these lay the pieces of steak. Season with pepper. Stand the pot on a part of the stove where it will cook very slowly in the fat of the bacon. When it has cooked from fifteen minutes to half an hour according to the toughness of the meat, turn the pieces of steak, and pepper the top. Cook again the same length of time. Then put the steak on a hot dish. Take out the bacon and pour off all but two tablespoonfuls of the fat. To this add a generous tablespoonful of flour, stir until smooth, then add a scant pint of water, and let it boil up. Pour over the steak. Serve with this boiled macaroni dressed with tomatoe sauce.

Mutton Chops on Toast.—Take six large mutton chops, put them in a pot with three thin slices of bacon or pork beneath them. Cover the pot closely and cook them on the back of the stove for two hours. When they have cooked half an hour add a small onion finely minced and a tablespoonful of minced parsley. Turn frequently to prevent burning. At the end of two hours add four tablespoonfuls of wine vinegar, a dash of cayenne and quarter of a teaspoonful of ground cloves. Cook half an hour longer. Wet a teaspoonful of flour with a little of the gravy, pour into the pot, stir well and let it boil up once. Have six slices of hot buttered toast on a dish; on these lay the chops and pour over the gravy.

Haricot of Mutton.—Take three pounds of lean mutton, and cut into neat pieces. Put two spoonfuls of butter into a pan, in this fry the mutton, and a small onion sliced. Add to them a cup of gravy or stock. Stew slowly an hour. Then add a carrott sliced, and a cup of green peas. Stew half an hour. Thicken with a tablespoonful of flour. Season with pepper, salt and a tablespoonful of tomato catsup.

Ragout of Mutton.—Cut two pounds of coarse, lean mutton into small pieces. Have two tablespoonfuls of butter in a pan, in which fry the mutton, and a small onion minced. Cover with hot water or stock, and stew slowly two hours. At the end of an hour, add pepper, salt and a tablespoonful of summer savory. At the end of two hours, thicken the gravy with a tablespoonful of flour and boil up. Turn into a hot dish and serve with it boiled green peas.

Steamed Mutton Chops.—Steam three pounds of mutton chops for three hours. Take them up and dredge with pepper, salt and flour, and fry brown in butter. Serve with tomato sauce.

PACIFIC RURAL PRESS.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 27, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Nursery Stock—E. J. Bowen.
Agricultural Implements—Baker & Hamilton.
Pacific Coast Home Supply Association.
Staudard Mower—Stanton, Thomson & Co., Sacramento.
Combined Harvestr—Daniel Best, San Leandro.
Combined Harvester—Holt Bros.
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☞ *See Advertising Columns.*

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The Week.

A good rain, in some respects the best of the season, followed quickly upon the promise which we gave in our last issue, and we think now of applying for a position on the staff of the rain-making bureau. The rain was wet, warm, penetrating and wide-reaching. Everything north of Tehachipi was well watered by it and the slight deficiency which still remains in the seasonal figures is little thought of. The outlook is for the grandest kind of a year—this is the current comment among those we meet.

The political pot is beginning to boil everywhere. This week has seen ebullitions all the way from New York to San Francisco, and in all cases there was no lack of warmth resulting from the clash of conflicting interests. And this is only the beginning. Soon we shall have politics from day to day and week to week, until November brings relief.

Work of the Fresno Convention.

If there is only one deduction to be drawn from the convention of fruit producers last week at Fresno, of which we publish full outlines on another page, it is that a disposition toward cooperative action now exists as it has never existed before among the producers of this State. It was an open convention and the axe-grinders of all interests had free access. A few years ago these henchmen of corporations and trade interests would have wrecked the convention, as they have on many a previous occasion, and would have baffled earnest, progressive men by their dilatory and illusory propositions. This convention had evidently no patience to be trifled with and the obstructionist was soon disposed of. This we take to be a clear indication that producers are stronger in their determination to protect and advance their own interests than ever before.

But there is another indication presented by the convention which is hardly less notable than the foregoing. It is the greater unanimity of opinion and deeper feeling of sympathy which are discernible. There is less than formerly of the timorous spirit, of the questioning as to whether producers can in fact understand their own interests and advance them. We don't hear so much as we did about approaching certain powers in a certain way and hoping that said powers have consciences large enough to hang an appeal upon. Even the kindly conservative ones who used to make such speeches a few years ago do not make them now., They have learned better. They have been bitten by the very pets which they fondled and they now know that there is nothing to be gained by such methods.

As the ideals of magnanimity and unselfish devotion in high corporate places have lost their charms, the producers naturally come closer together and have more confidence in each other. Enough has recently been done by them to warrant this confidence and to teach them that they have little to expect in the way of service from masters. It is not surprising then that producers have, during the last few years, acquired a good education both in the ills of others and the good in themselves, nor that they propose to turn this knowledge to their own account and sweep away obstructions which hinder their industrial progress.

We do not speak except in such general terms of the convention because the report upon another page presents the details of the work undertaken as clearly as it can be described. Whether the convention and its committee have hit upon just the best plan or not can only be made clear by longer thought and discussion of minute features of the plan. That will come in the immediate future. The movement has force in it and behind it. Do not let it fall from inaction. There must be united action. The situation among the fruit men is much as it was among the old signers of the Declaration of Independence when one of them said: "We must hang together or we shall hang separately." Fruit growers have been hanging separately long enough and some of their necks are seriously strained. Let them now try hanging together.

Irrigated Area.

The telegraph brings outlines of a special report on irrigation which issued from the Government Printing Office at Washington on Monday of this week. The report is prepared by Mr. Hinton of the Irrigation Bureau of the Department of Agriculture and is the final report of the artesian well investigation and the second part of the irrigation inquiry, both ordered by Congress. The document presents the States of Nevada, Oregon, Washington and Arizona in separate papers, wherein effort is made to illustrate the chief cause by which aridity is produced and the ways through which benefits by irrigation may be secured. For California, special attention is given to the progress of the storage of water and the distribution on a large scale in the fruit-bearing portion of Southern California, and the progress of the San Joaquin Valley fruit orchards in the growth of irrigation projects and the changes that are being produced by it in the great wheat ranches of Merced, Tuolumne, Colusa and Butte counties.

The following table is a condensation of the results secured by statistical inquiry as to the irrigated area of the arid States:

STATES AND TERRITORIES.	Estimated under ditch.....	Acreage under cultivation, 1891	Number artesian wells, 1891.....
Arizona	660,000	315,000	42
California	4,500,000	3,550,000	3,500
Colorado	3,007,050	1,800,000	4,500
Idaho	1,200,000	330,000	12
Kansas*	990,900	120,000	50
Montana	1,250,000	419,000	36
Nebraska	200,000	40,000	100
Nevada	150,900	75,000	76
New Mexico	700,000	405,000	10
North Dakota	2,500	2,000	670
Oregon	125,000	45,000	6
South Dakota	100,000	54,000	950
Texas	350,000	160,000	1,000
Utah	735,000	423,000	2,524
Washington	175,000	75,000	10
Wyoming	3,031,484	185,000	6
Total	18,533,107	8,019,000	13,690

*West of 97 deg. long.

ANOTHER WORLD'S FAIR ASSOCIATION.—At a meeting held at Yuba City last Thursday, there were delegates present from Shasta, Butte, Tehama, Glenn, Colusa, Sutter and Yuba counties. It was decided to form an association for joint work in the interest of good representation at the World's Fair. Gen. Chipman was chosen president. Other meetings will follow.

Railway Rates to the Citrus Fair.

It seems that reduced railway fare to and from Los Angeles during the fair can only be enjoyed within limits. In answer to an inquiry which we made at Southern Pacific headquarters in this city we received the following:

"A rate of one and one-third for the round trip will be made from stations between Bakersfield and Indio, including points on branch lines. Tickets will be good by trains arriving at Los Angeles March 2d to 8th, inclusive, and returning up to March 9th, inclusive."

We are sorry the reduction does not extend to all points. As it is, it is not available to those who live north of Bakersfield or east of Indio.

AMERICAN MEAT IN ENGLAND.—The directors of Eastman's Limited Company have issued a report for 1891. They estimate the falling off in sales of American meat in England at £69,000, which they attribute to the high price of cattle and excessive competition.

QUERIES AND REPLIES.

Points for Hawaii.

HONOLULU, Feb. 10.

TO THE EDITOR:—Please state in RURAL PRESS the best known means for killing blight and scale-infesting fruit trees, more especially oranges, lemons and limes?

We have a species of grass nut, imported here from the Coast, which it is impossible to exterminate by ordinary methods. It is a great nuisance to us, as it will kill out any other grass with which it comes in contact. Can you suggest a means for exterminating it?

Could sticks of buds of olive and orange be successfully sent from the Coast to Honolulu for purpose of budding native stocks? If so, inform me of persons who could supply same. Yours truly,

JOHN EMMELUTH.

If our friend had read his RURAL a little more carefully he would have already had a scrap book full of scale remedies. He is probably aware that for the red scale, which is now our worst foe on citrus fruits, the gas remedy, which has been fully described in our columns, is best. Probably, however, our correspondent desires washes, to use on a small scale. The following formulas are prepared by Mr. Alex. Craw, with the prices of the materials in this market:

ROSIN WASH FOR CITRUS TREES INFESTED WITH "RED SCALE."

20 lbs. rosin at 1½c	$ 30
6 lbs. caustic soda at 5c	30
3 lbs. fish oil at 4c	12
Total	$ 72

Water to make 100 gallons. This is very effective and costs about three-fourths of a cent per gallon.

ROSIN WASH FOR NEWLY-HATCHED BLACK SCALE UPON CITRUS TREES.

18 lbs. rosin at 1½c	$ 27
5 lbs. caustic soda (70 per cent) at 5c	25
2½ lbs. fish oil at 4c	10
Total	$ 62

Water to make 100 gallons. This will cost five-eighths of a cent per gallon.

COAL OIL EMULSION FOR BLACK SCALE UPON OLIVE OR CITRUS TREES.

5 gallons coal oil at 17c	$ 85
1½ lbs. laundry soap at 3½c	05¼
2½ lbs. home-made soap at 1c	02½
Total	$ 92¾

When emulsified, this will make in all 40 gallons of wash, or a little over 2¼ cents per gallon.

We presume the "grass nut" imported from this Coast is the "chufa." It can be killed out in dry soils in this State by plowing up in the hottest, driest time of the year. How to handle it with Hawaiian conditions, we do not know Will someone tell?

Bud-sticks of olives and oranges can easily be sent to Hawaii, if properly packed. Probably any nurseryman advertising these fruits in our columns will furnish the buds.

Six-Day Creamery Practice.

WESTMINSTER, ORANGE CO., CAL., Feb. 15.

TO THE EDITOR:—The farmers here, who take their milk to a creamery which runs but six days in the week, wish to know the best and cheapest way of keeping milk sweet from Saturday night to Monday morning, without injuring the quality or quantity of butter, especially in warm weather. Can you help us in this matter?—G. W. MACK.

We know of no treatment which would both keep the milk sweet and prevent the rising of the cream. The use of ice would prevent souring, but would hasten the cream rising. The use of preservative powder, if this can be shown to be without injury, would prevent souring but not cream rising. The creamery which will not run every day should therefore arrange to receive cream on Monday instead of milk, or else the farmer will have to churn his own cream from the delayed milk. In fact, in this country where ice is usually too high-priced for dairy use, the dairyman has no choice but to get the cream from the milk as rapidly as possible, and for this purpose the centrifugal separator is best, and shallow pans next best.

How to Ring a Hog.

CLOVERDALE, Feb. 22, 1892.

TO THE EDITOR: Replying to Mr. H. E. Dye of Tulare county, I will give you what seems to be a practical plan for holding hogs while ringing:

In your corral, substantially fasten a strong scantling in a horizontal position, and about four feet from the ground. Prepare a rope with a noose, and when your hog is caught, and he opens his mouth to squeal, the noose can be slipped over his upper jaw, until it comes back of the tusks, turning the loop down into the mouth. Then take a turn on the scantling and let the hog loose. He will pull back, very naturally, and be in a very good position to ring.

WM. T. HEALD.

The State Press.

Chico *Chronicle:* "Whether the bill to elect Senators by direct vote will pass or not remains to be seen, but of its wisdom and propriety there can be no question. Unless the people of a State can be trusted to elect their Senators, the Senate of the United States should be done away with entirely, for under the present system it certainly is not a representative body."

Palermo *Progress:* "We believe our judges should not be elected by the people on a party vote. They should be appointed, and appointed for life or during good behavior, and the higher appointments always filled by promoting from the lower ranks those meriting promotion. Our criminal trials ought then to be tried before a court in bank, and it must follow that less mistakes and less expense and more justice would result."

San Jose *Mercury:* "The miners of California have already found out that there will be a hard fight before it to get Congress to grant the relief it has gone to seek. That the fight will be hard can be due only to the parsimony of the present majority in the House of Representatives, or to the spirit of indifference, born of ignorance, with which too many Eastern men regard the needs of California. Certainly a juster claim, or one of greater importance has rarely, if ever, been presented to the Government."

Gridley *Herald:* "The next legislature will undoubtedly be strongly petitioned to make the offices of Justices and Constables salaried positions, thus doing away with the deadly fee system which is in many instances apparently an incentive to hasty and unnecessary arrests. Butte county tax-payers are this year being called upon to foot many a long bill for trials which ought never to have bothered the courts, either high or low. The only way to check the growing tendency to wanton waste in official circles is for the tax-payers to enter a united protest against such extravagance from now on and clinch their arguments at the polls. Spot the leeches and stop the leaks with ballots."

Stockton *Independent:* "Mr. Newberry's bill to cut off pensions from nonresidents of the United States will receive very wide support. There is a growing disposition to regard the pension list with jealousy since it has grown so large. This jealousy has long asked that the cases of all pensioners and the Pension Bureau be closely investigated, and the revelation that 15,000 pensioners reside in foreign countries will add to the clamor. Congress has the undoubted right to so amend the pension laws as to require pensioners to live within the country that supports them. If the drain on the Treasury for these 15,000 pensioners takes no more than a half million a year out of the country, the drain of money from the country is greater than the people will approve."

Stockton *Independent:* "Men of the world who like to see a successful politician win a fight will naturally congratulate lucky workers like McKenna and Morrow, but how will the appointments strike the people, who have been taught in days long past that the judiciary is the highest and ablest department of the Government. * * * President Harrison certainly did not fairly judge between available men when he passed over half a dozen of the ablest jurists of the State and selected men who are best known for their political successes. United States Judges are appointed for life, and thinking men who believe that the ablest lawyers in the land should be named for such positions of grave responsibilities will be disappointed in the selections made in California."

Visalia *Delta:* "The American Forestry Association has adopted a memorial asking for the establishment of four additional timber reservations, as follows: The Turtle Mountain reserve in North Dakota, Crater Lake reserve in Oregon, Lost Park reserve in Colorado and Sierra Madre reserve in California. Those who are opposed to Government reservation and control of unentered timber lands, fear that the purpose of the Government is to prevent all trespassing upon such territory for any purpose, but such is not the intent. The main object is to protect the cutting of timber, the prospecting for and working of mines, or the farming or pasturing of suitable lands. It would be folly to think of withholding a large area of land from use, thus preventing it from contributing toward any creative industry."

Government Railway Management.

SAN GABRIEL, LOS ANGELES CO., Feb. 19, 1892.

TO THE EDITOR:—I often read of the benefits which it is claimed would accrue from Government ownership and management of the railway system of the United States, and as often read and hear the idea scouted and ridiculed, and pronounced impracticable because it would lead to political jobbery and corruption in the practical management thereof, etc. Yet in Germany, I read, the railways are controlled by the State to the great benefit of the country, to the oppression of none, and are operated by the army. Why can this not be done in the United States? If it could be done, our trains would cease to be robbed, our mails and express would be safely transported, our postoffice department save millions now paid for carrying mails; there would be no strikes; the railways themselves would cease their unjust discriminations and oppressions of our peoples and places.

I do not ignore the pension rock. Let the law and the Constitution, if necessary, be that all men who enlist in the army or navy thereby forfeit (during their enlistment) the right to vote. Then the millions of men who will manage the railway system cannot collude with the corrupt politicians and vote themselves pensions. The army in this case should be so large in excess of the men required to manage the railway that while one-fifth, we will say, are attending to their military duties, drilling, etc., the other four-fifths would be on extra duty—that is to say, receive extra pay and be attending to their extra duties in the railway service, just as men are now on extra duty in the commissary and quarter-master's department of the United States army. The one-fifth on military duty could be on drill and learn all that is required to be perfect in the school of the soldier, and then, to keep him from "stagnating," put him on extra duty to keep him actively alive. We could in this way always have a great and efficient army, ready for any emergency, not idle, thriftless fellows, but soldiers with their wits about them.

Have the railway system so run as to pay its own expenses, and the expenses of the army and navy (perhaps), and a sufficient fund to pay interest and for a small sinking fund and extension fund, and no more. By this plan, the Government can own the railways. As it is, it is claimed the railways own proximately the federal and State Governments, with the Congress and Legislatures of the States, and also the federal and State judiciary. Proximately, I say, it is so claimed. I hope the claim is wrong; but I, and all other citizens, as far as I know, believe the claim approximates the truth.

If the baneful hand of the railway corporations, with their billions of dollars, were off of Congress, courts and legislatures, would we not have a chance to come back to honest principles? Railways, telegraphs, telephones and trusts are new institutions, comparatively, and if we allow them to get complete control of this nation (and are they not closing down on it?), then how can we get rid of them except by a great civil war—a war with all the money and power of the railway and of the telegraph, telephone and trusts on the one side, and the farmer, with his pruning shears and hay fork, on the other.

Forty years ago, the farmers of this country owned 80 per cent of its wealth. Now they own 20 per cent, and that mortgaged. Forty years ago, 80 per cent of the young men in our colleges were farmers' sons; now not eight per cent. What do these things mean?

It is claimed to be a fact (is true) that from 1872 to 1887, 15 years, the tariff on the railroad iron used in the United States paid to our Iron Baron, was one hundred and fifty millions of dollars. Not one cent of this went into the United States treasury. And our farmers are charged by the railways to pay this extra one hundred and fifty millions. For whose benefit was this? Would the Government, if it owned and managed these roads, pay these extraordinary, unjust and farm-crushing charges?

I write this from the standpoint of the farmer.

A. B. CHAPMAN.

Fruit Growers at Stanford University.

CARMEL VALLEY, Monterey, Feb. 22, 1892.

TO THE EDITOR:—Mental improvement being one of the traditions of the Berwick family, last Monday found my son and self on the cars northward bound for Menlo Park to enjoy all the good things that the Stanford University had to offer California's fruit growers. Menlo is 2¼ miles from the University buildings, and the somewhat exorbitant fare of 50 cents was charged each passenger by the conveyance plying between the two points. Next year an electric railroad is to connect Palo Alto depot with the University, and it is presumable that all cars will then stop at Palo Alto instead of Menlo. Leland Stanford Junior University (L. S. J. U. for brevity) requires a blue sky to show itself to the best advantage. Skies were gray as we traveled, and viewed in its present unfinished state, L. S. J. U. reminded one rather of some huge manufactory than of any collegiate edifice previously known. The present quadrangle is merely an interior square of a mammoth quadrangle yet to be erected of two-storied edifices. In the center of one face of these edifices will be a chapel of glorious architecture, and in the center of the other face a magnificent triumphal arch. These appear in the architect's sketch to be of white marble. The only fair place at present to judge of the effect of the style adopted is from the interior, and when the bright sunlight of California lit up the quadrangle of warm buff sandstone, with its red tiled roof, and the rich blue of heaven appeared through every arch, one could realize something of the future glories of the finished structure.

Room 90 was the apartment to which we were directed as the fruit growers' gathering place; but as the first special lecture did not begin until half past ten. Pres. Jordan kindly made us free of the institution to pluck from the tree of knowledge such fruit as each should desire. During the week, we amply availed ourselves of the privilege. I think we began by sampling the highest growing fruit first, and ranged from psychology down through flowers of poesy and literature, physics and chemistry, to the scale bug on the trunk and aphis on the roots. As the amount of intellectual pabulum provided required five days to swallow and an unlimited number to digest, I must refer your readers to those daily papers which published the lectures more or less in extenso.

There was one little point that Prof. Comstock made that may be of much service to us all. It was regarding the *application of the arsenites in spray*, as insecticides. Fruit growers have been advised heretofore to use ammonia to mix with their Paris green to make it more soluble. Prof. Comstock, replying to my question, deems this all wrong. He thinks it equally destructive to bugs when merely held in mechanical suspension in the spraying medium, and much less prone to burn the foliage than when made soluble by the addition of ammonia. When used for stone fruits, one pound to 320 gallons of water he deems amply sufficient. Attention to this will not only save the ammonia, but many a disfigured tree.

An address, of which I have seen no newspaper report, but which was of much practical importance, was delivered by Mrs. Comstock. "Mental horticulture" was the subject announced, and the lecturer forcibly urged the importance of making farm home life attractive intellectually, as well as physically. Mrs. Comstock deplored and deprecated the insensate folly of exchanging a pure, wholesome, natural life in God's sweet country air for a monotonous city routine in an atmosphere, moral and material, charged too often with foulness and filth, sickening to soul and body.

What can possess "our boys" that they should forsake the noble and invigorating career of the horticulturist to pen themselves for 10 hours a day behind a Kearny street counter, in the effeminate and emasculating business of measuring yards of ribbon and tape, or acting the human bootjack and buttonhook, even with the additional pleasure of nightly imbibing beer in some malodorous underground "dive," is certainly one of the things that "no feller can understand doncherknow." If a tailor be but the ninth part of a man, what fraction of manhood can remain in the many pale-faced underlings whose occupations demand not the ninth part of a tailor's ability? If the American male biped is to retain the vigor and sterling manliness of his progenitors he must seek and cherish it elsewhere than in Kearny street dry goods depots or Dupont street dives. And the American girl, let her not forget it!

These are not quotations from the lecture, for I took no notes, but my reflections on ideas therein set forth. Perhaps, Mr. Editor, you might persuade Mrs. Comstock to pleasure the home-staying fruit growers by publishing her lecture in the RURAL.

President Jordan one evening gratified both students and visitors with a stirring recital of the ascent of the Matterhorn by himself, Dr. Gilbert and party; he also gave an hour to describing the salmon and trout of the California coast. Dr. Gilbert entered a plea on behalf of the robin and other feathered friends of the farmer, now being recklessly and ruthlessly slaughtered by pot-hunters, to the great detriment of the horticulturist, and the untold multiplication of the bug. He also graphically described the methods of deep-sea exploration, illustrating his remarks with diagrams and specimens, including a sample, under the microscope, of the shells from the globigerina ooze. Dr. Marx urged our irrigationists to restrain their impatience until the expiration of such time as should allow a proper and comprehensive survey to be made of areas of water collection, distribution, etc. Dr. Brannan talked on the formation of soils by the disintegration of rocks, and the action of water and ice. Mr. E. E. Smith discussed phases of fruit culture and kindred subjects. But of course the chief attraction to fruit growers were the lectures of Prof. Comstock, who has made a life study of the fruit growers' friends and foes, insects, predaceous or rapacious,—predaceous as they prey on each other, rapacious as they commit havoc or rapine on farm crops. These are not professional distinctions, be it remembered. The professor speaks with that freedom which is possible alone to a master in science.

It would be hardly right to close this letter without a hearty acknowledgment of the uniform courtesy and kindness with which we were treated by all those with whom we came in contact. I am a little disposed to think that we felt almost as much at home at the L. S. J. U. as we do in our easy chairs by our farm firesides; and when I recall my 27 years of backwoods life, I don't think I can better indicate the heartiness of the welcome extended us. A body of men so talented, with so much modesty and so little assumption, ought to and *will* achieve great things, even in this "wild and woolly West." I am also vastly pleased to record that the Faculty are unanimous in their verdict that the students at L. S. J. U. average higher in ability and attainments than their former students of the Middle or Eastern States.

EDWARD BERWICK.

Fair Trade and Honest Labels.

NILES, ALAMEDA CO., Feb. 18.

TO THE EDITOR:—I must commend your editorial on "Sound Morals and Good Policy" in the impression of Feb. 13th. Speaking as an Eastern consumer, only lately become a California producer of almonds (I sent a carload to Chicago last year) and green and dried fruits, my theory is exactly the opposite of those who advise foreign labels. The reputation of California fruit is too high for its own good, and Eastern retailers take advantage of it to put on a price which restricts the sale. No matter what price we get, that tyrannical power called "the trade," which consists of the jobber and retailer, but holds sway over the commission merchant and the manufacturer, will not let the consumer have "California" fruit at anything less than a fancy price.

It deserves all the credit it gets and more; but the true remedy is to let the Eastern consumer know that he does not need to pay the fancy prices. He will more than double his purchases, and soon will not be satisfied with anything short of "California" fruit. I have just had some visitors from Indianapolis. They said they never got prunes as good as those on my table for less than 20 cents a pound, nor such dried peaches for less than 15 cents. I got 7 cents for the prunes and 5 cents for the peaches in Chicago, freight paid, and out of these prices paid five per cent commission.

I would have been glad to lay down in Indianapolis, freight paid, anything over 100 pounds of mixed fruits at 10 cents a pound. I could not do that every year, but they say they see no difference in this year of low prices for the California producer.

"The trade" has its rules, immutable as the laws of the Medes and Persians, and one of them is that everything from California, except wine, must be held for a high price. "Wine is a mocker," the good book says, and California wine may have to travel under an *alias*. If Montcalm had conquered at Quebec instead of Wolf, and this country had passed under French control, the wine men might have succeeded; but we drink an average one-half gallon of wine a year to the Frenchman's 20 gallons per head of population, and we carry beer and whisky into the winery and drink it rather than change.

The wine men have tried to induce or force retailers to sell wine at five cents a glass. They know better than I do how they succeeded, but I know that if we could induce Eastern retailers to sell our fruits at reasonable prices, we could have an enlarged market at better prices.

HENRY J. PHILPOTT.

Cost of Creameries.

Cor. Reno Gazette.

As the creamery business is the all-absorbing topic these times, we give the following cost of a creamery outfit for making butter from 100 cows:

1 6-H. P. engine	$ 175 00
1 8-H. P. boiler, horizontal	235 00
1 improved De Laval separator—capacity 1300 pounds per hour	350 00
1 200-gallon milk receiving vat	40 00
1 200-gallon cream vat	45 00
1 200-gallon box churn with tight and loose pulleys 16x4 inches.	32 00
1 power butter maker—preferably Mason's	50 00
1 400-pound platform scale	15 00
1 Renesselaer scale, for salting	8 00
1 60-gallon weigh can	2 50
1 milk conductor head	2 50
Milk conductor pipe, 6 feet at 20c	1 20
Thermometers, dippers, ladles, etc.	3 00
1 power force pump for water supply	25 00
1 separator tempering vat	15 00
1 cream cooler	8 00
1 butter-milk strainer	2 50
1 20-bottle Babcock milk tester	21 00
Total	$1,028 20

The size and number of pulleys, lengths of shafting, belting and pipes, will depend upon the dimensions of the building and position of the machinery. Below, I give the list prices of such material as is needed for setting up and connecting the machinery: Four-ply rubber belting costs, for 2 to 8 inch, 21 to 80 cents per foot; leather belting, for 2 to 8 inch, 23c to $1.02 per foot; shafting—cold rolled—1 7-16 inch size, usually used in creameries, 80 cents per foot; drop hangers, rigid, 1 7-16 inch journal each, $3.60; drop hangers, adjustable, 1 7-16 inch journal each, $5.89. Pulleys for above machinery, calculated for 6-H. P. engine:

Counter shaft to engine 16½x6 in	$ 4 85
Counter shaft to main shaft 12x5	3 50
Main shaft to counter shaft 23x5	6 50
Main shaft to churn 9x8	3 85
Main shaft to worker 7x6	3 00
Main shaft to pump 5x6	2 75
Total	$24 45

Additional apparatus necessary to fit the above plant for cheese-making:

1 500-gallon cheese vat	$ 60 00
1 curd mill with salter attachment	24 00
1 10-foot curd sink	18 00
1 cheese press with 6 hoops and follower	44 50
Or a gang press for 10 to 20 cheeses	$45 00
1 12-blade curd knife	4 50
1 conductor head and 10 feet of pipe	4 50
Curd pails, scoops, milk pails, dippers, thermometers, etc	5 00
1 milk cooler and aerator	5 00
50 feet 1-inch steam pipe with two globe valves	10 00
Tees and elbows	1 00
1 cheese dater	1 25
Total	$176 75

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

THE BEST ORANGES FOR BUTTE CO.—*Register:* P. R. Persons and Judge Lott made a long and careful examination of the Orange trees in this vicinity and compared the different varieties. Mr. Persons says that St. Michaels are strong and thrifty growers, but the fruit is small and there is not the demand for them that there is for the larger and more attractive oranges. The Washington Navels and the Mediterranean Sweets are the best in this climate. The navel when young is a shy bearer but as the trees get older they increase in bearing. The Homosassa is small and has many seeds like the ordinary seedling. The fruit is, however, delicious, and at this time of the year is as perfect as any fruit can be. Some of the navels are already beginning to show their white buds for blooming which is very early. The navels and Mediterranean sweets are in his estimation the two varieties that will lead all others in this region for size, flavor and salable qualities.

BAG THE ORANGE TREES.—Oroville *Register:* Major A. F. Jones, who has watched the planting of thousands of orange trees at Thermalito, tells us that the orange tree roots should be bagged even when the trees are to be moved but a short distance. He showed us trees taken from the same nursery and planted side by side in groves at Thermalito and those where the roots had been bagged were more flourishing and thrifty during the first year and there was far less loss than when the trees were not bagged. He says in this mild climate the trees are not dormant enough to be moved without causing a loss of vitality at any time during the year and hence the need of protecting the roots even when the trees are removed from a nursery and planted at once in orchard form.

ORANGE AND OLIVE TREES AT THERMALITO.—*Register:* Major McLaughlin has now 1,200 orange trees that are looking finely and will plant during the coming month 2,000 Mission olive trees and 6,000 seedling orange trees, making in the orchard 9,200 trees in all. This is just north and across the road from the 40-acre olive orchard owned by Messrs. Fogg and McLaughlin. There are 152 acres in the tract north of the road, and a vast amount of work has been done upon this in plowing, grubbing, leveling and putting in good shape for thorough cultivation. It is near Oroville, and will make, in a year or two, a magnificent showing from this town. F. S. Foote, of San Francisco, is filling in vacancies where some trees died and will put out 2,200 Parson Browns, Mediterranean sweets and navels. Col. Danicke will plant 1,200 budded orange trees, but we did not learn the varieties, and the work of plowing and planting is being done by J. B. Kiefer. Fred Stanton, of San Francisco, is putting out 1,400 budded orange trees of different varieties. G. C. Goodrich, of New York city, is planting 1,080 budded orange trees. Mrs. Goodrich will put out five acres to oranges a little further south in the colony. In the twelve trees tract Major Fisher is having 1,800 budded oranges planted. W. B. Martin, of Alameda, is having his land put in fine shape to put out 2,000 budded orange trees. The work is being done under the supervision of John R. Preston who has the contract for the orchard. Miss A. Briggs and her nephew, Frank Briggs, both of Chicago, are having their land prepared and will plant ten acres of oranges, ten of olives and ten of tragedy prunes. There are 309 acres of oranges, ten acres of prunes and forty acres of figs being planted at present.

Fresno.

THE SEEDLESS GRAPE.—W. A. Sanders in Visalia *Delta:* "The advantages the Corinthian, the Zante, the Sultanas and the Thompson seedless grapes possess above the Muscat are, first and greatest, they ripen from ten to twenty days earlier. This means that raisins from these varieties are entirely cured during the hottest and dryest weather of the summer before there is any possibility of loss from even the earliest autumn rains. Another advantage nearly as great, they are the first of the raisin crop of the world in the market. As they cure faster than the Muscat their output of raisins can be marketed a month ahead of the great mass of Muscat raisins, thereby insuring quicker sales and larger prices. Thompson's seedless vines grafted into Rose of Peru roots in March, 1889, yielded as high as one hundred pounds of grapes to the vine. Sultana vines, twelve years old, yielded sixty-three pounds average to the vine, Corinthians about the same, Zantes slightly less. Muscats averaged forty-two pounds to the vine, but were made to do so by counting with them a few dozen Huascos that yielded over eighty pounds to the vine. To sum up, seedless raisins yield more heavily than Muscats, are cured more easily, and being marketed earlier meet a ready demand, and are wholly exempt from liability to loss by autumn rains. Another potent fact that should be borne in mind, seedless raisins are growing rapidly in public favor."

Kern.

THE 15TH DISTRICT AGRICULTURAL FAIR.—Visalia *Delta:* The directors of the 15th District Agricultural Association met in this city Tuesday. Directors H. H. Fish and H. H. Blodget, accompanied by Captain Thomas B. Merry, editor of the Turf, of Bakersfield were present. It was intended to give Kern county $1,500 of the state appropriation of $2,500, and use the remainder for a horticultural show in this city. During the meeting it was moved that the entire appropriation be given to Bakersfield, and it was carried. There will be no fair in this county this year, and if a horticultural show is held the money for premiums will have to be subscribed in this city and vicinity.

Mendocino.

FRUIT TREE PLANTING.—Ukiah *Republican Press:* From inquiry among fruit men it is learned that not so much planting will be done this season as last. Two reasons are assigned. The price of prune stock, which may be said to be the leading fruit here, is high, and many who would plant this fruit if prices were lower, will wait another year. While pear stock ranges about the same as in other years, people realize that it requires considerable knowledge of this fruit to succesfully grow and market it. It cannot be denied that Bartlett pears grown in the Russian River valley are unexcelled by those in any other portion of the State. They are of good size, excellent quality and do not rot at the core. But Bartlett pears to be grown with profit must be shipped east, and of course until the people understood this and have enough of the fruit, no great results will be obtained. About 125 acres of Bartletts will come into bearing near here another year, and when the producers begin to successfully ship carload lots east, the reputation and adaptability of this part of the country will be established. The acreage planted to prunes in this county this season will be something over 100 acres.

Orange.

UNFROSTED ORANGES SELL HIGH.—Anaheim *Gazette:* Mr. Gilman sold his orange crop to Thacker Bros. The price is not stated, but it is reported to be in the neighborhood of $12,000 Mr. Gilman has 25 acres of oranges in bearing, and there is not a finer orchard in the State. The fruit consists of Navels, Mediterranean Sweets, thin-skinned St. Michaels and some seedlings. The crop is estimated at about 10,000 boxes or more, and although the price is not given it is believed $12,000 is not far from the figure. Both the Earl Fruit Company and the Thackers put in a bid for the crop. Last year Mr. Gilman received about $7500 for his crop. The increased price is owing to the fact that the orchard was absolutely untouched by frost or injured by the windstorm last month.

Sacramento.

HOP NOTES.—Sacramento *News:* If a hop is properly grown, and has moisture enough to mature it perfectly, it gathers a great amount of lupuline, and has a rich yellow hue, tinged with green. It also takes a peculiar luster, which distinguishes it from an inferior hop. Persons unacquainted with hops will readily detect this rich color and luster when contrasted with other grades. Daniel Flint is arranging to have an irrigating plant placed in his Yolo yards and also in the Riverside yard. A gasoline engine and a centrifugal pump have been decided upon. George Menke will irrigate, and is now engaged in sinking a deep well in order to secure an ample water supply. Several ranches commenced pruning this week and the good weather has put a number of cultivators in the yards. More care, it is thought, will be exercised by farmers in this important feature of the hop culture than has been done heretofore. Plow pruning has been abandoned almost entirely, which is as it should be. If too many of the top or water roots are destroyed the plant is sure to suffer from a lack of sustaining moisture. Over pruning or low pruning should be avoided also, as the crown of the plant is subject to irreparable injury. It is time that Sacramento growers awaken to the necessity of more care in growing and curing their hops. It is well known that no country in the world is so well adapted to hop-growing as the fertile valleys of Northern and Central California, and yet every man who knows one grade of hops from another must realize the fact that there are many bales of second and even third grade hops placed in the market. What is needed is reputation, and that can only be gained by producing a uniform high-standard grade of hops.

WORK OF RECLAIMING OVERFLOWED LAND.—*News:* Supervisor Jenkins, Chairman of the Committee on Roads and Bridges, says: "A year ago I visited Andrus and Brannan islands and other reclamation districts, with other members of the Board. We found the country a tule swamp. Thousands of acres of what comprises those islands were but a glassy sheet of water, broken here and there by a wilderness of tules. On my visit last week I found instead of a vast lake a broad plain protected on all sides by high and substantial levees. Farmers were busy at work cultivating the fields and hundreds of acres are already sown to grain. I was informed by ranchers who have formed the adjoining reclamation districts that 50 sacks of barley is not far from the average crop. Two crops are raised annually. The first crop, usually hay or grain, is harvested in June and July and the stubble is burned, the ground plowed and beans, onions or potatoes planted, which mature in good season. Four crops of alfalfa may be cut from the ground, the yield per annum averaging about 10 tons per acre. I have no idea of the amount of land reclaimed, but it runs up into the thousands of acres. Few people outside of the men interested in the reclamation have even a faint idea of the importance and magnitude of the work. The benefit to the county can hardly be estimated. These lands will each year throw into the market hundreds of thousands of dollars' worth of grain and hay. Such a thing as a failure of a crop will never be known, unless, of course, a levee should break, and these are being strengthened every year by being built higher and broader. If the season is unusually wet the rancher simply sets his pumps running and pumps the water out. If the season is dry he lifts the flood gates and lets the water in. They are independent of the elements as much as any people in the world. The effect the reclamation districts will have on the river will be a very material one, if carried to the extent that is now predicted. It will simply act as a levee to the river and force it into a deep channel, and thus, during the flood seasons, the river will be scoured out until large vessels will ascend."

San Bernardino.

SUGAR BEET ACREAGE.—Chino *Champion:* Work is now going on steadily and vigorously on a crop of 4000 acres, which will be planted, cultivated and cared for in the best light of the knowledge gained by close observation and careful study of the soils, the plants and the methods of cultivation.

THE FRUIT INDUSTRY.—From Horticulturist Commission to the Board of Supervisors: The planting for the season of 1891 is as follows:

	ACRES.	TREES
Vines	1,639½	
Peach	524	32,705
Pear	1⅛	132
Apricot	144½	14,299
Apples	16¼	1,635
Figs	99¼	8,154
Olives	102⅛	9 514
Prunes	823	79 689
Nuts	70¾	6,396
Lemon	350¼	20,123
Orange	6,602¼	599 588
Total	10,373¾	782,235

Making the total acreage of these fruits in the county at this time as follows:

	ACRES.	TREES.
Vines	6,807	
Peach	2,472	244,581
Pear	347	37,662
Apricot	1,257	120,509
Apples	123½	9 141
Figs	301	35,668
Olives	229	21,536
Prunes	1,095⅛	117 066
Nuts	201	12,691
Lemon	786	68,835
Orange	19,678	1,760,531
Grand Total	33,292	2,016,327

San Diego.

ALPINE FARM NOTES.—Cor. S. D. *Union:* At this writing, the prospects for hay and all kinds of fruit are quite favorable. A large amount of new land has been cleared and planted to fruit trees and vines.

BIG FARMERS.—Perris *New Era:* Some idea of the extent of our agricultural resources may be gained from the statement that within sight of our office Mr. William Newport is engaged in plowing and seeding 6000 acres of land to wheat and barley, using 70 horses on the work. Schee Bros. are planting 3600 acres adjoining, using 28 horses, and Messrs. Clark & Hewitt are farming a 4000-acre tract near by with 68 work animals.

San Luis Obispo.

A NEW CULTIVATOR.—*The Moon:* J. V. Webster has patented a new cultivator. So far as it has been perfected, it beats all other cultivators. It is six feet in width, and with four horses does much more work than any other cultivator extant. It clips every weed and stirs the soil to a good depth.

GRAIN-SEEDING AT SIMMLER.—Cor. Paso Robles *Moon:* Large crops are being sowed, larger than ever before. Some of the farmers are through seeding.

San Joaquin.

COST OF A 40-ACRE ORCHARD.—Lodi *Sentinel:* Frank J. Lease of San Francisco, some weeks ago purchased 40 acres of land, three miles east of Lodi. Mr. Lease, in response to a request of the writer, gave a complete statement of the cost of planting his 40 acres of trees and the caring for the same for the coming year ending Feb. 1, 1893. In making his statement, Mr. Lease referred to his receipted bills and his account book. Nothing was guessed at, bunched and "averaged in," hence these figures can be relied upon as being the correct result of practical experience. Following is the statement:

2616 almond trees (best varieties)	$ 368 75
200 assorted trees for personal use	69 72
Plowing 40 acres	80 00
Marking and staking	10 00
Digging holes	12 50
Planting	25 00
Freight and drayage	5 00
Miscellaneous labor	15 00
Contract with man to take care of place 1 year to Feb. 1, '93	200 00
Total cost of orchard when 1 year old (not including taxes and interest)	$ 785 97

Mr. Lease intends to plant 40 acres more next year, when he will build a residence and make his home on his fruit farm. This locality needs several thousand more men of Mr. Lease's stamp and then Lodi will be so far ahead of what it now is that some of the local silurians, who do not keep up with the procession, will become lost and bewildered in orchards and vineyards.

Santa Cruz.

POTATO NOTES.—Watsonville *Pajaronian:* Holders of spuds are unloading, and there is a good demand for shipment to the San Joaquin valley and the southern counties. Several shipments have been made to these places, especially to San Diego and Los Angeles. The time of the year when the new spud puts in an appearance is not far off, hence the activity of shippers.

Santa Clara.

PRUNE-PLANTING AT LOS GATOS.—*News:* Reports concerning the planting of prune trees continue to come in. It is difficult to make anything like an approximate of this year's increase, but it will reach into the thousand acres within a few miles of Los Gatos. It is undoubtedly the workingman's fruit. Recent improvements in handling, curing and packing have reduced the cost to a figure that would have been incredible five years since. Recently, the Santa Cruz mountains have shown some excellent results, and the foothills will have to make an effort to retain their laurels. The redwood soil being deep and mellow, seems a natural home for the prune family.

DISTRICT AGRICULTUAL FAIR.—S. J. *Mercury:* An important meeting of the Santa Clara Valley Agricultural Society and the Santa Clara and San Mateo District Association, No. 5, was held February 23d. The joint meeting was for the purpose of setting the date for the annual fair and attending to matters in connection therewith. It was resolved to give a free stallion exhibition on Saturday, March 12th, at 1 o'clock. The directors expressed the hope that all stallion owners would bring their horses and the public generally would attend. The time of holding the annual fair was set as Sept. 26th to Oct. 1st. This will make it about the last on the list. The reason for this action was that a great many of the best stables are to leave here in June to go over the Montana circuit. They will not return until it is time for the State Fair, and by holding the San Jose Fair later they will be able to come here.

Sonoma.

CROP PROSPECTS.—Petaluma *Argus:* The present season has thus far been one of exceptional fair crop prospects in Sonoma county. This applies to the wide range of products of field, farm and horticulture. The rains have been neither heavy nor continuous, but came in such manner as to give our farmers ample opportunity to do their planting. While we have not had any extremely cold weather, there has been enough frosts to keep the fruit orchards from premature development of buds. The testimony on every hand is that the grain is looking better now than for several years at this season.

ANOTHER CREAMERY AT TOMALES.—Petaluma *Courier:* The creamery is to be built on the Fallou ranch, at Griffin's Switch, and therefore it was concluded to call it the Fallon Creamery. The capital stock is to be $10,000, representing 671 cows, with a prospect of more coming in directly. The present subscribers are: Geo. W. Burbanks, 60 cows; O. B. Hubbell, 35 cows; D. B. Burbank, 40; P. Sartori, 90; E. Carporgno, 55; Wm. Bassett, 40; A. L. Corrick, 27; W. D. Freeman, 30; D. T. Thomas, 45; Mrs. Luke Fallon, 25; J. W. Graver, 40; Samuel Webster, 60; David Bassett, 45; Mrs. E. Griffin, 19; total, 671. The Directors are Geo. W. Burbanks, J. W. Gaver, P. J. Sartori, Louis Bailey, A. L. Corrick, with full power to build and act.

Tulare.

BUG INSPECTION.—Hanford *Journal:* N. W. Motheral, Horticultural Inspector for this district, was engaged all last week in inspecting the orchards in this vicinity for injurious insects. He informs us that he found very few scale bugs and very few of the parasites which feed upon them. The inference is that the parasites have killed out the scale pretty thoroughly and have departed for pastures new, where scale bugs are more plentiful. Mr. Motheral states his belief that if all the fruit trees in Lucerne are sprayed this year, we will be rid entirely of the scale bugs, but if this is not done enough of the pests will be left to keep the orchards well supplied. Our orchardists should take united action and rid themselves for good of the pest, now that they have such a favorable opportunity. Mr. Motheral states that the willow trees are great breeders of scale bugs, and recommends that these trees be destroyed, as they breed the scale and perhaps other insects injurious to orchards.

FAVORABLE FOR COFFEE CULTURE.—Porterville *Enterprise:* James Deitrick of Tulare City, late superintendent of the Southern Pacific R. R. Co., is conferring with E. Newman as to the advisability of planting 2000 coffee trees in this immediate vicinity. Mr. Deitrick has friends in Guatemala, who own large coffee plantations, and he recently made a trade with them for the trees. He is sanguine about our climate and soil, and says it is certainly as favorable as the best coffee land in Brazil, South America. In the latter country Mr. Deitrick spent the past summer and made a careful study of coffee-raising.

AN IRRIGATION SYSTEM PURCHASED.—*Journal:* The Tulare Irrigation District, embracing lands in the vicinity of Tulare City, has made another large purchase of ditches and water rights. A dispatch from that place, dated Feb. 9th, says: The Board of Directors of the Tulare Irrigation District this evening decided by a vote of 4 to 1 to purchase the Kaweah canal and irrigation system for $150,000 in bonds of the district. They also unanimously voted to purchase the Cameron and Rocky Ford system for $20,000. Part of the consideration is that R. Linder take additional bonds and advance money to connect these systems with the present system of the irrigation district. This will require about $60,000. As soon as the transaction has been completed, a large force of men and teams will be put to work in order to connect the systems and construct the laterals, so that the water may be fully utilized this year.

RAIN TO ORDER.—Huron, Feb. 8: A contract between the rain makers and the grain growers has been formulated, and is now being signed by the latter. The former agree to bring rain sufficient to produce six sacks of grain per acre over an area of 60,000 acres for the sum of $30,000, money to be paid when crops are marketed. In case of a failure of the rain men, there is no charge to the farmers. Only land on the plains and not under irrigation or subject to overflow is included in the contract. Operations are to begin as soon as the temperature does not go below 40 degrees F.

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CAPITAL $10,000,000.

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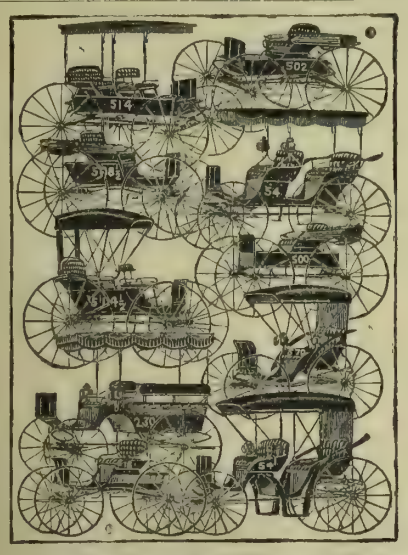
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With the Absolute Certainty of Never Failing to reap a good crop

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Who want to produce the choicest Peaches, Grapes, Prunes, Pears, Apricots, Apples, Olives and all other fruits known to California
In the Shortest Time, of the Best Quality and with the Greatest Certainty

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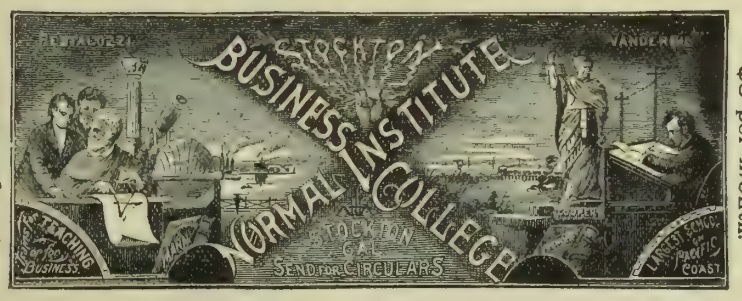
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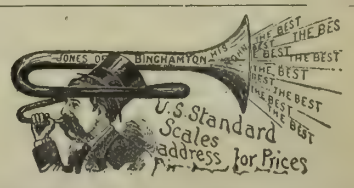

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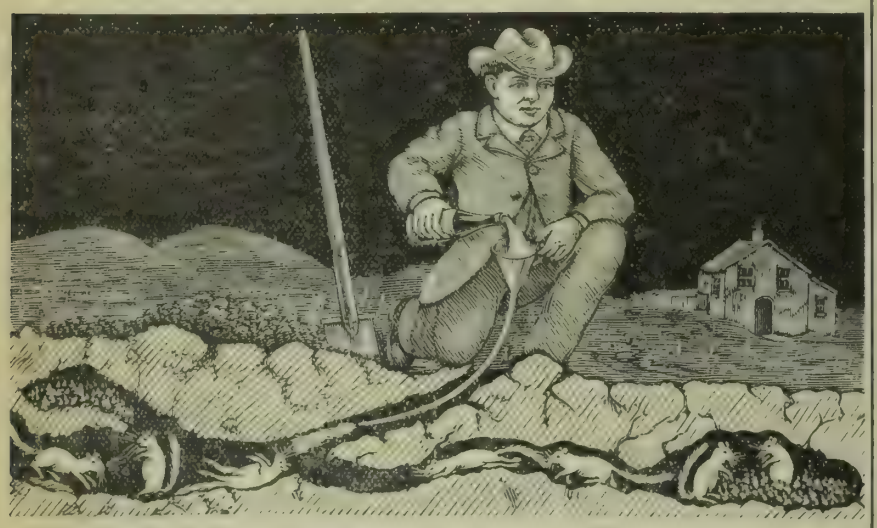
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For boys we are just as well fixed. Good school or Sunday suits from 5 to 13, knee pants, at $2.50, $3.50 and $4.50. With long pants and vest, $4.50, $5.50, $6.50, and even higher. We do not keep the cheap cottonade or common low-priced suits. We have a few from 7 to 11 years we are closing at $1.40, worth $2.50, in two-piece suits, but shall not replace them.

But we have about 60 SINGLE COATS, without vests or pants, from 9 to 17 years, at $1.50, $1.75, we would like to sell, and they would be called cheap at $4.00. Hats, shoes, shirts, caps, collars, stockings, boots, underwear, one line of ready-made dress shirts, colored, at 25 cents, well ——

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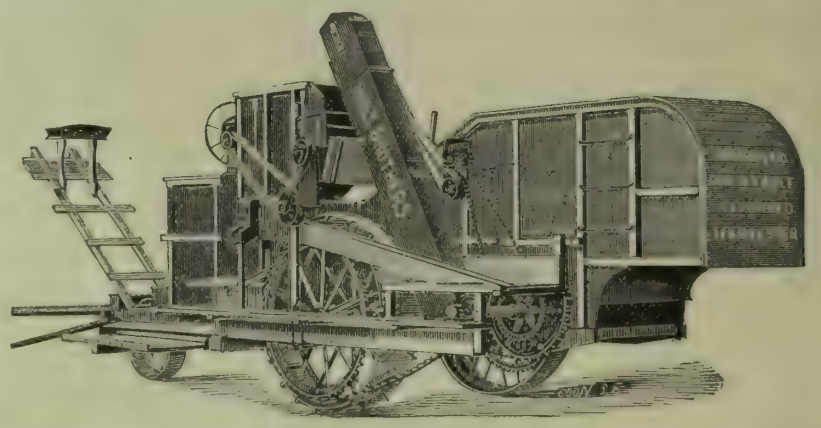
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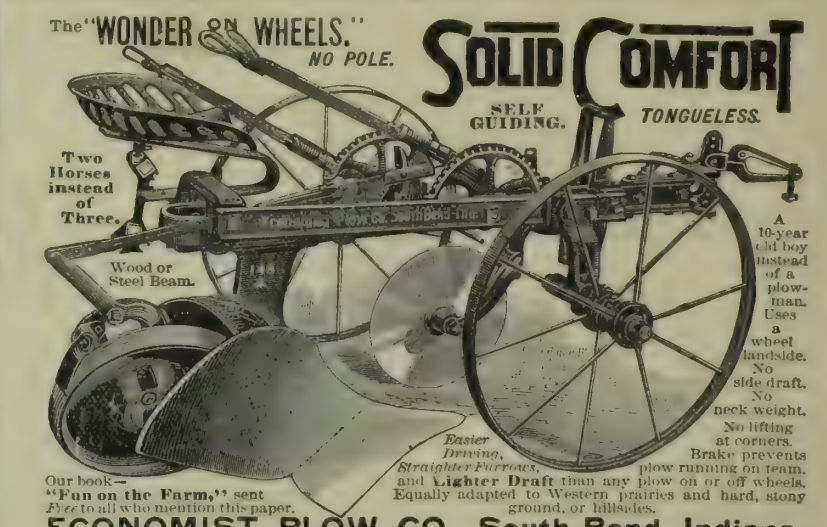


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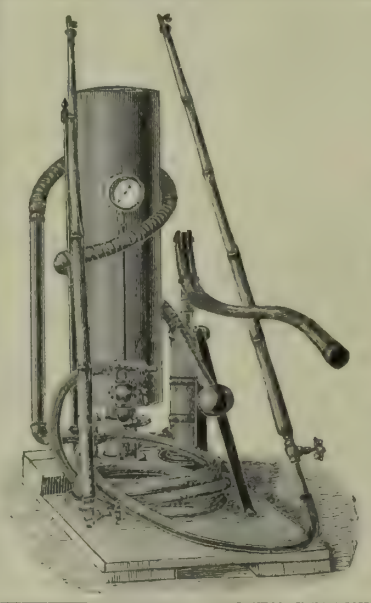


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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

The following brief list by telegraph, for Feb. 23, will appear more complete on receipt of mail advices:

Elmer Bowen, Los Angeles, automatic car coupling; William F. Buswell, San Francisco, pulley; Frederick W. Cook, San Francisco, gang edger; James E. E. Depue, Oakland, ledger, sales and billing book; Frank H. Disbrow, Glendora, stoning knife; Peter B. Donahoo, Fresno, street sweeping machine; John H. Driller, Los Angeles, automatic funnel cut-off; Thomas Fullen, Angels Camp, safety device for mining cages or elevators; James H. Hawthornthwaite, San Francisco, amalgamator; William Holder, Mokelumne, atmospheric bed covering; Robert W. Jessup, Alameda, seed cleaner; Alexander J. McAdam, San Francisco, hydraulic elevator; C. Vogel, San Anselmo, conduit for cable and electric tramways; John W. Pack, San Francisco, hydraulic motor; John A. Perou, Perris, inhaler and respirator; William Smith, Berkeley, electric railway.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

THE PEOPLE'S PARTY.

CALL OF THE STATE CENTRAL COMMITTEE TO ORGANIZE THE PEOPLE'S PARTY IN ALAMEDA CO.

All reform organizations and every man and every woman who are in sympathy with reform movements, and believing in independent political action, endorsing and willing to support the People's Party platform, adopted by the State Convention of the People's Party held at Los Angeles on the 22d of October, 1891, are earnestly requested to assemble in

MASS CONVENTION

At the Town Hall in the town of Niles on *Saturday, March* 5, 1892, at 10 o'clock A. M. for the purpose of organizing the People's Party in this county and electing a County Central Committee and adopting a plan for conducting an active political campaign, and such other business as may be brought before the Convention.

E. M. WARDALL, Chairman.

H. B. VALPEY, Member for Alameda.

Warm Springs, Alameda Co., Cal., Feb. 20, '92.

[P. S.—Persons willing are requested to favor the new movement by extending the circulation of this publication and arousing interest in the cause.]

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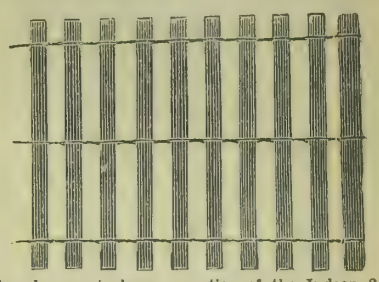
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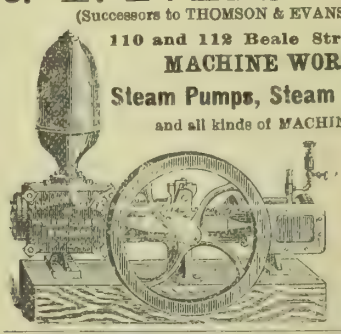
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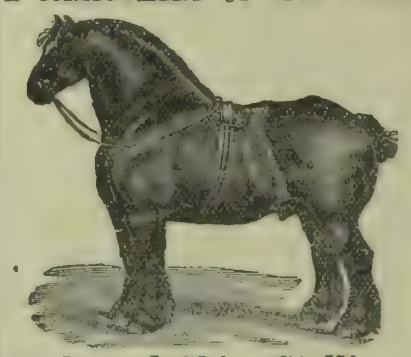


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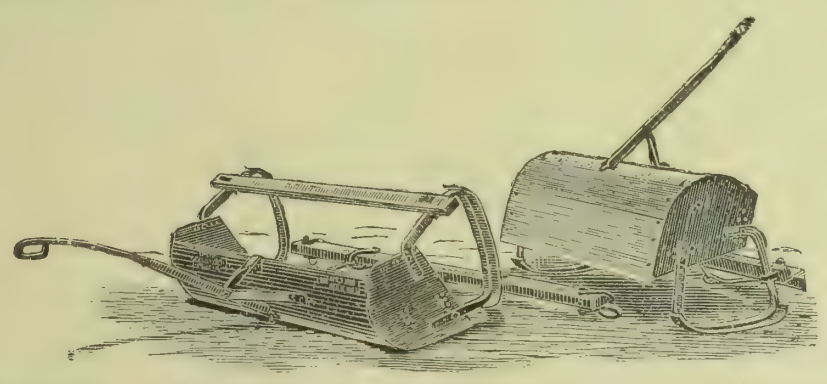
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OF CALIFORNIA,

SAN FRANCISCO, CAL.

Incorporated April, 1874.

GRANGERS' BANK OF CALIFORNIA

Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders...	720,000

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January 1, 1892 A. MONTPELLIER, Manager.

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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 17, 1892.

The weather continues to be of the most favorable character for outdoor work and also for growing crops. Leading farmers visiting this city report that crop prospects never before, at the like date, were so flattering for large yields in cereals, fruits and vegetables. This opinion is also reflected by our exchanges. There has been more or less of a selling pressure in hold-over grain, hay, etc. The local money market continues easy, with the rate of interest generally in borrowers' favor.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June.
Thursday	8s 1½d	8s 0¾ d	8s 0¾d	8s 0⅝d	8s 0½d
Friday	8s 0⅝d	8s 0¾ d	8s 0⅝d	8s 0⅝d	8s 0½d
Saturday	8s 0⅝d	8s 0¾ d	8s 0⅝d	8s 0⅝d	8s 0½d
Monday	.....	.....	.....	.....	.....
Tuesday	8s	8s 0⅛d	7s 11 d	7s 10½d	7s 11d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s3d	40s6d	40s9d	Held higher.
Friday	41s	40s9d	41s	Very strong.
Saturday	41s	40s6d	41s	Quieter.
Monday	.....	.....	.....	
Tuesday	40s6d	40s	40s6d	Weaker.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	181	180¾	180	176⅝	173½
Friday	181	181	179⅝	175½	172⅝
Saturday	180	179½	178½	175	171⅝
Monday	.....	.....	.....	.....	.....
Tuesday	176½	176⅝	175⅝	172	169⅝

The following is to-day's telegram:

NEW YORK, Feb. 24.—Wheat, $1.06 for February, $1.05¾ for March, $1.05¾ for April, $1.03¾ for May, $1.02¾ for June and $1.00½ for July.

CHICAGO, Feb. 24.—Wheat, 92¾c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	174½	172½	145½	149	145½	145
Friday	173	171½	147½	147½	144½	144
Saturday	171	170½	....	....	144½	144½
Monday	.....	.....	....	....	.....	.....
Tuesday	168½	165½	....	....	142½	142½

The following are to-day's recorded sa'es on Call:

Informal session: Buyer season—300 tons, $1.67; 100, $1.66½; 800, $1 66⅝. Seller 1892—200 tons, $1.43½ per ctl. Regular session: Buyer season—100 tons, $1 68; 1 0, $1.67½; 100, $1 67½; 100, $1.68; 300, $1 68½; 100, $1 68½; 1000, $1 69; 400, $1 68½; 200, $1 68½; 100, $1.68½; 900, $1 69; 300, $1 69; 1.0, $1.69½; 200, $1.69⅝; 100, $1.69¾; 700, $1.69½. Seller 1892—400 tons, $1.43½; 500, $1 43⅝; 100, $1.43⅝ per ctl. Afternoon session—Buyer season—100 tons, $1.69½; 600, $1.69⅝; 300, $1 69⅝; 300, $1.69. Buyer September—100 tons, $1.45½. Seller 1892—100 tons, $1.43½ per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892 H.	L.
Thursday	103½	101⅞	....	....	....	....
Friday	101	99½	....	....	....	....
Saturday	99½	99½	....	....	....	....
Monday	.....	.....	....	....	....	....
Tuesday	99	97	92½	92	....	....

The following are to-day's recorded sales on Call:

Morning session - buyer season—300 tons, 99c; 100, 99½c; 100, 99½; 23'0, 99½; 200, 99½c; 100, 99⅝c ₰ ctl. Afternoon session—buyer season—100 tons, 99½c; 100. 99½c ₰ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 22.—The wool movement has been light at the seaboard markets, in buyer's favor. Mills are well emptied of men's heavy goods and cloth, but the smaller ones intimate that they have to work close to the previous raw prices, especially for early orders. Western manufacturing competition is also alluded to with some emphasis.

Wheat and Corn Exports.

NEW YORK, Feb. 22.—Exports of wheat from United States ports for the week ending February 17th equal 4,042,000 bushels against 3,641,000 bushels the week before, 2,036,0.0 in the same week a year ago, and 2,236,000 in a similar period two years ago. Indian corn exports for this week continue phenomenally heavy, being 3,264,000 bushels, as compared with 2,927,000 bushels a week ago, as contrasted with only 327,000 bushels in the likeweek a year ago.

Eastern Dried Fruit Market.

NEW YORK, February 22.—Unpeeled peaches are unchanged; peeled are reported at 20c.

Prunes—The consumption is fairly steady, the last-designated prices being supported for a period. Sellers are plenty at the old prices for all styles. Apricots are slow. The weather this winter has been against their free use.

Eastern Hop Market.

NEW YORK, Feb. 22.—Hops show the lightest trading for several weeks. Large brewers are using direct supplies. Interior State are quoted at 20@23c, and spot wants, order higher grades than recently. Full last prices are upheld, with Pacifics holding their advance. Common to choice '91's range from 20@25c; choice Coast, 25½c. The foreign market is quite steady with no inquiry of importance here. Exports for the week, 165 bales. Closing options—California, bid and asked, March, 23@23¾; April, 23¼@24c; May, 25¼c, asked; June, 23¾@25¼. July, 24@25¼c; August, 25@25½c. There has been fair dealing in prime, 50 bales of choice July selling at 26½c; 30c. was once asked.

Miscellaneous.

NEW YORK, Feb. 22.—Honey is firm. For extracted comb there is little inquiry.

Beeswax is as before for Coast. The South supplies current wants cheaper.

Lima Beans—Sellers are plenty. Trade is confined to small lots, quoted at $1.75@1.85.

The latter are machine-cleaned.

General Remarks and Statistics.

Cereals.

The shipments to Europe of the principal exporting countries, America, Canada, Russia and India, from August 1 to January 16 of wheat and flour amounted to the tremendous total of 181,000,000 bushels, against 100,000,000 last year.

Returns from the Russian ports on the first of February showed that there were in store on that date at ten ports 10 400,000 bushels of wheat. Returns last year of the amount at Odessa and Nicolaieff were 12 800,000 bushels, and the remaining ports were estimated to hold 7,200,000 bushels, making a total of 20,000,000 bushels.

Chairman Hatch, of the House Committee on Agriculture, says: "What I regard as legitimate dealing in futures, is this: A company has elevators scattered through the grain districts and it finds itself with 50,000 or 100,000 bushels of wheat on hand It wires its brokers to sell this wheat to be delivered at such a time as it can be conveniently sent to the seaboard. Meantime it borrows money at a low rate of interest on warehouse receipts. This is beneficial to the farmers and to the elevator company; but when the buyer of this wheat in New York sells it to another and he to another, the transaction is not legitimate, and becomes an injury to the producer, because the great volume of business, by magnifying the apparent visible supply, tends to depress the price. Congress can suppress such transactions by the exercise of the taxing power.

The local wheat market made quite an advance, but declined rapidly under strong bear raids at the East and abroad, brought about by close stringent money markets abroad and political unrest. English papers coming to hand report lack of confidence in commercial and financial circles, and until confidence is restored, money-hoarding and an absence of speculation will continue to prevail. Outward shipments of wheat continue on a liberal scale. Disengaged tonnage in port is increasing; while the list of engaged ships is growing smaller. Crop prospects never before looked so promising in this month, and with well-distributed spring rains, the outturn to the acre is expected to show a large increase over that of 1890 and 1891.

Receipts of barley show a large increase, and as there is a strong selling pressure to avoid paying taxes, the market has shaded off, closing the week, weak. The feeding consumption continues on a large scale for the season of the year.

Oats are easier, with concessions offered to induce purchasing. The receipts are only fair

Corn, like oats and barley, is weak under free offerings and buyers holding off until after March 7th. There is a fair export movement to Central American ports.

Buckwheat and rye are fairly steady.

Feedstuff.

Bran and middlings hold strong under a free demand and only moderate obtainable supplies. Rolled barley and feedmeals are easier.

Straw comes in sparingly, yet dealers are offish, confining purchases to near-by requirements.

The market for hay continues in an anomalous condition, viz: To force sales, lower prices must be accepted; to buy, full prices must be paid. Obtainable supplies are light, while the demand is falling off. Crop prospects continue flattering.

Fruit.

Apples continue to gain in strength under moderate receipts and an enlarging demand due to the poor quality of this year's orange crop.

It is claimed that strawberries will begin to soon put in an appearance. This opinion is based on the advanced season.

The receipts of oranges are large, causing a heavy dragging market, owing to the bulk being very poor in quality and small of size. Choice, juicy oranges are wanted and for which good prices are obtainable.

Lemons are barely steady. Mexican limes are weak and lower.

Raisins are fairly firm for the more choice grades.

In dried fruits there is nothing new to report. The firmness reported last week in peaches and prunes is not only continued, but a disposition is manifested to advance prices. In other dried fruits the market is slow.

Vegetables.

General information received is confirmatory of last week's remarks of the forward condition of garden vegetation and that the market will be supplied at a much earlier date than usual. The receipts of asparagus and rhubarb are increasing, causing prices to steadily shrink.

Onions are in liberal receipt for the season, and as the bulk is poor keepers, forced sales are in order. Good keepers are wanted.

Potatoes continue to glut the market, causing low prices to obtain under forced sales. Oregon and Washington are liberal contributors to the market,

Dairy Produce.

Freer receipts and poorer keeping weather are against butter. Many dealers under forced sales had to accept lower prices. Retail dealers confine their purchases under an impression that still lower ranges in values will obtain.

Eggs are weak at lower prices, with the trade looking for still lower prices. This opinion is grounded on experience derived from former seasons.

Cheese has a weaker tone, although quotations are reported unchanged.

Live Stock.

The market is easier for both bullocks and mutton sheep, owing to freer offerings. Indications are said to point to the combine being broken, or, at least, it is reported that indirect underselling is done by one or more of the members. Hogs are strong at previous quotations. Lambs are hard to get.

Overland Produce Shipments.

The following is the official statement of Eastern overland shipments of California produce and the points from which they were forwarded during the month of January, 1892, via the Southern Pacific Co., and total shipments to Feb. 1, 1892:

PRODUCE, TONS.	San Francisco	Oakland	Sacramento	San Jose	Stockton	Marysville	Los Angeles	Total
Beans	338	.....	.....	.....	.....	.....	453	791
Canned goods	304	24	124	309	.....	121	293	1185
Fruit dried	24	.....	200	596	181	59	27	1305
Fruit citrus	.....	.....	.....	.....	.....	.....	869	869
Honey	1	.....	39	.....	.....	.....	16	56
Hops	60	.....	61	.....	8	8	.....	133
Raisins	60	.....	238	7	851	11	157	1314
Vegetables	66	.....	.....	.....	11	.....	209	286
Wool greas	918	11	.....	4	.....	.....	8	952
Wool pulled	23	.....	30	.....	.....	.....	.....	53
Wool scoured	170	.....	.....	.....	.....	.....	.....	170

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 23, '92, were as follows:

Flour, qr. sks	59,275	Bran, sks	17,444
Wheat, ctls	257,107	Buckwheat "	
Barley, "	25,237	Middlings "	7,449
Rye, "	133	Chicory, bbls	87
Oats, "	1,118	Hops, "	133
Corn, "	4,770	Wool, "	8
*Butter, "	832	Hay, ton	1,496
do bxs	314	Straw, "	81
do bbls	....	Wine, gals	232,780
do kegs	....	Brandy, "	9,120
do tubs	....	Raisins, bxs	250
do½ bxs	182	Honey, "	21
†Cheese, ctls	440	Peanuts, sks	93
do bxs	10	Walnuts "	46
Eggs, doz	71,075	Almonds "	147
do " Eastern	....	Mustard "	308
Beans, ctls	19,615	Flax "	....
Potatoes, sks	19,384	Popcorn "	6
Onions, "	1,292	Broom corn, bbls	456

*Overl'd, — ctls. †Overl'd. — ctls. 1905 bales, Australia.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon Washington and other distant points compare as follows:

	July 1, '90 to Feb. 21, '91.	July 1, '91 to Feb. 20, '92.
Flour, ½ sks	203,627	335,904
Wheat, ctls	996,347	1,136,083
Barley, "	231,396	29,099
Oats, "	266,482	329,757
Wool, bales	5,798	5,978
Hops, "	392	396
Rye, sks	....	3,299
Potatoes, sks	45,397	72,073

Miscellaneous.

From reliable advices up to Feb. 24, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892	In port 1891.
San Francisco	246,341	298,311	*119,789	57,655
San Diego	20,528	10,934	4,318	.....
San Pedro	2,414	6,433	.....	
Oregon	21,172	30,050	31,470	19,226
Puget Sound	16,026	17,335	.....	
Totals	246,481	363,063	155,607	76,881

*Engaged for wheat, 1892, 39,085; 1891, 44,993. †For new crop loading, 1,746.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 18th, are as follows:

	1891.	1892.
Wheat, ctls	10,975,891	7,972,182
Flour, bbls	732,022	768,036
Barley, ctls	768,306	191,078

Bags are strong at 7¼@7½c.

Poultry after shading off closes the week strong at a slight advance. Ducks are wanted at a much higher range.

Next season's hops are being contracted at 12 to 13 cts. It is said that as high as 15 cts. and as low as 11 cts. have been paid.

Wool continues slow. The stock here is about cleaned up.

Beans are doing better under a freer eastern demand. The Ventura *Free Press* Says: "Thos. Lake during last week purchased 200 tons of lima beans for shipment East by rail and steamer. He paid from $1 67½ to $1 75. It is also learned that Dixie Thompson has sold some 200 tons and that A. Levy, of Hueneme, has made quite extensive purchases during the week. The railroad people have asked Mr. Lake to hold his shipments a few days to see what they would do toward lowering the rates." The above indicates lower freight rates to points at the East.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on tot quotations, while very poor grades sell less than the lowe quotations.

WEDNESDAY, February 24, 1892

BEANS AND PEAS			FLOUR.			
Bayo, ctl	2	@ 2 20	Extra, City Mills	5 00	@ 5 25	
Butter	2 30	@ 2 80	Do Country Mills	5 00	@ 5 25	
Pea	2 50	@ 2 80	Superfine	3 15	@ 3 45	
Red	2 20	@ 2 50	NUTS—JOBBING.			
Pink	1 90	@ 2 05	Walnuts, Cal. lb	5	@ —	
Small White	2 40	@ 2 70	Do Choice	7	@ —	
Large White	2 30	@ 2 60	Do paper shell	7	@ —	
Lima	1 80	@ 2 15	Almonds, sft shl.	11	@ —	
Wld Peas, blk eye	1 35	@ 1 55	Paper shell	12	@ 14	
Do green	1 70	@ 2 50	Hard Shell	6	@ 7½	
Do Eastern do	2 55	@ 2 75	Brazil	6½	@ 8	
Do Nines	1 30	@ 1 45	Pecans small	12	@ 14	
Split	3 85	@ 4 15	Do large	15	@ 17½	
BUTTER.			Peanuts	3	@ 4	
Cal. Poor to fair, lb	17½	@ 25	Filberts	11½	@ 14	
Do good to choice	28	@ —	Hickory	7	@ 8	
Do Giltedged		@ 33½	Chestnuts	11½	@ 16	
Do Creamery rolls	—	@ 32½	ONIONS.			
Do do Giltedge		@ —	Silver Skin, Ch'e	1 00	@ 1 20	
Eastern	17½	@ 25	Fair to Good	75	@ 90	
CHEESE.			Cut	50	@ —	
Cal. choice mild	13½	@ 15	POTATOES.			
Do fair to good	10	@ 12½	Early Rose, ctl	25	@ 40	
Do gilt edged	15½	@ —	Burbank Seedling	30	@ 45	
Young America	12	@ 16	Do do Salinas	80	@ 1 05	
EGGS.			Do do Oregon	60	@ 85	
Cal. ranch, doz	19	@ —	Do Humboldt	75	@ 95	
Do do selected	—	@ 22	River Reds	25	@ 40	
Do store	17½	@ —	POULTRY.			
Eastern	—	@ —	Hens, doz	5 50	@ 8 00	
FEED			Roosters, old	5 50	@ 7 00	
Bran, ton	20 00	@ 22 50	Do young	7 00	@ 9 00	
Feedmeal	— 00	@ 27	Broilers, small	4 00	@ —	
Gr'd Barley	23 00	@ 24 00	Do large	5 00	@ —	
Middlings	25 00	@ 26 50	Fryers	6 00	@ —	
Oil Cake Meal	— 00	@ 25 00	Ducks	9 00	@ 12 00	
Manhattan Food ₰ cwt.	7 50		Geese, pair	1 75	@ 2 50	
HAY.			Turkeys, Gob'r	11	@ 13	
Wheat, per ton	13 00	@ —	Turkeys, Hens	13	@ 15	
Do choice	14 50	@ —	Do Dressed	12½	@ 16	
Wheat and Oats	12 00	@ —	Manhattan Egg Food ₰ cwt.	11 50	@ —	
Wild Oats	11 00	@ —	PROVISIONS			
Cultivated do	12 00	@ —	Cal. Bacon, he'vy, lb	9½	@ —	
Barley	11 00	@ —	Medium	10	@ —	
Alfalfa	10 00	@ —	Light	12	@ —	
Clover	11 00	@ —	Lard	9	@ 11	
Straw bale	50	@ 60	Cal. Sm'k'd Beef	11½	@ —	
GRAIN, ETC			Hams, Cal salt'd	10	@ —	
Barley, feed, ctl	90	@ 1 00	do Eastern	12½	@ —	
Do Choice	1 02½	@ —	SEEDS.			
Do Brewing	1 05	@ —	Alfalfa	7	@ 8	
Do do Choice	1 10	@ —	Clover, Red	12	@ 13	
Do do Giltedge	1 15	@ —	White	20	@ —	
Do Chevalier	1 05	@ 1 40	Flaxseed	2 50	@ 2 80	
Do do Giltedge	1 45	@ 1 50	Hemp	3½	@ —	
Buckwheat	1 70	@ —	Mustard, yellow	3 25	@ 3 75	
Corn, White	1 27½	@ 1 32½	do Brown	3 00	@ 3 25	
Yellow, large	1 22½	@ 1 27½	WOOL.			
Do small	1 20	@ 1 30	SPRING, 1891.			
Oats, milling	1 45	@ —	Humb't & Men'cino	20	@ —	
Feed, Choice	1 42½	@ —	Sac'to valley	16	@ —	
Do good	1 32½	@ —	Free Mountain	19	@ —	
Do fair	1 25	@ —	S Joaquin valley	13	@ —	
Surprise	1 50	@ —	do mountain	18	@ —	
Black Cal	1 35	@ 1 75	Cala'v & F'th'll	16	@ —	
Do Oregon	1 25	@ 1 40	Oregon Eastern	14	@ —	
Gray	1 30	@ —	do valley	21	@ —	
Rye	1 60	@ 1 72½	So'n Coast, def	11	@ —	
Wheat, milling. Gilt edged	1 73½	@ —	So'n Coast, free	13½	@ —	
Do Choice	1 72½	@ —	FALL, 1891.			
Do fair to good	1 71½	@ —	San Joaquin	9	@ 12	
Shipping, cho'ce	1 71½	@ —	Mountain	10	@ 15	
Do good	1 68½	@ —	Humb't & Men'cino	14	@ 18	
Do fair	1 65	@ —	HONEY.			
Common	1 60	@ —	WhiteComb, 2-lb	10	@ 13	
Sonora	1 60	@ 1 72½	do do 1-lb frame	12	@ 14	
HOPS.			White extract'd	6½	@ 7	
1891 Choice to Ex.	24	@ —	Amber do	5½	@ 6½	
Fair to Good	20	@ —	Beeswax, lb	22	@ —	

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, February 24, 1892.

Limes, Mex	4 00	@ 5 00	Beets, sk	—	@ 1 00	
Do Cal	75	@ 1 00	Carrots, sk	35	@ —	
Lemons, box	1 25	@ 3 50	Okra, dry, lb	15	@ —	
Do Sicily	5 50	@ 7 00	Parsnips, ctl	—	@ 1 25	
Oranges—			Peppers, dry, lb	8	@ 12½	
Butte County	1 10	@ 2 25	Do green	20	@ 35	
Do Seedlings—			Turnips, ctl	50	@ —	
*Riverside	85	@ 1 50	Cabbage, 100 lbs	60	@ —	
*Los Angeles	65	@ 1 25	Garlic, lb	2	@ 3½	
Do Navels—			Squash, Mrft. tn	6 00	@ 10 00	
*Los Angeles	75	@ 1 50	Do Summer, lb	20	@ 25	
*Riverside	1 25	@ 3 50	Pumpkins, ton	7 00	@	
*Duarte	1 25	@ 3 50	Tomatoes, box	1 50	@ 2 25	
*Oranges free from frost sell at an advance of $1 per box on the above quotations.			Asparagus, lb	7	@ 12½	
			Do choice to ex	15	@ 22½	
Apples, box	75	@ —	Peas, green, lb	8	@ 12½	
Do choice	1 50	@ —	Rhubarb, lb	15	@ 18	
Do extra choice	2 00	@ 2 50	String Beans	20	@ —	
			Cucumbers, doz	1 50	@ —	

Live Stock.

BEEF.			MUTTON.	
Stall fed	7	@ —	Wethers	10 @ 10½
Grass fed, extra	7	@ —	Ewes	9½@ 10½
First quality	6½	@ —	Lamb, yearling	11 @ 12½
Second quality	6	@ —	Do Fall	15 @ —
Third quality	5½	@ —	HOGS.	
Bulls and thin Cows	2½	@ 3½	Light, ₰ lb, cents	4½@ 5
VEAL.			Heavy	4½@ 4½
Range, heavy	5½	@ 7	Feeders	4½ @ 4½
Do light	8	@ 9	Stock Hogs	3½@ 3½
Dairy	8½	@ 10		

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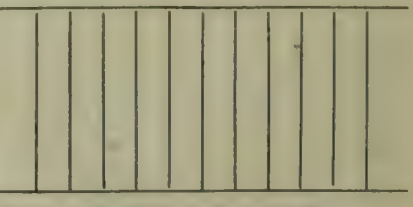


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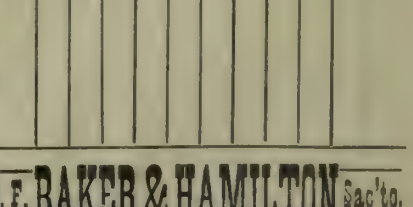
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SOME FOR THE VINEYARD.
SOME FOR GARDENS.
SOME FOR GENERAL USE.



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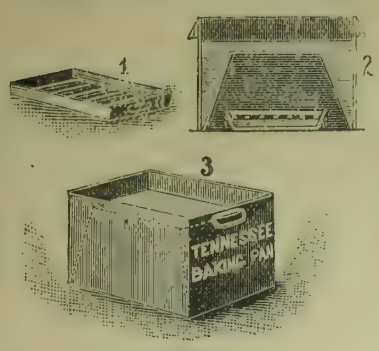
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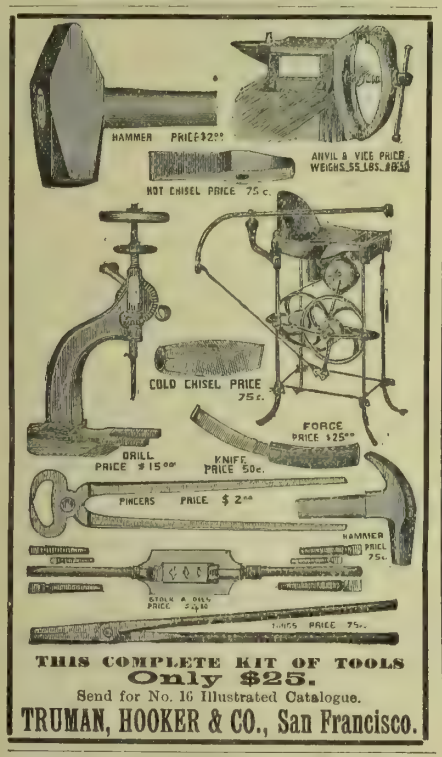
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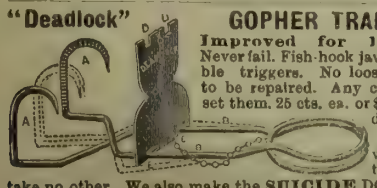
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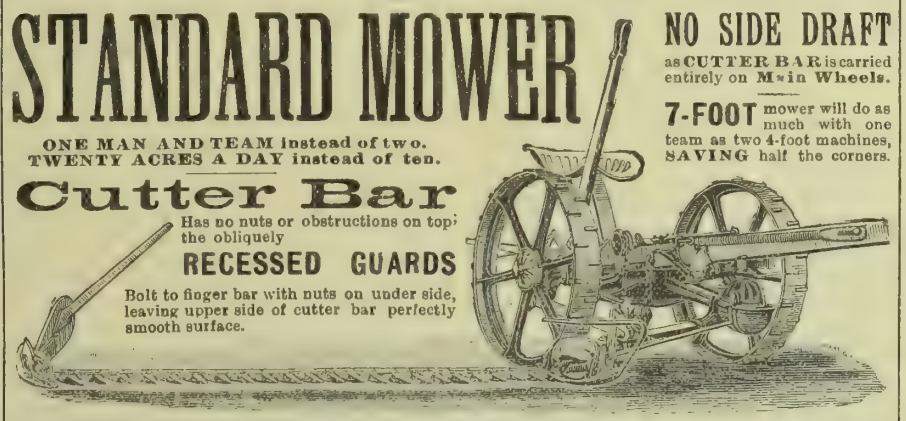
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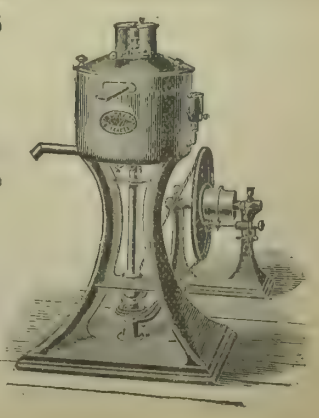
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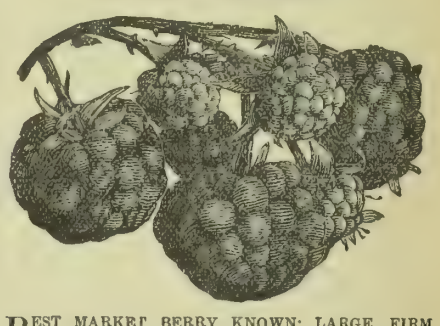
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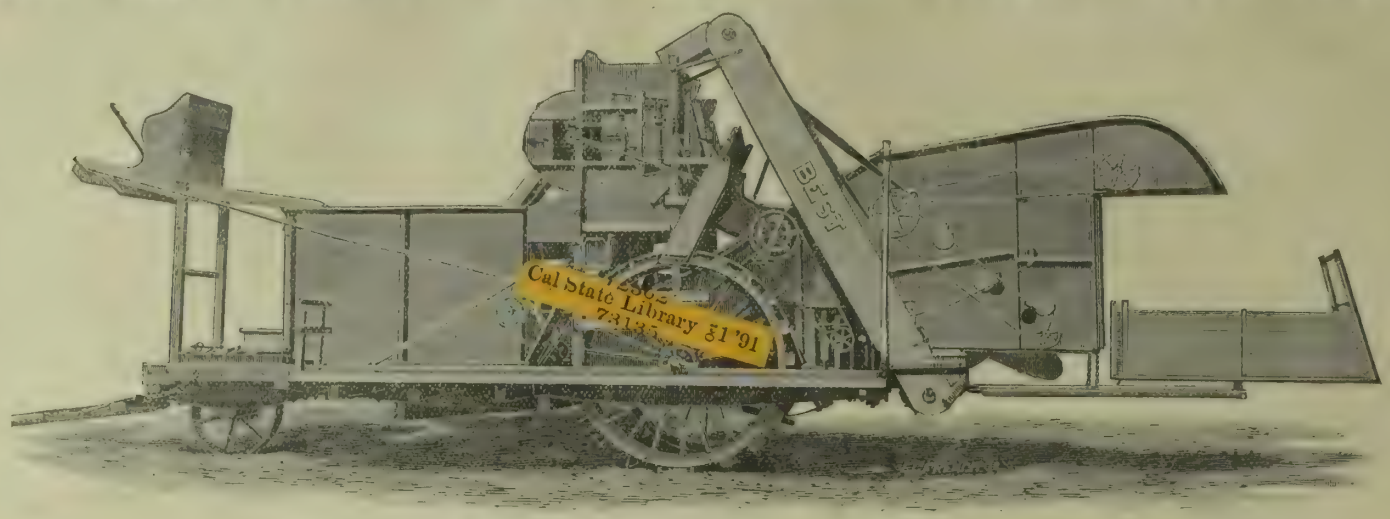
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THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND BREAK, THE CELEBRATED BEST'S CLEANER, LONG STRAW CARRIER, ADDITIONAL STRAW BEATERS, STRAW DUMP CART, ADJUSTABILITY FOR CUTTING HIGH OR LOW,

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circular. Send for Testimonials. Come and See the New Model for 1892.

DANIEL BEST AGRICULTURAL WORKS,

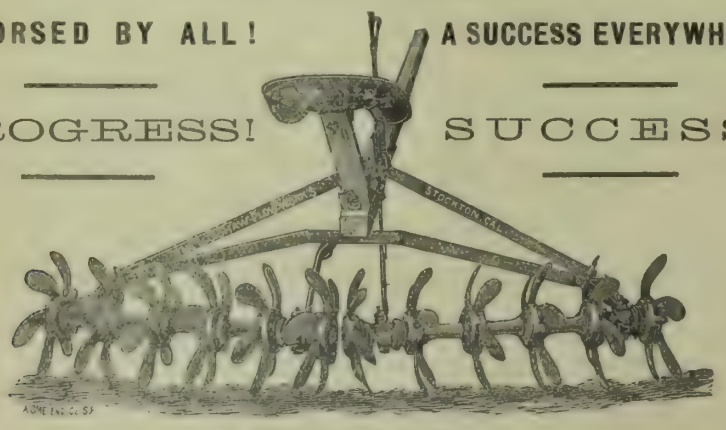
SAN LEANDRO, CAL.

THE MORGAN SPADING HARROW.

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ENDORSED BY ALL! **A SUCCESS EVERYWHERE**

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Style "A."

Greatest Pulverizer of the Age.

SOMETHING NEW AND ORIGINAL.

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TESTIMONIALS.

FRESNO, Cal., Dec. 19, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Having used the Morgan Spading Harrow last season I can well recommend same for vineyard use, it is economical and does its work well. In heavy ground it is the best tool I have used for a pulverizer and it leaves the ground in good condition.

Respectfully yours, E. I. BABER,
Manager for Eisen Vineyard, Fresno, Cal.

FRESNO, Cal., Jan. 20, 1892.

H. C. SHAW PLOW WORKS.—Dear Sir: In reply to your inquiry regarding the Morgan Spading Harrow will say that it is by far the best tool I have ever seen used in a vineyard. I had the Disc Harrow, the Pacific Spader, the Clark Cutaway and the Morgan Spading Harrows all at work in our vineyard last year and soon discovered that the Morgan was the boss of them all. The draft is much lighter and its work more complete, besides being the easiest handled of all others. The Morgan will be the only cultivator seen at work in our vineyard the coming season. All others will be found at rest in the fence corners. Yours truly, S. K. LEMON,
Supt. Oakland Vineyard Co.

BERENDA, CAL., Dec. 17, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Enclosed find check to pay for Morgan Spading Harrow. It is the best implement ever invented for the cultivation of the soil. Respectfully, J. F. WARD.

We are Sole Agents for the Coast.

H. C. SHAW PLOW WORKS

361, 363, 365, 367, 370, 389 and 390 El Dorado Street,

STOCKTON, CAL.



THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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575 MISSION ST., SAN FRANCISCO, CAL.

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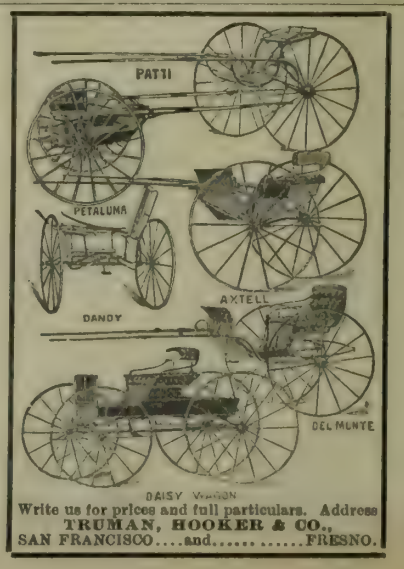
The same device which makes the Bicycle run easy, enables our Harrow to save one horse power in use, beside cost for repairs. It conquers toughest sod—fits uneven ground. *Examine it yourself.* Where time and horse-flesh are thought worth saving, the "Keystone" goes to stay.

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BRANCHES: St. Louis, Mo. Kansas City, Mo. Council Bluffs, Ia. Columbus, Ohio.



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PACIFIC RURAL PRESS

Vol. XLIII. No. 10. SAN FRANCISCO, SATURDAY, MARCH 5, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Orange Interest.

The king of citrus fruits is now commanding more attention than ever before at the hand of planters. His power has fluctuated somewhat it is true, from year to year, and yet has always increased, though with varying degrees of rapidity. Plantations at the north have thus far justified the hopes built upon them, and growth has been very gratifying to planters. If no mishap befalls, we are now approaching considerable shipments of oranges from the groves on the bench lands on the eastern side of the Sacramento and San Joaquin valleys. Disposition is turning again to plantations on the higher portions of the valley plains as well as upon the mesas. People claim to be justified in such extensions by the success of the trees they already have in such situations. We trust, however, that all such conclusions will be conservatively drawn, for there is always a danger that such an enticing fruit as the orange will be put in places where an occasional drop in temperature will destroy the value of the fruit, even if it does not kill the tree.

At the south there has also been a most notable increase in the orange acreage, and the lemon, too, is increasing in popularity. The wonderful development of water supplies, the new reservoirs, the economical distribution by pipe lines, the employment of artesian wells and other similar undertakings, are increasing the available acreage at the south more rapidly than was once thought possible. This year it is true that there has been much loss by untoward weather conditions, so that the exports will not be as great as should be in the regularly ascending series, but it is only very seldom that such seasons occur and the usual products soon make them easily forgotten. On another page of this issue, a special contributor for the RURAL gives the results of recent inquiry among the citrus fruit growers of the south, which show the activity and confidence which characterize this leading producing interest at the south.

As a token of citrus charms, we give on this page an engraving from a photograph by W. R. Nutting of a young, budded orange tree growing in the Riverside region. The tree had been two years in the orchard at the time the picture was taken and held 136 oranges at the time. It was in the nursery four years from the seed, and was, of course, budded in the nursery a year or two before planting out in orchard. This mass of fruit comes then, probably, four years from the insertion of the bud. Such returns from trees in good situations and well cared for are not infrequent.



A TWO-YEAR-OLD TREE.

Such a tree as the engraving portrays, in its natural colors of green and gold, is one of the most beautiful sights in our horticulture. It is little wonder that the visitor from wintry regions of the earth becomes enraptured by the view of such products on the warm mesas, while perhaps the mountain peaks above are clad in snow mantles.

THE Italian Government is alarmed over the extensive migration of Italians to Brazil and the Argentine Republic.

The Northern Citrus Fair Association.

In last week's issue, we alluded to a movement to organize the citrus fruit interests of the upper half of the State. On Thursday last, the movement was given definite form by the incorporation of the Northern California Citrus Fair Association. Its object is to encourage the cultivation and exhibition of citrus, semitropical and deciduous fruits. There is a State appropriation for two citrus fairs annually in California — one in the southern part of the State and the other in the central or northern portion. This Association will govern the expenditures under the appropriation for the latter. All the counties north of the Sixth Congressional District were asked to send delegates. Eleven counties were represented, and it is expected others will come in. The articles of incorporation designate Sacramento as the principal place of business, and there is no capital stock.

The first fair under the auspices of the Association will be held in San Francisco in January or February next.

A committee was instructed to apply to T. L. Thompson, the World's Fair Commissioner, for half of the five acres allotted to California for horticultural exhibits and growing trees.

PIONEER HORTICULTURISTS.—We are in a fair way to secure a better knowledge of the early history of horticulture in this State than has hitherto been available. This is very important in view of the extent thus far attained in horticultural arts and industries and the greater development which will follow. The call issued by the State Horticultural Society for a meeting of pioneers in this city, last week, was quite well attended, and much interest was manifested. The pioneers of the region around San Francisco bay were naturally most fully represented, and their descriptions of crops in the lower part of Alameda county in the early fifties were heard with much interest. Portions of the Sacramento and San Joaquin valleys were also represented. At another time, we will give an outline of the meeting and account of the measures taken to secure upon another occasion a fuller attendance of pioneers, and a series of written papers in which the early horticultural history of the various counties and regions will be set forth.

FORESTRY.

A Strong Letter on Forest Preservation.

We are glad to print the following vigorous letter on the important subject of forest preservation, which is sent us for publication by the recipient, Abbot Kinney, ex-chairman of the State Board of Forestry, who is known throughout the State as a friend of the trees:

U. S. DEPARTMENT OF AGRICULTURE,
Division of Forestry,
WASHINGTON D. C., February, 10, 1892.

Abbot Kinney, Esq., Lamanda, California—DEAR SIR: I regret to learn, that the misrepresentations of interested parties have weight enough with the people of California in hindering the wise policy, just inaugurated, of reserving some of the mountain forest cover and managing it with more sense and more consideration both of its value as a material resource and a protection to stable water conditions, than has prevailed hitherto.

For a self-governing people we govern ourselves badly, indeed, when we allow transient sheep-herders, irresponsible land steerers, selfish lumber syndicates and the like, for their own present gain, to use up, wantonly destroy and render unproductive one of our most important resources without any regard to consequences.

There are many foolish things done in the world, but the most utterly foolish, because self-destructive, going on in the United States appears to me now the vandalistic uncivilized manner, in which forest growth is being destroyed or deteriorated.

Is it possible that there are still reading and observing men, that are ignorant of the end and result of such a policy?

Are you in California still in such a crude and undeveloped condition, that the thought of the future—and that the near future—need not to be considered in the management of your resources?

Is there anybody in the fertile valley who does not know that his interest lies in permanent water supplies? Is there anybody so ignorant as not to know, that the permanency of equable water supplies depends upon the condition in which the mountain slopes are kept? Recite to them the history of France in those mountain departments where the same foolish disregard of consequences has led to poverty of thousands, where to restore the natural conditions, nearly forty million dollars have been, and as many more will be, expended for replanting the barren rocks, made so by ax, sheep and fire. And it is not the tree growth alone, the tall timber, which influences the water supply, but much more, the forest-floor and undergrowth, which keeps the sun out and prevents rapid evaporation and equalizes the flow of springs, brooks and rivers; and the forest-floor is difficult to replace when once destroyed by fire and sheep.

Can you not make your people see that? Can you not also make them understand that proper forest management does not exclude timber cutting, mining, water storing—even pasturing in proper places? It is only the manner in which these things are done at present, that is reprehensible. It is only the wantonness and lack of forethought and method with which the timber is cut, or much oftener burned, the forest floor and young growth is destroyed, that leads to ruin not only of the forest resource itself, but of the fertility of adjoining agricultural lands.

I cannot see any reason, if we are as smart people as we pride ourselves, why we might not manage our forest resources as wisely and profitably as is done now in France and for a longer time in the German Empire, a management under which the timber is cut and reproduced and with all the profits resulting from marketing the crop, the forest conditions are carefully preserved so as not to disturb water conditions.

How this is to be done seems to me clear enough. First withdraw and reserve for permanent forest reserves the mountain timberlands, protect them from fire and keep out the trampling browsing herds of sheep; regulate the manner in which the Reserves may be occupied by prospectors, miners, campers, hunters, etc.; institute a management under which timber can be supplied to adjoining settlers, as well as the small sawmillmen, and, if there be sufficient areas of heavy timber, to large lumber operators, under a system of licenses as described fully in Senate Bill 1779, 50th Congress; supervise the cutting of the timber and regulate it, so that there will be desirable natural reproduction, and if the profits permit, begin replanting the barren spots, which the thoughtless policy of our predecessors have left us as an undesirable heritage.

Above all things open the eyes of the people that listen to those who counsel against such a course, to the fact that, they are being duped by men who will use them simply as tools for their selfish ends.

Very truly yours

B. E. FERNOW,
Chief of Forestry Division.

Work of the State Board.

"I have just returned from the Bidwell station, near Chico," said Mr. Lyon, State Forester, to a *Call* reporter. "We have been shipping deciduous and evergreen trees, and have distributed eight or ten car loads, representing not less than 30,000 trees. They have been used about the grounds of public institutions and for roadside planting. The Ukiah Insane Asylum, the Home for the Adult Blind at Berkeley, the Soldiers' Home at Yountville, the Oakland public parks, the road improvement clubs of Niles, Fruitvale, Calistoga and other towns in Northern California received donations.

"We have 40 acres at this station, and a number of the trees have been planted permanently to beautify the grounds. Drives and walks have been constructed, and the whole plat laid out to a park, which will be thrown open to the public.

"Several varieties of trees have been obtained by a system of exchange with foreign countries. One of the more recent introductions is the Cordea cordata sent from the Botanical Gardens of Rio Janeiro, where it grows in high altitudes. During the past year it has been planted in various districts of Southern California, where it has thriven. It is a valuable timber tree.

"Another new tree is the Lagunaria Patisoni, brought here two years ago from Brisbane, Queensland. It is growing well in every part of California, and there are now about 2000 fine specimens in the State. Although a small timber tree, the wood is valuable. It is highly ornamental, bearing handsome flowers, and is one of the best of the recent additions to the California exotic flora."

THE APIARY.

Nonswarming Systems of Bee Culture.

GRIZZLY FLATS, CAL., Feb. 19, 1892.

TO THE EDITOR:—Ever and anon, some bee keeper of limited experience spends considerable time and money in trying to introduce his nonswarming system of bee culture. He would not labor long under such a delusion if he would buy up a few bee books and a few years' back numbers of bee magazines and give them a thorough perusal.

No sooner does an infatuated beginner get fairly well started in the apiarian business than he goes to inventing something, and nine times in ten, what he thinks he has invented has been tried and abandoned years ago.

It is a pity that so many spend their time and money inventing and patenting worthless hives for controlling swarming; or worse still, patent a moth-proof hive, which, did he know it, is the perfection of absurdity and worse than useless. If he advertises it in the bee journals and agricultural papers, he gets laughed at or pitied for his pains by all progressive apiarists.

The bee keeper of to-day rarely thinks about the moth as an enemy to bees. With the new races of bees—that is, the Italians, Cyprians, Carniolans and Syrian bees, little trouble is to be apprehended from moths. The only way they bother, to amount to anything, is to destroy empty combs, not protected by the bees, and bee keepers should not be so careless as to allow empty combs to lie around any length of time.

All bee hives that are advertised as possessing superior advantages in the way of nonswarming, will find no purchasers to amount to anything in these enlightened times. Nonswarming hives are a failure. When it comes to managing bees to advantage, and to keep them from swarming too much, the Langstroth hive is as good as any style hive. It is not a complicated hive and not a costly hive.

It is true there are systems of bee culture by which swarming can be reduced to a great extent—by the inversion of the hive, destroying queen cells, and by adding surplus room when needed; also sufficient ventilation and shading, and the frequent use of the honey extractor.

If headed off too many times in their attempts to swarm, they will kill their queen and raise another; and when this one is able to fly, they will swarm. And if this queen is interfered with, and kept from going, they will go off without a queen. Too many setbacks given to bees when they are trying to swarm, will be apt to demoralize them, and they will swarm anyway.

Mr. Simmons, an English bee keeper, originated a system of bee culture known as "Simmon's nonswarming system." It has some valuable points on discouraging bees from swarming, and is as follows:

He gives each colony in the spring of the year several frames with starters in them, placing them between the brood and the entrance. (From this I infer that he must use hives with the frames running crosswise of the hive.) After carefully watching the brood apartment, and cutting out all the new combs built on these frames, previously inserted, he places this said comb in section boxes, and returns to the bees. If the new combs happen to contain eggs or larvæ, they are left away from the bees long enough to destroy their vitality.

The originator of this system says that bees will never swarm until they have a finished brood nest, and as part of their brood nest is cut out as fast as finished, the bees will have no desire to swarm, and therefore swarming is controlled. In time, the bees finding the sections filled with combs, will gradually cease working on the unfinished frames in the brood apartment to a great extent and go to work with redoubled energy in the section boxes.

Mr. Simmons believes it is best to give the bees an abundance of room (from 40 to 60 one-pound sections at once). He thinks bees should not be cramped, as it greatly encourages swarming. Mr. Simmon's system is certainly original, and a person with a small apiary might control his bees to better advantage; but a man having 500 colonies could not afford to bother with such a system. Of course, this system will not prevent swarming, but will discourage to a great extent.

A California apiarist, in order to accomplish rapid work, must have a different system of management entirely. He must have a hive that is easily and quickly manipulated—a hive where surplus room can be easily and quickly given, by either side or top storing; a hive where the queen can be easily discovered and queen cells cut out at a moment's notice. With a honey harvest crowding hard, he has no time to cut comb out of the brood chamber and insert in section boxes; foundation is a great deal better and cheaper. Some apiarists prefer bees that do not swarm much, and with this end in view, breed all their queens from colonies that cast but few swarms.

Such strains of bees may be pretty good for honey-gathering, but all things considered, I believe I would sooner have a strain of bees that is good swarmers. If bees are managed right, the colonies that swarm most are the most profitable.

S. L. WATKINS.

ENTOMOLOGICAL.

Scale Insects.

[A lecture by PROF. J. B. COMSTOCK, at the Stanford University.]

One of the most anomalous groups of insects is that family known to entomologists as the Coccidas. This family includes the insects commonly known as mealy bugs, bark lice or scale bugs, and many other forms for which there are no common names. Although these insects are bound together by certain structural features which have led entomologists to class them as a single family, the different species differ greatly in appearance, and we find even that the two sexes of the same species differ as greatly in appearance as do insects of different orders.

There are many other forms of scale insects than those commonly known to the fruit growers of this State. The family includes three sub-families. I will describe representatives of each. The first sub-family is represented by the mealy bugs and their allies. The mealy bugs are well known pests in the conservatories the world over, and in the open air in warmer sections of the country. Thus oranges are often infested by mealy bugs. These insects receive the common name from the fact that the body is covered with a whitish mealy powder. It is the presence of this powder, which is waterproof, that makes these insects so difficult to combat. The ordinary washes used to destroy allied insects are of little value when used against the mealy bugs, the wash being shed by the mealy covering and the insect remaining uninjured. The meally bugs differ less than other members of the family from other insects. They retain the power of movement throughout their lives, whereas most scale insects become fixed in the latter stages, or at least the females do. The female mealy bug, when full grown, excretes a mass of woolly or cottony matter, within which the eggs are deposited. These masses are commonly found in the axis of the leaves of infested plants. When the eggs hatch, the young lice scatter over the plants, being able to crawl quite rapidly. The young lice resemble in form the adult female. In the case of the females, there is little change in form, simply an increase in size, but the males differ from the females in a remarkable way. The sex is rarely observed by gardeners. The male insect, when it ceases feeding, is not more than one-third as large as the adult female. It spins a delicate cocoon about its body, and within this transforms to a pupa, and later, from this cocoon, it emerges as a winged bat-like insect. These are very small, delicate creatures, and would escape the attention of any but skilled observers.

I think, without doubt, the mealy bug is the most difficult insect to destroy that occurs upon plants in conservatories. We have conducted a very extensive series of experiments, using all of the commonly recommended insecticides, and found nothing that was satisfactory. The best results were obtained by the use of an extract of pyrethrum. This, however, is too expensive for use except upon a small scale. When the mealy bugs infest trees in the open air, as they do orange trees to a serious extent in Florida, doubtless the best method of combating the pest is by the use of hydrocyannic acid gas, in the same way that the red scale is fought upon orange trees in the southern part of this State.

The cottony cushion scale, so well known upon this coast, is closely allied to the mealy bugs. In this species the adult female excretes an egg sack somewhat similar to that of the mealy bug described above, but much more regular in form. In fact, it is a beautiful object, being ribbed in an exquisite way. The transformations of this species are similar to those of the mealy bugs just described, the male being a winged bat-like insect, differing very greatly in appearance from the female, the form commonly observed. Since the introduction of the Australian lady bird (*Vedalia*) there is little need of discussing other methods of combating this pest.

Not all the insects of this order are obnoxious to men. Certain species are very beneficial. Among these is the Lac insect, which exists in Asia. This insect lives in large numbers upon the twigs of certain trees. They suck their nourishment from these trees and excrete from their bodies a resinous substance which finally completely envelops them. This substance is collected and becomes an article of commerce, under the name of Stick Lac. The resinous excretion of the insect is dissolved and made into thin plates, which are known as Shell Lac, and from this is made the substance commonly known as shellac, which is used so widely in finishing woodwork.

Cochineal is an insect closely allied to the mealy bugs. It lives upon cactus in the warmer countries. I have fouud it living upon cactus in Florida, although it does not occur to any extent in this country. The insects are collected, killed and dried, and their bodies form the dye commonly used under the name of cochineal.

The second of the three sub-families of scale insects includes the Lecaniums and their allies. Here belong several of the well-known pests of fruit trees in this State. The soft scale of the orange, the black scale infesting almost all our cultivated plants, and the brown apricot scale, are familiar examples. In these the adult form usually becomes fixed, remaining in one place upon the plant infested. The young Lecaniums are active, crawling quite rapidly over the limbs of infested trees. It is in this way that the insects spread.

In the case of both the black scale and the brown apricot scale, the eggs hatch in the latter part of the summer. The young lice grow but little during the fall and winter months. In the spring they move out upon the newly-grown wood. Finding a suitable place, they settle, insert their beaks, and do not move thereafter. Very soon after this the body increases rapidly in size, becoming very convex. This rapid growth is due in part to the development of eggs within the body. These eggs are deposited beneath the body of the insect, the body shrinking upward so as to make room for them. In this way the insect becomes reduced in thick-

ness, so that it is finally a little cuplike scale covering the eggs. When the eggs hatch, the young crawl out from under the scale and spread over the tree.

A remarkable fact in the history of the majority of species of Lecanium is that the males are unknown. It seems probable that in the majority of species, this sex rarely if ever occurs. This is true of both the black scale and the brown apricot scale.

The third sub-family is represented in this State by the pernicious scale, the red scale of the orange, and many other species. These insects differ from the two preceding sub-families, in that the body of the insect is covered by a scale. Thus, while in the Lecaniums the scale like object covering the egg is the dried up body of the female, in the case of the pernicious scale and its allies the scale which one sees is a covering beneath which the insect is to be found.

The young insects of this sub-family resemble in general appearance those of the preceding sub-families. Their active stage, however, is much shorter. After crawling about over the twigs of the trees for a few days, the young scale insect settles upon a suitable place and immediately begins to excrete a cottony substance which soon becomes compacted into a thin pellicle covering the body. As the insect grows and needs to shed its skin, this cast skin is joined to the excretion and forms a part of the scale. This is the bright colored nipple-like prominence seen in the centre of the pernicious scale and of the red scale of the orange. The position of this cast skin in the scale differs in different genera and forms a good character for classification.

The closely allied species present but little difference in the forms of the scale. To distinguish these it is necessary to study the insect itself, which is found beneath the scale. The distinctions between closely allied species are such that it requires very close observation and much skill in this particular line to make the determinations, a careful preparation of the specimen and an excellent microscope being necessary requisites.

The different species of scale insects vary as regards their food habits. We find that certain species infest particular plants and will feed upon no others. Thus the red scale of the orange does not trouble deciduous fruits. On the other hand, other species have a very wide range of food plants. This is the case of the greedy scale, which infests a great variety of both cultivated and wild plants.

As to the best methods of fighting scale insects, there are two which are used under different conditions. Thus in the case of citrus trees, where, owing to the constant presence of the foliage, it is difficult to reach every part with the spray, the gas treatment used in Southern California is doubtless the best; but in the case of scale insects infesting deciduous trees a cheaper method can be employed, namely, the use of winter washes. During the season of the year when the trees are free from foliage and the buds are dormant it is a comparatively easy matter to spray the trees in such a way that every twig can be thoroughly coated with a wash which will destroy the insects and not injure the trees. Formulæ for making these washes have been prepared by the State Board of Horticulture, and can be obtained from that board on application. From what I have been able to observe in comparing orchards treated by the different washes, I am led to believe that the most efficient wash now in use is that known as the "Resinous Wash for Winter Use on Deciduous Trees."

The wash which Prof. Comstock thus commends is, we presume, the following, as priced by Mr. Craw:

ROSIN WASH FOR WINTER USE UPON DECIDUOUS TREES.

This remedy should be applied as soon as the leaves drop in the fall, and will destroy the "San Jose," "apricot" and "black" scales.

30 lbs. rosin at 1½c	$ 45
9 lbs. caustic soda (70 per cent) at 5c	45
4½ lbs. fish oil at 4c	18
Total	$1 08

Water, 100 gallons, This brings the diluted wash to a little over one cent per gallon.

SHEEP AND WOOL.

A Valuable Record of California Experience.

The following, which we find in the Ukiah *Press*, Mendocino county, is probably the most careful record of California sheep-breeding experience which has ever been published:

In February, 1873, we made an investment in ten thoroughbred Spanish Merino ewes and one buck. They cost us delivered on the ranch $987. The sheep were bred by Jewett in Missouri from stock selected from the then famed flocks of Hammond and Atwood of Vermont. We were unfortunate in the loss of our buck in the following August. We bought a buck, imported by Muson, which cost us $68 more; our whole stock in the autumn of 1873 cost us on ranch $1055, which formed the base of the flock. We had no experience in sheep husbandry. Bought all the standard works treating on the subject; adopted everything we found practical in them. The conditions under which their experiments were made were entirely different from ours; we in the genial climate of California had not to make much preparation for shelter and food that flock masters had to make in more rigorous climates. Our sheep are shorn twice each year, while other localities shear but once. We went it blind as the saying is; wherever we found we had made a mistake we corrected it. We endeavored to breed our sheep up to a high standard in quality and fineness of wool, form, reducing wrinkles, black top and yolk in wool, endeavoring to get as many of these good qualities in our sheep as possible, which future experience taught us a slow and rather uphill business. All stock bred up to a high standard requires constant watching and judicious crossing to improve them. The great tendency is to deterioration. The old proverb of like producing like will not hold good in my experience of advance stock-breeding, from the fact that so many conditions have been used to elevate the standard; many lie dormant and crop out in future crosses. I append a table that is self-explanatory regarding the average prices of wool in Ukiah City, and average wool yield per sheep.

		Cts.		Lbs
May 20, 1873,	sold in Ukiah.	30.00	Average wool yield	14.00
May 20, 1874,	" " "	30.00	" " "	13 23
Season, 1874–75	" " "	23 38	" " "	14.10
" 1875–76	" " "	16.25	" " "	13.26
" 1876–77	" " "	23.63	" " "	13.07
" 1877–78	" " "	20.00	" " "	12 66
" 1878–79	" " "	21.50	" " "	1 .23
" 1879–80	" " "	25.75	" " "	9 77
" 1880–81	" " "	26.50	" " "	9 25
" 1881–82	" " "	21.20	" " "	10 36
" 1882–83	" " "	19.84	" " "	12.52
" 1883–84	" " "	17.56	" " "	10 44
" 1884–85	" " "	14 56	" " "	9.79
" 1885–86	" " "	16 46	" " "	9 80
" 1886–87	" " "	16.85	" " "	9.89
" 1987–88	" " "	15.50	" " "	9 60

The above table shows great variation in price of wool, and annual average per head. In 1879 we procured an exceptionally free white yoked merino buck; we were trying to improve the quality of our wool, as our wool was considered heavy, his progeny gave us lighter fleeces and better quality of wool. We never sold any of our merino ewes; as they aged, it reduced the general average per head. In 1884–5–6, heavy wools got a black eye; prices fell far below other wools.

We adopted the method of weighing each fleece as it was shorn. We procured metal tags numbered from 1 to 12 inclusive; inserted in the ear, we had, as it were, 12 families. We stamped the age of each sheep on them, and the year each lamb came, so we were enabled to credit each sheep in the family with their weight of fleece when shorn. By that method we thought we could ascertain what progress we were making. It proved a delusive hope, the variable seasons and grass gave us such unequal results that we learned nothing from it. It clearly demonstrated one fact, whenever the growth of wool was arrested by short feed, spoiled feed, rain after grass dried in summer losing its strength, rigorous or inclement weather, all the wool growth lost during such periods of its growth were at the expense of length of staple and weight of fleece. We had no way of finding out what progress we were making in regard to fineness of fiber. In 1883 we addressed a letter to the Hon. Commissioner of Agriculture to ascertain who he appointed to examine wool fibers. He referred our letter to Wm. McMurtrie, professor of chemistry in the Illinois Industrial University; that placed us in communication with him. We sent him wool samples in 1883–4; he reported to us after examination that our wool samples sent him had an average fineness of 1267 fibers to the lineal inch.

YONATT'S MEASUREMENT OF MERINO WOOL FIBERS.

In England from Lord Westerman's flock, 1835, lineal inch	750
Manly Miles' measurement of wool fibers from E. Hammond's flock of eight merinos, Vermont growth of 1864	1,209
From W. H. Ladds of Ohio, growth of 1864	1,294
From C. H. Rich, Lapier, Michigan, one ram, 1864	1,164
C. H. Rich, Lapier, Michigan, four ewes, 1864	1,087
Argentine Republic, 13 rams, 1876	1,265
Australian Colonies, seven rams, 1876	1,260
Our measurements made by McMurtrie, 1884	1,267

From the above comparisons we had kept abreast of the times in regard to fineness of fibres. In 1888 we closed out our merino flock after charging every expense against them except feed and care; we had to the credit of our merino family after paying original investment $2465.36, in a run of fifteen years with them.

In 1873–4 we bought 217 thoroughbred southdown ewes from E. Meek, Alameda county. The original stock was imported by J. D. Patterson of New York, costing us delivered on the ranch $1565. This was the base of our grade flock; we crossed them with thoroughbred Spanish merino bucks. By having those two and pure varieties we were enabled to make crosses with but two types, one to the merino and the other to the southdown. I append a table of the results of our crosses; we adopted an ear mark for each grade. Before shearing we separated them into their respective grades, each grade of wool was weighed, averaged, and placed to the credit of its class. Our sheep year was from September to September. We adopted that method in order to get our fall lamb clip in their first year's average. We sent samples of our grade wool to McMurtrie in 1883; he reported in 1885 as follows:

LINEAL INCH MEASUREMENT.

15-16 merino 1-16 southdown	1292
7-8 merino 1-8 southdown	1316
3-4 merino 1-4 southdown	1320
1-2 merino 1-2 southdown	1060
Pure Shropshire buck	713
9-16 merino 4-16 shropshire 3-16 southdown	1196
3-8 merino 4-8 shropshire 1-8 southdown	1042
2-8 merino 4-8 shropshire 2-8 southdown	1077

From the above report our 15-16, 7-8 and 3-4 merinos were finer than our thoroughbred merinos. Our 3-4 merinos were the finest.

By referring to the above table you will notice that the first cross between the merino and southdown gave us an average gain of 3 38 100 lbs. The second cross, 3-4 merino 1 4 southdown, gave a gain of 3 36-100 lbs. over the first.

In the fall of 1878 we commenced breeding lighter-fleeced merino bucks with freer wool, less yolk, and black top. The 7-8 merino and 15-16 crosses were no gain, rather a loss from the 3-4, but better wool. It has fully demonstrated the fact. The two first crosses gave the best results, and there is where we should have stopped; after passing the 3-4 cross became more effeminate, poorer milkers and mothers, lambs more weakly.

In 1881 we bought a thoroughbred shropshire buck from J. B. Hoyt of Solano county, used him in the manner the table indicates; his blood gave us larger and more vigorous sheep. Our 1-2 merino 1-2 shropshire gave us larger sheep than merino and southdown of the same grade, good mothers and extra milkers. In my judgment, our 3-4 merino 1-4 southdown, the 1-2 merino 1-2 shropshire were the best sheep we ever bred. My preference is the 1-2 merino 1-2 shropshire as the best all-round sheep we ever bred.

Since 1888 we have been breeding a coarser and larger variety, aiming at about 3-8 merino 5-8 shropshire. Mutton has more largely entered into consumption in our food centres in this State, ruling higher than beef; with our depleted flocks it will continue to. So it now behooves the sheep grower to produce a sheep that will yield a large carcass, mature early, and as much good free wool as he can get on it.

The 1-2 merino 1-2 southdown cross gave us 7 86-100 lbs. The same merino and shropshire gave us 5-8 of a lb. more though the style of breeding was different. The first was merino buck and southdown ewe. The second, merino ewe and shropshire buck. It is an undisputed fact among intelligent stock breeders that the female imparts more of her qualities than the male, hence the difference of wool yield.

TABLE SHOWING RESULTS FOR SIXTEEN YEARS.

Years.	Annual average per cent. of lambs	¾ Merino, ¼ Shropshire	½ Merino, ½ Shropshire	¾ Merino, 3-16 Shropshire, 1-16 South Down	¼ Merino, ½ Shropshire, ¼ South Down	9-16 Merino, 4-16 Shropshire, 3-16 South Down	⅝ Merino, ⅛ Shropshire, ⅛ South Down	15-16 Merino, 1-16 South Down	⅞ Merino, ⅛ South Down	¾ Merino, ¼ South Down	½ Merino, ½ South Down	Annual average of South Downs	Number of wethers shorn each year	Average of Merino bucks' fleeces bred	Annual average price in Ukiah	Annual average lbs. per head	Number of sheep	Number of days between shearings
1873												3.50			30 00	3.50	16	
73-4												5 90					3	368
74-5												4 60			16. 5	4 60	245	367
75-6													20			4.48	476	357
76-7												7.86	76			7.86	519	366
77-8												7.57	112			7.57	628	365
78-9												7.81	168			7.80	514	366
79-0												11.22	228			8.78	635	366
80-1												10.36	115			6.31	551	373
81-2												8.75	53			5.81	559	355
82-3												6.59	14.00			6.75	584	375
83-4												9 12	13 00			5 12	711	356
84-5												8 35	18				696	358
85-6												9 26	16				417	370
86-7												10 70	20				518	364
87-8												10 97					529	371
		9.44	8.63															
		7 38	6 01	8 31	8 49													
		5 75	6.62	7.50	9.13	9.07												
		8 27		8 29	7.28	9.48												
		8 22		8.44	5.91	10 08												
		6.62		7.11	7 98	8.37												
		9 04																
		7 37																
		6.17	7.79															
		6.28	7.19	6 44	7 98													

*Bred 7 grades, 1 Merino. †Bred 7 grades, 1 Merino. ‡Bred 5 grades, 2 Merino. ‖Bred 5 grades, 2 Merino. §Bred 6 grades, 2 Merino.

Sheep husbandry has been largely on the decline in our county the last few years. Our great pests are coyotes and other "varmints" in our mountain ranges, and useless curs in our valley and foothill ranges. I am in favor of a general scalp law to eradicate all sheep pests, and a tax on dogs. More attention must be given by flock masters to their sheep. A large portion of our mountain ranges are adapted to nothing else but sheep raising. Our grade sheep have been much more profitable than our merinos were. The merino bucks bred on ranch were used in our grade crosses. No charge was made against the grade flock for it. If we should have had to supply them from outside sources it would have lessened their profit to the grades, although we sold them for as much as any of our bucks after service; in fact, they were more sought after by outside sheep men, as they were the cream of our breeding.

OUR GRADE SHEEP ACCOUNT AT THE END OF 1891.

Has in its favor	$20874 50
With sheep on hand worth	1800 00
	22674 50
Expense fitting ranch for sheep	800 00
	21874 50
Merino account	2465 36
Total profit	$24339 86

All expense charged against our grade sheep except feed and care. Our ranch contains 880 acres, about 350 acres bottom land, the balance rolling, some of it timbered.

SAM. S. BAECHTEL.

CROP PROSPECTS IN BUTTE.—The Biggs *Argus* says: The finest rain of the season commenced falling last Thursday, Feb. 18th, and continued up to Saturday morning. There was no wind, just a warm steady downpour. Three inches and two hundredths of rain fell during the storm, making the rainfall for the season 13.29 inches. No better season could have been expected by farmer or fruit grower, and no better prospect for good crops has ever been experienced in this section. The pleasant weather following the last rain has caused the buds to spring forth on the almond, peach and many other kind of trees, and we notice a number of early peaches already in bloom. The wheat crop following the stooling process of the last two weeks is springing up in splendid growth, and every kind of vegetation is growing grandly. Butte county will make a showing in grain and fruit this year which will make everybody prosperous and happy.

CLOVERDALE ORANGES.—We are indebted to W. T. Heald of Cloverdale for a lot of excellent samples of oranges gathered from growers in that region. The fruit is mainly seedlings, but included also some grafted stock. The quality throughout was high, the fruit well ripened and with perfectly clean and bright rind. The growers are as follows: J. E. Chalfant, Capt. John Field, Mrs. F. J. Bowman, J. E Shaw, J. C. Holloway, A. Bentley of Cloverdale and Wm. Appleton of Preston.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

ANOTHER GRANGE VICTORY

has been gained at the last session of the National Grange. A resolution was passed asking for a better dissemination of weather forecasts for the farming classes. A letter has just been received from Hon. Mark W. Harrington, chief of Weather Bureau, in which he says: "I am pleased to inform you that the Weather Bureau will cordially cooperate with your Order in placing the daily forecasts within the reach of as many of your members as the limited appropriations of the Bureau will permit." In a short time circular letters of information will be mailed to each Grange in California, giving further and explicit information about signals, and so forth. Be patient, fellow-patrons! Another victory is about won. To those farmers who are without the Grange, we would say: Organize a Grange and get the benefits of Trade-Card, Weather Bureau and other things too numerous to tell.

Have you had a package of seeds from your Congressman? If so, please tell us what else he has done, to your knowledge, for the benefit of agriculture. I suppose that the Representative concludes that he who causes two—onions—or cabbages—or beets—to grow where but one grew before, is entitled to a reelection and his little $5,000 a year, with mileage and the franking privilege. Think so!

Be very careful to whom you send the name and Post Office address of your Master and Secretary. Designing parties are seeking these addresses. The Master and the Secretary of the National Grange have given the "sign of caution." The Master of the State Grange repeats it! Beware! Beware!

Sebastopol Grange has appointed a committee to look into the advisability of holding a farmers' institute at that flourishing place.

Sutter County farmers are taking great interest in the Grange.

How has your "Trade-Card" served you? Can't you save money by purchasing through the houses with whom the Executive Committee have made special arrangements?

It is claimed that the agricultural product of 1891 exceeded that of 1890 by $700,000,000, but were your taxes any less? Is your bank account much increased? Who obtained most of that $700,000,000, the producer or the speculator?

Which has the stronger grip on the modern legislator, coin or conscience.

Who controls State Legislatures and Congress, corporations or the people? Is it the *jew*, or is it the *many* for whom laws are made? Look to the Statutes and see for yourself.

Are you *jor* or *against* "Free Rural Mail Delivery?" Do you know that you help pay the expense of delivering the letters and papers to your city cousins? Why not let them help pay for the delivery of your mail?

San Joaquin Pomona Grange.

TO THE EDITOR:—Pursuant to the notice heretofore published in the RURAL for the meeting of San Joaquin County Pomona Grange, which was held in Lodi hall on Thursday, the 25th of February, it being a beautiful day, the hall was filled to overflowing with Patrons, which from general appearance was a State Grange session, there being present the Worthy Master of the State Grange, Past Masters of the State Grange, and Hon. Thos. McConnell of the Executive Committee. The special order being the installation of officers and discussion of the silver question, the Worthy Master, E. W. Davis, assisted by C. W. Norton, installed R. Pixley as Worthy Master, etc., all in due form, after which the Worthy Master and McConnell addressed the Patrons upon the grievances, accomplishments and purposes of the Order, which consumed all the afternoon, the evening being for degree work and feast of Pomona. From the encomiums manifested, all the absent brothers and sisters missed a treat in not being present, and if you will permit the writer to be a judge, I will say that it was the best and most enjoyable meeting that this Grange has held. Owing to much important business that could not be taken from the table, there will be

A SPECIAL MEETING

Of Pomona Grange in Woodbridge Grange hall, Thursday, the 24th day of March, commencing at 10 A. M. A full attendance is desired, and it is expected all the Patrons will take due notice and govern themselves accordingly. Fraternally, J. D. HUFFMAN, Sec'y.

A Solano County Farmer's Opinion.

DIXON, Feb. 16, 1892.

TO THE EDITOR:—It seems the history of the past few years makes it the imperative duty that every farmer should unite as a combined body to have some uniform prices on our productions; also, we should be represented in Congress by a goodly portion of farmers, many of whom are as well qualified, yes, better than most lawyers, who do not study the farmer's interest. We see combines, monopolies and call board systems are working for themselves and against the farmer. Let us meet in our Granges and societies for discussing methods and means whereby we can honorably meet the necessities of the day.

SOLANO COUNTY FARMER.

W. L. OVERHISER, P. M., intends to start from Stockton, on his tour of Grange visiting, through Monterey, San Luis Obispo and Santa Barbara counties, about the 21st of March. He is a sterling P. of H., who proverbially makes things interesting wherever he goes. Public meetings will be held by each Grange in the above named counties. Hon. J. V. Webster and Hon. Geo. Steele will accompany Mr. O. as far as convenient.

The Nicaragua Canal.

STOCKTON, Feb. 29, 1892.

The following address was delivered before Stockton Grange, No. 70, P. of H., by Past Master Thos. E. Ketcham, Feb. 27, 1892:

In addressing you upon the subject of the Nicaragua Canal, I regret that I am not possessed of the ability to give you a more full and exhaustive statement of the present situation, as I believe that the early completion of the Nicaragua Canal is of vital importance to the United States, both in a commercial and military sense.

The question of a passage through the American continent was sought to be solved by the Government of Spain as early as the year 1502, and in fact the last voyage of Columbus was undertaken with the principal object of finding a feasible passage by water connecting the two oceans. Since that time, a number of expeditions has been organized by the United States to survey the Isthmus of Panama, as well as the Isthmus of Nicaragua, to determine the relative practicability of the two routes. Lieut. Strain of the U. S. Navy, in his survey of 1854, fully demonstrated the impossibility of constructing a canal across the Isthmus of Panama. The surveys of the Nicaragua route show conclusively that the canal can be built at a small expense, comparatively, and that it is the only available route known and discovered at the present time. The length of the proposed canal is about 169½ miles; of this distance, from 28 to 40 miles would be required to be excavated. Lake Nicaragua, the San Juan river and the basin of the San Francisco furnishing a natural waterway for the balance of the distance, the summit level of the canal will be 110 feet above the mean sea level. It is proposed to build seven locks, 1000 feet long, 100 feet wide and 30 feet deep, having a capacity of passing from two to four vessels at one lockage. The greatest difficulties to be overcome are the harbors at the Atlantic and Pacific termini. A large amount of work has already been accomplished at the harbor of Greytown on the Atlantic side; vessels drawing 14 feet of water can now enter the harbor and discharge at the docks.

From information received from friends who have visited Nicaragua and other sources, I learn that the soil is fertile and the climate salubrious; the productions, coffee, sugar, cochineal, cotton, cocoa, indigo, indiarubber and tropical fruits in abundance, besides large forests of the most valuable woods. The estimated cost of the canal is one hundred millions of dollars; but if the company has to place its bonds upon the markets of the world, the cost will be greatly enhanced by the payment of discounts, commissions, etc., besides the danger of foreigners getting control of the canal.

I believe that the U. S. Government should guarantee the payment of the interest on the Canal Company's bonds, but with such safeguards as would prevent any loss to the Government and secure the people from a repetition of the scandals of the Union and Central Pacific Railroads. It is also of the first importance that the United States should have the controlling interest in the canal and erect fortifications at salient points to prevent foreign powers from seizing or using the canal to the detriment of the United States.

The distance from San Francisco to New York via Cape Horn is 14,840 miles; San Francisco to New York via the Nicaragua route, 4946 miles, a saving in distance of 9894 miles; from Liverpool to San Francisco via Cape Horn is 14,690 miles; Liverpool to San Francisco via Nicaragua route, 7694 miles, a saving of 6996 miles. The wear and tear of a voyage around Cape Horn, the cost of insurance, seamen's wages, supplies, etc., are very great; by the Nicaragua route, it would be comparatively small.

The time required by sailing vessels to make the voyage around Cape Horn is from 110 days to 150 days. The voyage by steamers via the Nicaragua route (when the canal is completed) can be easily made in 25 days, thereby avoiding the perils of the tempestuous voyage around Cape Horn, reducing the cost of insurance, etc., lessening freights and enabling farmers and shippers to save a large percentage of the money now required to get their goods to market.

The completion of the Nicaragua Canal will eventually give us the control of the American continent, the commercial supremacy of the Pacific Ocean, neutralize the power of England to injure us, through her possessions in the West India Islands, settle the question of the Monroe doctrine, secure our sailors from injury and death at the hands of foreign mobs, and be a powerful factor in preserving peace and insuring a just and equitable settlement of any disputes that may arise between us and foreign nations.

To illustrate the possibilities for business by the Nicaragua Canal, I will state that prior to 1846, all the transportation done on Lake Superior was by batteaux and canoes, during the winter of 1846. Capt. McKay moved the schooner Algonquin on ways across the portage of Sault St. Marie and launched her on the waters of Lake Superior, sailing early in spring for Copper harbor (with Cyrus Mendenhall and myself, with a number of men and supplies for the mines in which we were interested), being the first vessel of any considerable size that, so far as known, ever floated on Lake Superior. Since then there has been a canal built around the Sault St. Marie, connecting Lake Superior with Lake Huron. In 1881, the traffic by the Sault St. Marie canal amounted to 1,802,571 tons; in 1890, it had developed to the vast amount of 7,221,935 tons, exceeding the business of the Suez Canal by nearly 1,000,000 tons.

For full information on the subject, I refer you to the reports of Warner Miller, Pres. of the Nicaragua Canal Co., to an article by Senator Sherman, published in the *Forum* for March, 1891, and a pamphlet by Capt. Wm. L. Merry of San Francisco.

STATE GRANGE CANVASS.—The list of appointments published in last week's RURAL has been sent to Worthy Master Davis for any possible necessary correction or revision.

The publication of the list referred to will be considered as an answer to many of the letters written to the Secretary of the State Grange concerning special meetings, all correspondence relating thereto having been turned over to the Master, for consideration, at the late Executive Committee meeting.

By another week we expect to have something further to report in regard to the special meetings. The Secretary or Lecturer of each subordinate Grange to be visited, should take special pains to have his meeting well announced in the local papers, stating when the meetings will take place and by whom they will be addressed, extending a broad invitation to all interested to attend these Grange and farmers' gatherings.

QUESTIONS FOR GRANGE DISCUSSION.—According to arrangements of the Committee on Womans' Work in the Grange, Mrs. C. E. Kinney, Deputy of the N. G. Com. announced questions for discussion by Pacific States Granges from November to February inclusive, with the understanding that the State Committee on Woman's Work in the Grange for Oregon should prepare and send the RURAL PRESS the questions for discussions for the next four months, and the Committee of Washington Grange for the four months following. Will Oregon Committee now send us the questions for discussion for March, April, May and June; and Washington in due season their quota.

LECTURER'S PROGRAME.—The Lecturer of Corvallis (Oregon) Grange, announces the following programme for the meeting of March 12th. Useful Weeds, by Moses Craig; Declamation, A. Pike; Reading, D. P. Adamson. For March 26th: The Farmer's Duties to his school, J. D. Johnson and Charles Horning: Reading, Ida Locke. Would it not be well for Lecturers of all subordinate Granges to make similar appointments in advance? Who will try it in California?

VACA VALLEY GRANGE will be visited by W. L. Overhiser, P. M., March 12th.

FARMERS' ALLIANCE.

Less Than Two Months Work.

Secretary Barbee reports that since Jan. 1st the following Sub Alliances have been chartered:

NAME.	NO.	LOCATION.	ORGANIZER.
Poso,	492,	Kern county	J. T. Austin.
La Dow,	495,	Los Angeles county	P. K. Wood.
La Canada,	498,	" "	T. A. Atwater.
North Perris,	507,	" "	G. P. King.
Kingsburg,	496,	Fresno county	J. L. Gilbert.
Pescadero,	503	San Mateo county	P. R. Adams.
Buckhorn,	508,	Ventura county	M. M. Tousey.
Mt. Fairview,	511,	San Diego county	Wm. Justice.
Hope,	521,	San Diego county	Anna F. Smith.
Courtland,	501,	Sacramento county	A. A. Kruil.
Ocean View,	517,	Orange county	D. E. Smith.
Suisun Valley,	499,	Solano county	S. D. Bristo.
Skyland,	506,	Santa Cruz county	J. B. Rigdon.
Pacific,	509,	" "	J. C. Drew.
Mt. Pleasant,	505,	Placer county	Henri Fairweather.
Excelsior,	510,	" "	J. H. Gregory.
Austin,	493,	Tulare county	John T. Austin.
Cross Roads,	497,	" "	"
Kaweah,	500,	" "	"
Central,	502,	" "	"
Quincey,	504,	" "	"
Barcelona,	512,	" "	"
Hooker,	513,	Mariposa county	J. H. White.
White Rock,	514,	" "	"
Oakdale,	515,	" "	"
Ben Hur,	516,	" "	"
Palona,	518,	" "	"
Snow Creek,	519,	" "	"
Indian Gulch,	520,	" "	"
Garnette Springs,	522,	" "	"
Comes,	523,	Tuolumne county	
Marshs' Flat,	524,	" "	"
Groveland,	525,	" "	"
Morning Star,	526,	" "	"
Curtis Creek,	527,	" "	"

This makes a total of 34 Sub Alliances organized since this year began, with Kern and Tuolumne ready to organize.

The Industrial Convention.

People's Party Platform, Etc.

Dispatches from St. Louis of Feb. 24th give the following in brief of the platform and resolutions adopted on the last day of the session of the Union Industrial Convention:

The platform states that the nation is on the verge of moral, political and material ruin; that corruption dominates the ballot-box, the Legislatures, Congress, and touches even the ermine of the bench; newspapers are subsidized or muzzled, public opinion is silenced, business is prostrated, homes covered with mortgages, labor impoverished and land and money are concentrating in the hands of capitalists. The workmen, it declares, are denied the right of organization for self-protection; imported pauperized labor beats down wages; a hireling standing army, unrecognized by our laws, is established to shoot them down, and they are rapidly degenerating into European conditions. The national power to create money is appropriated to enrich bondholders; silver has been demonetized to add to the purchasing power of gold, and the supply of currency is purposely abridged to fatten usurers, bankrupt enterprise and enslave industry.

A resolution declares that the old political parties have allowed this to exist without any effort at restraint, and therefore, it asserts, a new political organization, representing the political principles herein stated, is necessary.

The declaration of principles is then made. A national currency is demanded that is safe, sound and flexible, issued by the General Government only, and full legal tender for all debts, public and private, and that, without the use of banking corporations, a just and equable means of circulation be established with a tax not to exceed two per cent, as set forth in the subtreasury plan of the Farmers' Alliance, or some better system. It demands the free and unlimited coinage of silver; that the amount of the circulating medium be speedily increased to not less than $10 per capita; a graduated income tax; that all national and State revenues be limited to the necessary expenses of the Government, and that postal savings banks be established by the Government.

The platform declares that land should not be monopolized for speculative purposes and alien ownership of land should be prohibited. All lands now held by railroads and other corporations in excess of their actual needs, and all kinds now owned by aliens, should be reclaimed by the Government and held for actual settlers only. It declares that the Government should own and operate the railroads, telegraph and telephone, and demands that the Government issue legal tender notes and pay the Union soldier the difference between the price of the depreciated money in which he was paid and gold.

The following Conference Committee was appointed to act with the People's party of the National Committee: Van Wyck, Nebraska; McCune, Texas; Branch, Georgia; Powers, Nebraska; McGuire, New York; Polk, North Carolina; Willetts, Kansas; President Humphreys of the National Colored Alliance; Hackett, Missouri; Barnett, Illinois (F. M. B. A.); Morrill, Louisiana; Seits, Ohio; Mrs. Lease, Kansas; Mrs. Doctor Dabbs, Texas; Benjamin Terrill, Texas.

Later, the Conference Committee selected July 4th as the date for the convention, the selection of the place

being left to a sub-committee of ten to be appoinfed by Taubeneck of Illinois.

Much excitement was created in regard to Woman Suffrage and prohibition resolutions, and the former only was adopted.

Whether the fact that temperance advocates are divided on the prohibition question defeated Miss. Willard's resolution or not, fuller reports may show. Through intervening conference the Fourth of July nominating conventions may yet bridge the gap made by the hastily closing convention.

Readers should bear in mind these early reports are made up from news gained by reporters who are not members of the orders and associations composing the convention, and for publications not particularly friendly, to say it mildly, to the organization of a new party.

Alameda County Organization.

Individual members of the Alliance and other farming and industrial organizations will assemble in mass convention at 10 A. M. of Saturday, March 5th, in the Town Hall at Niles, for organizing the People's Party in the county and appointing a Central Committee. Those who support the Los Angeles (State) platform, both men and women, are invited.

Mrs. C. P. Stetson, an able writer and speaker, has promised one of her excellent poems for the occasion. A basket lunch has been recommended, with music and appropriate songs. All interested in the new movement are expected to manifest it by their personal attendance, if possible. COM.

Address to the Goddess Pomona—An Acrostic.

The following lines will be best understood by those acquainted with the geography of the valley of Pomona and surrounding country, embracing Los Angeles, San Bernardino and San Diego counties. The names of certain places and natural objects are employed to signify the various mythical characters of the piece :

Peerless Goddess of fruits, and patron of plants and flowers,
Of gardens rich, of shady nooks, and cool and leafy bowers;
Most gracious the divinity, that gave thee inspiration,
On this most fair and lovely spot, to fix thy habitation,
No other half so beauteous could'st thou have ever found,
As this transcendent, charming vale, in all the world around.

Legions of loyal Angels, who in thy western province dwell,
Obey thy royal mandates, and of thy goodness tell.
St. Bernard, with devoted zeal, shall rule throughout the East,

And save from all intruding foes, and make thy subjects blest,
Noble, brave San Bernardino with royal force enmasse,
Guards with faithful vigilance thy northern mountain pass.
Exalted, grand "Old Baldy" with his mighty host stands forth,
Loyally protecting all thy borders upon the north.
Enlightened San Diego doth o'er thy south land reign,
Sacredly thy will expounding from mountain to the main.

Calm and chaste Sierra Madre, from her lofty seat on high,
O'erwatches all thy vast domain, with ever sleepless eye.

Coronado, blithe and sweet, and Santa Monica gay,
And Santa Ana staid, sedate in her more modest way,
Lends each her aid to greet San Pedro, who watches o'er thy sea,
Inspecting all aquatic sports, if good or bad they be;
Faithfully thy ports commanding, guarding thy ocean trade,
Offering unto Santa Rosa every needed aid.
Redundant San Antonio pours forth his generous flood,
Nobly giving man and beast their needed drink and food.
In love and pride thy sweet handmaid, the gentle San Jose,
Attends with true fidelity, her goddess day by day.

Thy great magicians, mighty men, lest there should come a dearth,
Hold high their magic wand of art and smite the pleth'ric earth.
Each potent stroke is blessed; and lo, a hundred flowing wells

Proclaim "glad tidings of great joy" to every one who dwells
Amid the marvelous glories of this thy favored land;
Replete with nature's choicest gifts, magnificent and grand.
Aye, grand! all climes within thy realms unite, and yet is each
Distinct; frigid mount, tropic plain, and cool and temperate beach.
In its botanic products are plants from every zone,
Such sagebrush, briars and brambles, as in the north are known,
Eucalyptus, pepper, palm, banana and cypress green,

Orange, lemon, apricot, olive, prune, fig, nectarine;
Fir tree, spruce and cedar, cottonwood, oak and stately pine,

Every apple, peach, pear, plum, cherry, small fruit plant and vine,
Add the gorgeous wealth of flowers, culled from every clime;
Richest perfumes, fairest landscapes, and mountain scenes sublime,
Then all may see, who've read of Eden, where Adam's race had birth,
How this, thy home, sweet Goddess, is "The Paradise of Earth."

Thus saints, magicians, angels, too—powers below, above—
Have all with lavish nature joined to found thy realm of love.
Exquisite taste, ingenious skill, and learning now shall plan

How best to furnish and adorn a perfect home for man.
Orient and Occident shall patterns proper supply,
Making architectural grace comport with strict utility.
Elegant palatial homes and cottages neat shall rise,

Of every ornate style of art that genius can devise.
Fragrant, neat and orderly yards, and spacious garden grounds,

Adorned with flowers of every hue, and where delicious fruit abounds;
Replete with shade trees, verdant lawns and cypress hedge of green,
The shapely fount, the hydrant's flow, complete the outward scene,

The same good sense and genius rare, o'er things within preside.
Homes, to be true temples of love, for culture must provide.
Exalted men of high resolve and sentiments refined,

Long since have found the finer arts give strength to heart and mind.
Ah, then, must music find a place in every perfect home,
Nor may it fail the youth to charm, that they may never roam.
Dearly cherished portraits of friends shall hang upon the wall—

Oh true and sweet remembrancers. How fondly they recall
Faces and forms now absent or forever gone. So then

Must fine art have a place in all the perfect homes of men.
Indeed, these lovely private homes, complete in every part—
Love-inspiring, soul-exalting—make thy land "The Home of Art."
Kindly, too, thou dost provide for every grosser need,

And herds and flocks, to furnish meat, upon thy hillsides feed;
Nor doth exalted chanticleer, with happy, cackling brood,
Deny to any, chicken pie, nor fail to furnish them egg food.

Honest, well kept, patient kine, afford an ample supply
Of good rich milk and butter fine, and cake and custard pie.
Nor is this all, for still, to please, thou givest honey from the bees,
Enchanting land! in all things rich, now blessed with work and money.
Your realm is royal, Goddess: "The land of Milk and Honey."

—*H. W. Finson.*

Agricultural Notes.

CALIFORNIA.

Alameda.

Farm Notes.—Haywards *Journal:* The farmers have now rested on their oars, and the entire valley and hillsides will soon be coated with green, and with a continuance of the present warm and moist weather, the young grain will begin to climb at a rapid rate. Never before in our recollection have we had such a glorious winter for crop-planting, and the full acreage is put in. Chevalier barley-seeding will come next, and there is little doubt but that the good luck so far met with will continue throughout the season. The mild open winter has given orchardists a show to thoroughly prune their orchards, and also spread terror in the ranks of the bug family, particularly the brown apricot scale that has gained such a foothold in this valley, that the most active measures will have to be used to get rid of it.

Glenn.

County Agricultural Fair.—Willows *Journal:* At a meeting of the Directors of the Willows Agricultural Association, the following officers were elected for the ensuing year: J. R. Troxel, Pres.; W. R. Merrill, Vice-Pres.; W. V. Freeman, Sec.; Bank of Willows, Treas. They fixed the date of the annual meeting for the second week in August, commencing Tuesday, August 9th, and continuing five days. Directors Merrill and Kelley were elected as delegates to attend a meeting of the Directors of all Northern Associations to be held at Chico to formulate a speed program for the northern circuit.

Kern.

Remarkable Growth.—Bakersfield *Echo:* In the spring of '91, E. W. McCutchion set out a prune tree, then one year from the bud. All the limbs were cut away, leaving the main stem about 18 inches high. He recently measured the limbs that grew last year and found that they aggregated 221 feet. This was in Mountain View Colony.

Los Angeles.

A Large Grain Farm.—Santa Monica Cor. Los Angeles *Herald:* A ride over the Jones-Baker tract reveals one of those marvelous agricultural spectacles only to be seen in Southern California. Here you will see 5000 acres of barley, sown ten days ago and now sprouting four inches above the soil. Here also, in due season, you will find 1000 acres planted in corn. The steam plow has opened up great possibilities on the Jones ranch, and crops of 60,000 centals of barley are the result.

The Irrigation Question.—Pasadena *Star*: There is need of a much more general use of irrigation in Southern California in order that the subdivision of land and the multiplication of rural homes on which our growth in prosperity and wealth so greatly depend, may be brought about. The tendency of dry farming in California is toward increase in the size of ranches and decrease in the number of farmers. Under present methods of growing grain, calling for the use of combined harvesters and steam power in the place of animals, the small farmer is at a disadvantage compared with the large operator. As the small farmers drop out their lands are added to some of the large ranches adjoining. This tendency prevails in the United States as a whole, as well as in California. In the area covered by the three counties of Los Angeles, Orange and San Bernardino, as the maps of the State engineer show, there are not less than 1,250,000 acres of land susceptible of irrigation. This is all on the seaward side of the great mountain chain which forms the western boundary of the Mojave and Colorado desert. Of this great irrigable area not one-tenth has yet been supplied with water. There is abundance of the fluid, and storage systems are needed to prevent it from flowing idly to the sea. The catchment area of the Pacific slope of the mountain ranges and the snows and rains of each winter season supply more than enough water for the irrigation of every foot of the 1,250,000 acres above mentioned.

Orange.

Free Planting at Rouse Valley.—Cor. Santa Ana *Blade:* The virgin soil of the low foothills has been invaded by the sturdy farmers, and the horticulturists are busy planting sweet olives, figs, apricots, etc., and there will be planted in primitive farming this year a larger area of corn, potatoes and barley than ever before in this valley. The Belford Company are quietly but vigorously transplanting the hills adjoining their estates here, into magnificent olive orchards, which will in a few years form a lovely setting to the modern villas that will be built in their midst. Thes eye of the invalid, as he passes through this paradise on his way to the Hot Springs, will dance with delight.

Improved Appearance of Orchards and Vineyards.—Santa Ana Cor. Los Angeles *Express:* That portion of Orange county embracing Santa Ana, Orange, Tustin, El Modena, McPherson, Silverado and Garden Grove, coming within a ten-mile circle, looks very inviting just at this time. It is recovering from the stroke of paralysis which took the nerve out of it two and three years ago, through the vine disease and prevalence of scale, which utterly ruined many vineyards and materially weakened nearly all the orchards. Hundreds of husbandmen have been put to the test of financial endurance by reason of those plagues, and right well have most of them withstood the strain, using every known available method to cope with blight and parasite. The result is that they are now in a fair way to recover lost ground, as the severe methods used—in some cases, entire obliteration and replanting, with severe pruning and the recent introduction of the new red scale destroyer—has proven effective. In each place named, the fruit is now looking well and a more cheerful feeling prevails.

San Bernardino.

Enlarging Operations.—Redlands *Citrograph:* The Bear Valley Irrigation Co. continues to enlarge its field of operations. The latest step in advance was made last Friday, when water was turned on the Arrowhead tract north of San Bernardino. Pipes are already laid to cover 1000 acres, and 3000 acres more will be brought under irrigation from this new pipe line. The water has a heavy pressure, and the pipes are of steel, made by the Redlands Steel Pipe Works, and range in size from 18 inches to two feet. The Arrowhead Lemon Co., which is to plant 400 acres to lemons, has its land in this tract.

San Diego.

Early Fruits at Valley Center.—Cor. Escondido *Times*: Crops look fine. Apricots and peaches are blooming a month earlier than last year.

Santa Cruz.

The Creamery a Success.—Watsonville *Rustler:* The Watsonville creamery has passed the experimental stage, and is now an assured success. Two hundred cows are being milked daily, and the butter product is of good quality, meeting a ready sale in the San Francisco and local markets. More buildings are to be erected. The success of the creamery should encourage the establishment of other industries in this valley.

Sugar Beet Notes.—Watsonville *Pajaronian:* The acreage contracted for beets for this season shows that there will be more land in cultivation for this crop than at any time in the history of the factory. From 1500 to 2000 acres are expected in this valley—the former amount being already contracted for—there will be over 1200 acres on the Moro Cojo ranch, and across the Salinas river from it, there will be from 500 to 600 acres of the Cooper ranch, the Blanco district will furnish as much more, and in the vicinity of Salinas an acreage nearly as great has been contracted. It is expected that there will be over 4000 acres of land planted in beets for the Watsonville factory. Up to date, the prospects for the season could not be more encouraging. The rains have come just right, and no part of the work of preparation has been delayed. If the good fortune continues, the beet crop should be enormous. The major part of the land in beets outside of this valley is on tracts which have been leased by the Western Beet Sugar Co., and the company has been more successful in making its labor contracts than in former years. The Mongolian has become more reasonable in his demands, and some heavy contracts have been made during the past week.

Solano.

Crop Prospect.—Dixon *Tribune:* The late storm relieved the apprehensions of the farmers and business men alike. Nothing was absolutely suffering for want of rain, but a feeling of uncertainty pervaded the whole State, and it was feared that there would not be sufficient moisture to start the winter-sown grain, which was languishing, and the feed was becoming very short. The storm removed all forebodings, however, and it is now conceded that with the usual spring showers, a crop is assured. Business has brightened up and every one is looking for a return of good times.

Sonoma.

A Farmers' Institute.—Sebastopol *Times:* The grangers of this vicinity, realizing the benefit derived from Farmers' Institutes, have appointed Messrs. G. N. Sanborn, C. Wightman and M. Litchfield as a committee to arrange for an institute at this place in the near future. As there is no expense attached to such a meeting, aside from entertaining the guests from a distance, there is no reason why all should not fall into line in this important matter. And none can fail to concur with us when we say important, for instruction is gained by the horticulturist from these institutes that can be derived in no other way. Farmers interchange views, and methods of fruit culture are discussed, soil is analyzed and lectures given by men who have scientific knowledge of fruit pests, their parasites and exterminators, all of which becomes more practical when gained in this way than from any other source. The Farmers' Institute is to the farmer what the Teachers' Institute is to the teacher, and what wide-awake teacher would be willing to do away with this annual coming together? Let the fruit and the vine of the "Gold Ridge" be cultivated scientifically and with intelligence.

Tulare.

Raisin Culture.—C. J. Berry, Visalia *Times:* Many of your readers will doubtless be interested in the description of how I produced six tons of first-class raisins on a 16-acre vineyard, the vines one and a half years old. When the vines started to grow I carefully removed all the suckers, and just as soon as the buds of the grape showed up I at once sulphured them, and when the buds had opened into blossoms I then sulphured again. It seemed to me that when the second crop's buds made their appearance, the vines were going to overbear. I severely thinned the second crop, and sulphured the vines again. I thus avoided the "colure," that is, the dropping of the grape berry. The bunches set full. When it came to the time when I ought to summer prune the vines, I went carefully through the vineyard and cut off such lateral vines that had not fruited. I did not top off any part of the vines that had fruited well. By this process, I threw the sap into the fruit and produced a larger berry and made a first-class raisin. When the blossoms of the third crop came on, I was too busy to pull them off from the entire vineyard. I could only do so with a portion of it. I found that portion produced the largest grapes. The results I have already stated. I am well satisfied, if the grape grower for raisins will follow this plan of thinning the fruit and summer prune as described, he will produce a much larger grape and will make a finer quality of raisins, which will bring him a better price, and none of which he'll have to carry over.

Experimenting with Oranges.—*Times:* J. J. Cairns visited Southern California this fall and gathered all the information he could about orange culture. His place is located in a section of the county that is supposed to be perfectly adapted to orange-growing, and in order to test the matter he has reserved 160 acres of ground surrounding his house, 135 acres of which he will plant in oranges. This land has all been flooded from a well on the place, and 30 acres plowed to a depth of 30 inches, which will be planted this year. He has contracted to have the trees planted, which will cost him $80 an acre. Next year he intends to plant 105 acres more. He will plant 10 acres of assorted fruit trees on the south side of his house.

Stanislaus.

Good Crop Prospects Around Oakdale.—Cor. Modesto *Herald*: Gentle rains and mild weather during the past week give a cheering promise of an abundant harvest. The grain crop has made a rapid growth within the past ten days, and our farmers chuckle with delight over the cheering outlook for prosperous times.

Farm Notes at Schautz.—Cor. Woodland *Mail:* Almond trees in blossom, peach trees in full bloom, wheat and barley all looking well, green peas a foot high, potatoes of equal stature, and all other vegetables feeling the forcing influence of the rain.

Yolo.

Fruit Outlook.—Woodland *Mail:* J. S. Houser, who owns a fruit and berry farm on Cache Creek near Woodland, and is an enthusiastic and progressive orchardist, says that so far as he could judge from his own orchard and those of his neighbors and the reports he had heard, the apricot crop promises to be extremely light this year. The fruit buds are very scattering. Mr. Houser attributes this in great part to the immense crops of last season. Other fruits are promising well and the yield of berries bids fair to be enormous. Mr. Houser furnished the markets of Woodland and Sacramento last season with blackberries, almost to the exclusion of other growers, and then had several tons that he could not dispose of, and which were a dead loss. It will be hard to find a market for the immense crop which will be borne this season.

Yuba.

Work on an Irrigation Flume.—Cor. Marysville *Democrat :* The Brown Valley irrigation flume is being constructed as rapidly as possible—at the rate of nearly a quarter of a mile per week—under the management of superintendent E. C. Kendall. J. R. Meek is engineer. About 30 men are employed on the flume, which is a very stable structure, capable of carrying a large quantity of water, being five feet in width and three feet in height.

NEVADA.

The Beef Market.—The beef market is looking better daily. Seven cents is readily offered, but there is none for sale at that figure. Seven cents and a half and eight cents are offered for an agreed delivery, but feeders seem to think that if there is anything to be made by feeding them, they can afford to take the chances themselves. There is a good deal of difference whether one is holding on a falling market or on a rising market that is strong and healthy.

THE HOME CIRCLE.

The Whistling Boy.

O'er the pavement comes the schoolboy, lips a-pucker, cheeks out-blown,
Scraps of ancient tunes he whistles, little catches of his own;
For is it not vacation time, the greatest of all boons,
When he wanders like an Arab in the golden afternoons?
Whistle, whistle, how his treble through the varied bustle cleaves,
Drowning out the noisy chatter of the sparrows in the eaves;
Whistle, whistle, what a joyance as it echoes up the street,
I have heard in all my journeyings no music half so sweet;
For he whistles down the shadows that the jealous years have cast,
And in whistling off the present he has whistled up the past.

I have heard the blackbirds whistling on a swaying maple bough,
And have heard the plowmen whistle as they walk behind the plow;
I have heard the mournful meadow-lark, whose whistle is a wail,
And well I know the whistle of the brown and bonnie quail;
Yet none of these may enter in the city's grimy walls,
Where the crash of wheels is constant and the veiling smoke appals.
But the trilling of the schoolboy seems to bring them back to me,
And I see an old red schoolhouse by a gnarled wild cherry tree;
For his whistling tells of happiness unmixed with care's alloy,
And I mark amid his shrilling lilts I whistled when a boy:

"Bonnie Doon" and "Annie Laurie," "Yankee Doodle Come to Town,"
"Sailor's Hornpipe," "Old Dan Tucker," "Money Musk," and "Camperdown."
Why, I seem to smell the clover and the basswood budding bright;
There's a well-sweep in the distance and an orchard to the right,
And the pink-white apple blossoms nod this message from each bough:
"School is over for the summer; school is over, over now."
Whistle, whistle, they are coming, all my happy boyhood days,
With the sound of running waters and the winding, wooded ways.
Whistle, whistle, now he ceases—and yon sunshaft's amber gleam
Turns as gray and cold as winter—God have mercy, 'tis a dream.

—*Ernest McGaffey, in Independent.*

A Lucky Mistake.

Within a month after Fort Sumter was fired on, two young men from Pennsylvania enlisted in the Union army. These young men were twins, Tom and I. We were very much alike in size, feature, voice and manner—everything indeed, and the only persons who could always tell which was Tom and which was I were the twins themselves. We did not join the same branch of the army, Tom enlisting in the cavalry while I joined the Secret Service.

After the investment of Vicksburg, and when the Union forces were each day digging nearer the city, I was sent to make an inspection of the Confederate fortifications.

I succeeded in passing theConfederate lines and entered the city of Vicksburg, where, dressed in civilians clothes, I was reasonably free from suspicion. But it took me a full day before I secured the desired knowledge and started back toward the Union lines under cover of darkness.

I passed the guards safely, and was perhaps the third of the way to camp, when I heard a sharp "Halt! who goes there?" accompanied by the click of cocking weapons.

Escape was out of the question, and a moment later I was a prisoner.

"Which camp do you belong to?" queried the leader of the men who had captured me.

"Neither," I answered, "but I am staying at Vicksburg."

"How came you so far from the lines to-night?"

"I was just wandering around and thought I would go until I reached the outer line of guards," I answered.

"This is very strange—if true," said my questioner, turning to his comrades; "but probably it is all a lie." Then to me, "We'll just take you into camp and sift that yarn of yours."

The yarn sifted so poorly that I was convicted as a spy and sentenced to death.

On the day after my conviction some young ladies of the city visited the prison where the Yankees were confined, some to see the strange animals of the north, who, they believed had "horns and hoofs like an elephant," as one of the young women expressed it; others to leave flowers or fruit for the unhappy prisoners. The number of the latter class was small.

As a condemned spy I was an object of especial hatred or commiseration, according to the feelings of the fair visitors.

"Is he really a spy?" asked one young girl of gushing class and age.

"Yes," answered the guard, "he is a genuine Yankee spy."

"Oh, isn't it awful?" said the girl. "How can you tell He doesn't look like a spy, and if you hadn't told me I should say he was real nice."

"You can't tell anything by looks," replied the guard. "Some of the brightest and handsomest men in the service are spies. This 'un looks well enough but he is a sneaking spy, just the same.'

"How strange! And what do these dreadful spies do? What did this one do?"

"He came to look over our fortifications, so he could tell the Yanks where it would be easiest to break through them and capture the city."

"Oh, dear! you don't think the Yankees will capture Vicksburg do you? If they should, they would kill us all, wouldn't they? Oh, how dreadfully awful it would be!"

"I don't think they will ever take the city; it is too well fortified and too strongly defended."

My attention was soon attracted to three young ladies who were distributing handsome little bouquets to some of the prisoners whom they appeared to know, and I was surprised to see the horrified stare which followed the younger girl's first glance at me. She looked a second time, searchingly, her face pale and startled, then turned away with her companions.

The next day she came back again bringing flowers, and I had a chance to watch her for some moments. She brought me a small bouquet, and when handing it to me accompanied it by a glance apparently full of meaning and yet utterly bewildering and untranslatable.

"Surely," I thought, "I have never seen her before. Not a look, or question, or movement is familiar. And yet she appears to recognize me." The more I thought on the subject the deeper and blinder was my mystification, the more surprising the action of my beautiful friend.

I watched my charming mystery-builder until she left the prison, then turned to the bouquet she had given me. I gave it a close examination. Hidden among the leaves of one of the flowers was a very small note, the paper being almost as delicate as the tissues of the flower leaves. The note said.

"DEAR TOM—I was so startled and horror struck to see you yesterday that I almost betrayed the fact that I recognized you. Fortunately I did not, and now I will try and help you. Examine carefully everything I bring; it may have something useful. Agnes is already almost ill, and I have not dared to tell her. MABEL."

Evidently the young lady thought I was somebody else.

A guard came to my cell after she left and said:

"I saw you were one of the favored ones to-day."

"Yes," I replied, "who is the lady?"

"Miss Murfree—Mabel Murfree."

"Her home is in Vicksburg, I presume?"

"No, Judge Murfree, her father, lived outside, and his plantation was for several weeks in possession of the Yankees. Finally he came here to be in a safe place, and brought his daughters along."

The next day Miss Murfree came again, and when she reached my cell she handed me another bouquet.

I waited until I was free from observation, then examined my bouquet. In the hollow stalks of the flowers was a very small file, a slender but strong steel bar with sharp point, and a little platinum bottle of hydrofluoric acid. The flowers had been carefully sealed up at the bottom to prevent their contents from falling out. Besides the tools for escape was this note:

"DEAR TOM—To-morrow I will try and find out the password from a young officer who visits us. MABEL."

I awaited the result of her effort with painful interest, and when she came the following day and gave me the usual bouquet, I found the following note:

"MY DEAR TOM—The password to-night is 'Cartridge.' If you get out, go to the corner this side of the flag-staff, which you can see from your window, and give a low whistle. A colored man will come from the basement of the tall building on the right and address you as 'Massa Tom.' Follow him and I think you will be safe. May God help you to escape! MABEL."

The night proved an auspicious one for my purpose. It was very dark, and a heavy thunderstorm shook the old jail, so that no amount of filing or prying could be heard. With the acid and the tools I made short work of the bars across my window, and of the irons which fettered my limbs.

I squeezed through the window and dropped to the ground.

I had not gone far when a guard called out sharply, "Halt! Who goes there?"

"A friend," I answered.

"Give the countersign!"

"Cartridge."

"Pass on!"

On reaching the corner, I whistled softly, and in answer a negro came up and said, interrogatively, "Massa Tom?"

"Yes," I replied.

He threw a long cloak over my shoulders, and started up the street at a sharp gait. I followed him perhaps half a mile, when he stopped before a plain brick house, unlocked the door and bade me enter. I had scarcely glanced around the dimly lighted hall before the mysterious "Mabel," accompanied by a young lady taller and darker than herself, hurriedly entered from an adjoining room. They had evidently been waiting for me.

I only heard my benefactress say, "Oh, Tom, thank heaven!" before her companion, with a wholly glad and half hysterical cry, threw her arms about my neck and showered tears and kisses upon me in most embarrassing profusion.

I was utterly dumfounded. Finally, collecting my thoughts, I turned from the excited and half-crying woman I held in my arms to the one I partially knew, and said:

"My dear Miss Murfree, you have saved my life, and I am bound, as an honorable man, to tell you that you have made a strange mistake in thinking you know me!"

"Mistake!" gasped the young lady who had so passionately caressed me. "Mistake! What do you mean? Are you not Tom Atherton?"

"Not quite," I answered; "but if you thought I was he, the mistake is not a very bad one. I am his twin brother Ned."

The surprise and confusion which had overwhelmed me were transferred to the young ladies, and for a moment we all simply stared at each other. Then Mabel laughed and said:

"And so you are that wonderful brother of whom Tom used to tell us."

"Yes, fortunately," I answered.

"And you stood there and let me kiss you without saying a word," Agnes (I found out afterward she was Agnes) said reproachfully.

"You didn't give time to object, even if I had wished to," was my perfectly truthful reply.

"I don't know but that is so," she assented. "But, Mabel, what shall we do with him?"

"I am entirely in your hands and will do whatever you wish," I said. "If my being here will endanger you in any way I will try and get through the lines to-night."

"You will be much safer here," Mabel said. "We owe it to you to do whatever we can for you."

"Owe it to me!" I said, "for what?"

"For your brother's sake. He saved my sister's life and protected our property from destruction and us from insult. He is the best and truest man that ever lived, and we can not do too much for his brother."

I was compelled to keep a dark retreat only a part of the time, and several hours each day were spent with Judge Murfree or his daughters.

Mabel Murfree had saved my life, and the gratitude I felt was perhaps enhanced by the fact that she was a rarely beautiful woman.

After weary weeks of siege, the city was captured, and the soldiers of Grant and Sherman entered it in triumph, and I was free.

When the time came for me to go, having said good-bye to Judge Murfree, I went to the parlor to see Mabel and Agnes, feeling how hard, how very hard it was to say farewell; and when I saw Mabel dressed in pure white, with white flowers in her beautiful hair, her cheeks flushed with excitement, and her deep blue eyes unwontedly bright, the duty was not made any easier.

"Agnes is writing a letter to Tom for you to deliver," she said as I entered the room. "She will be down in a few moments."

"I am quite willing to wait," I replied; "and, indeed, I am sorry that I must go at all. I do not expect to ever again find such friends as I have found here."

"You must thank your brother for them," Mabel answered.

"Miss Murfree, Mabel, you wish to rob your act of saving my life of any personal significance; you do not want me to be misled by the gift of my poor life to ask for that which can make it valuable. I refuse to be warned. I love you, Mabel—love you madly, hopelessly—love you as I never thought to love any one; and while I dare not hope that you will return my love, I could not leave you without speaking. Forgive me if I have pained you; but it was impossible for me to go away without telling my love, and you will at least be fortunate in the fact that an opportunity will not soon occur for you to be troubled again by one whose love was stronger than his fear of offending."

Tears trickled through the long dark lashes, then, half-smiling through her tears, she lifted her brave, clear eyes to mine and said:

"And what if I insist on your remaining to repeat your offense!"—H. F. Marsh, in Once a Week.

San Francisco Fashion Letter.

[Written for the RURAL PRESS by MARIE EVELYN.]

SAN FRANCISCO, Feb. 20th, 1892.

DEAR DAISY:—A cynical French writer has observed that there is something not absolutely displeasing to us in the misfortunes even of our friends. Without going so far as this, we must own to a feeling of complacent satisfaction on hearing from Paris that they are still complaining bitterly of the severe weather, still devising winter dresses and fur lined wraps; while here the tokens of spring greet us at every step. The store windows are full of spring goods; violets are being sold at all the street corners and in every milliner's store, only the milliners have introduced purple varieties unknown to the horticulturist, particularly in the cheaper kinds which many people patronize, in order to afford to discard them at the end of a month.

By all means be in fashion with us here, and wear a bunch of violets, but let it be in a hat containing neither fur nor feathers, for although many people are now combining the spoils both of the animal and vegetable kingdoms on one piece of headgear, it is not considered good taste to mix flowers and feathers. Some of the new spring bonnets are charming, though so small and transparent as to be a covering to the head in name only. Hats on the contrary, are worn very large.

Many of the new bonnets are composed entirely of flowers, others of jet, or of lace and jet trimmed with colored bows or sprays of flowers.

As for the crowns, they are often to small to fit a good sized doll, and make no pretence to going onto the head, the brims, small as they are, being ridiculously large in comparison. Most bonnets have narrow velvet strings, crossed at the back in a variety of ways, and as this draws attention to the back of the head, the hair is dressed in elaborate little rolls and puffs, coiled in braids, or else crimped and arranged in a knot ornamented with a dagger or some fancy pins.

The long clinging skirts, that look so graceful, prove very expensive wear, as they fray out rapidly and gather up mud and dust. To obviate these disadvantages, most of the dry goods stores are now selling a rubber lining, about an inch and a half deep, edged with velvet of shades to match almost any dress. Sown inside the hem of the skirt this lining is a great protection and when worn out can easily be renewed, as it is very cheap.

Cloth skirts are made without any foundation, and are lined throughout with thin silk or muslin. A French correspondent tells us that for cloth-made garments the ultra fashionable color is green. In fact green is the color of the season for anything made of cloth.

Costume dresses are certainly the most in vogue for street wear, particularly with a surah silk vest of the same color or one that harmonizes well. This is a description of one gown. Soft dove colored cloth, with a long clinging skirt, trimmed with three bands of silk to match. A long coat of dove colored cloth, open at the front, shows a vest of olive green surah, drawn in at the waist by a ribbon of the same color. The bonnet is of jet, trimmed with three bands of olive green velvet, a black aigrette and black velvet strings, the gloves of dove-colored undressed kid.

Some of the new spring goods are extremely pretty and delicate, particularly those in challies and in surah silk. Flower patterns upon a black or neutral ground are extensively shown, so if you have any old-fashioned flowered silks, of your mothers or your grandmothers that went out of fashion years ago, this is the time to have them made over.

MRS. ANNIE BAXTER was some months ago elected County Clerk of Jasper Co., Mo., by a large majority. The defeated candidate, Julius C. Fischer, contested the election, claiming that women are not eligible. The Circuit Court at Springfield, Mo., on Jan. 27th decided in favor of Mrs. Baxter, and condemned Fischer to pay the costs of the contest. Mrs. Baxter is very popular in the county, and the case has excited much comment.

The Eldest Sister.

How much the world owes to the oldest sister in the home, writes T. De Witt Talmage in his department in the *Ladies' Home Journal*. Born while yet the family was in limited circumstances, she had to hold and take care of younger brothers. And if there is anything that excites my sympathy it is a little girl carrying round a great heavy child, and getting her ears boxed because she cannot keep him quiet. By the time she gets to young womanhood she is pale and worn out, and her attractiveness has been sacrificed on the altar of sisterly fidelity, and she is consigned to celibacy, and society calls her by an ungallant name, but in Heaven they call her Mariam. In most families the two most undesirable places in the record of births are the first and the last, the first because she is worn out with the cares of a home that cannot afford to hire help, and the last because she is spoiled as a pet. Among the grandest equipages that sweep through the streets of Heaven will be those occupied by sisters who sacrificed themselves for brothers. They will have the finest of Apocalyptic white horses, and many who on earth looked down upon them will have to turn out to let them pass. And this leads me to the thought: Let sisters not begrudge the time and care bestowed on a brother. It is hard to believe that any boy you know so well as you do your own brother can ever turn out anything very useful. Well, he may not be a Moses. There is only one of that kind needed for six thousand years. But I tell you what your brother will be—either a blessing or a curse to society, and a candidate for happiness or wretchedness. He will, like Moses, have the choice between rubies and living coals, and your influence will have much to do with his decision.

What Gain?—Lilian Whiting, in the Boston *Budget*, commenting on the assertion that the woman suffrage movement has made no gain, says: "Compare the status of woman in the closing decade of the 19th century with that of its early half! Colleges are built for her; the higher education beckons and entreats her to enter into its golden land; occupations are open to her; the arts and sciences and professions are as hospitable to her as to men. She has even outlived the pioneer days when she was pointed at as eccentric if she chanced to prefer independent self-support to being a burden on others, or being driven into a *marriage de convenance*. It is now as honorable—as womanly, even—to be a doctor as to be a drudge, to be a scientist as a seamstress. The world is before her where to choose; and all this, whose summary would require pages, may be condensed into the terse little phrase of achieving individuality. And this is the present gain which woman suffragists may claim—the gain of having educated and elevated and exalted womanhood."

Miss Amelia B Edwards, the Egyptologist, has been accorded a pension on the civil service list of the British Government, "in consideration of her services to literature and archæology." This honor comes at a most opportune time, for Miss Edwards is still confined to a sick bed, having never entirely recovered from the accident which befell her towards the end of her lecturing tour in this country nearly two years ago.

Young Folks' Column.

The Boy's Stratagem.

[Written for the Rural Press by Minnie W. Edwards.]

Concluded from last week.

"Not the least bit, truly Mrs. Norton, but maybe we'll not be in till late," and Ross was off before his words were fairly heard.

With nightfall came rolling in from the sea, a dense fog, such as often comes in summer in California, all over the country around the Norton's ranch, which was about fifteen miles from the ocean, and the wind howled dismally 'round the old barn, shaking its loose irons, and the fog gathered on the roof and trees and dripped, dripped down in a lonesome, dreary fashion, while in the barn could be heard only an occasional movement of the two horses which the boys had tied in their stalls as usual.

Out of the mist and gloom,—it seemed about midnight—there slunk noiselessly up to the barn door on the side of the stalls, two hulking figures looking like giants in the fog, their slouch hats drawn down over their eyes, and gently unlatching the door, felt their way in to find the steeds they expected to ride that night.

Where were the boys? Had their courage given out and their valor vanished? It would soon be too late to save the horses.

"It's a durned quare schmell here anyway," said the Irishman, as he groped around to untie the halter rope. "Dot's so," echoed Dutchy, who acquiesced in everything, even to committing a crime, and he would have thought it still queerer had he lifted his head and seen the ghastly looking object that sat on each horse, with its left legs resting on the horses' necks, so as not to be touched by the would-be thieves, who each one led a horse out, and no sooner were they outside than a large, cold, wet hand was gently drawn 'round the cheeks and necks of the two tramps by the boys (who as you may have surmised, were the ghastly looking objects that now straddled each horse), and as that caused the thieves to look up with a cry, of fright, they beheld terrible looking creatures with bright glowing horns, glistening ribs and gleaming eyes, that stared and glared at the two rascals till they were almost unable to move, and Jim forgot about the strength of his boasted "foine phist," and rolled on the ground in an agony of fear, while Dutchy was flat on his face muttering, "Himmel, himmel!" as the nearest approach to a prayer he could remember. Each boy now prodded up his particular tramp with a pitchfork they'd provided themselves with, so that Jim and Dutchy were soon rolling, stumbling and endeavoring to escape their foes; bumping into trees, falling over stones and piles of boards, crying, "Holy Moses," and "Dunder unt blitzen," till the boys were choking to laugh, while urging the horses on and using their weapons at every opportunity. They were now out in the grove, and the dogs having joined in the fray, the confused tramps felt they were chased by numberless demons, and soon were over the fence into the county road, but as the boys had left the gate open purposely they were able to follow them up the road, prodding them when within reach; each punch of the pitchfork bringing forth a terrified howl.

When the first crossroad was reached, however, the boys slackened speed, and then with a dash turned up it and were on the way to the rear road of the ranch, while the tramps did not dare to look behind for some time after the prodding had ceased, and when they did, were positive they saw their bony enemies vanish in the fog, and so ran another half-mile to get well away, their superstitious fears and guilty consciences urging them, when, thoroughly exhausted, they sank down under shelter of a fence, with frightened eyes staring fixedly down the road. Finally Jim whispered, "Did ye moind thim horns," at which Dutchy howled more like a puppy than anything else, "and thim eyes" (another howl), "and did ye say the ribs of 'em and the strake o' fire that was behoind 'em, and did ye fale the ridhot irons they stuck into us." "Ow, wooh, wooh!" a smothered howl from Dutchy, "und dot colt hant, oh himmel!" "Bedad, that was enuff to freeze yer marrer," and so the tramps whispered, enlarging on their experiences till sleep overcame their flight, and they slept to awake the next morning sore and stiff with cold and the race they had had "wid the auld one himself."

Meanwhile, the boys had returned to the barn, rubbed the horses down and fed them an extra allowance of grain, and shedding their ghostly rags and donning their clothes, made their way to the house and found Mrs. Norton waiting for them at the door, wondering at their absence and at the noise in the barnyard. No sooner had the boys reached her, than she exclaimed, "What is this frightful odor, and what have you been doing?" and though both Phil and Ross had determined not to relate their adventure till the next morning, for fear of causing Mrs. Norton a sleepless night, they could not resist the temptation, and between horses, tramps, pitchforks, barn-sheets and confused words, breathlessly uttered by both boys at once, it was some time before Mrs. Norton could make head or tail of their story. "And we put the pillow-cases over our heads and tied the corners up like horns and rubbed them with phosphorous from one, and made holes for our eyes, and false eyes above in phosphorous from the other, and streaked our underclothes with it, too, to look like bones, and we each had one of father's old working gloves on, well soaked in cold water, and ho, ho! ha, ha!"—and the boys had to stop, and nearly doubled up with laughter at the fright of the two tramps, and their grand success at playing ghosts.

"Here's all that is left of the sheet. We tore it in pieces smeared more phosphorous on them, of course, and we tied a piece around our necks so it flew out behind us when we rode; and I don't wonder one bit the tramps were frightened, just too, when they thought they were having everything their own way, and could simply walk off with the horses."

"You must have been terrifying-looking objects," said Mrs. Norton, "especially to those scamps, and I think the sight must have been worth seeing, though I'm just as well pleased I knew nothing of it; but while I wondered at the noise continuing, I thought you must be romping with the dogs, and had a good scolding ready for you when you should come in for staying out so long such a cold, foggy night as this is!"

"Well, I guess you won't scold us now, will you, little mother, for you see you were well taken care of to-night? But my! I'd have felt terribly to have had father come back and have found those horses stolen!"

"How did you come to think of rescuing them in such a way?" asked Mrs. Norton.

"Well," said Ross, "Phil thought up some, and then I suggested some things; but I think the Dutchman's talk about the ghost put the idea in both our heads. Just for a moment, though, while the men were fumbling at the door, I did feel somewhat frightened; didn't you, Phil?"

"Yes," acknowledged Phillip, "I did feel shaky; but so soon as they were inside, and the fun commenced, I was too excited to think about being afraid. But the smell was so like garlic and so horrid it made the horses uneasy, and we both concluded *we* didn't care about going to that 'lake of fire and brimstone.'. We were all settled on the horses some time, of course, before the tramps came, so we had a good dose of it, and were glad enough to get out in the air again!"

"But oh, my dear boys, you have run such a risk! Suppose they'd been armed! And don't you know that phosphorous is very dangerous, though of course the ordinary phosphorous sold has to be adulterated? Still, it is dangerous to play with, and you might have set the hay on fire!"

"We were real careful, though, mother, for I knew it was risky; but we were so anxious to get ahead of those wretches. And as to their having pistols or anything, I knew that sort didn't keep anything they could sell for whisky. Besides, we were armed and had the advantage of being mounted," and Phillip went to hang the ghostly rags out in the air, for as Mrs. Norton said, they savoured too much of the geysers to be pleasant.

"And you were prancing around in your underclothes!" suddenly exclaimed Mrs. Norton. "Goodness! I have been so upset myself, I just realized it. And now, there's plenty of hot water, so take baths, and I will get you clean clothes, for I'm dreadfully afraid you'll both have severe colds, and I feel too proud of you both to allow that, even after such an escapade."

And when the boys were refreshed from their baths, they found a delicious hot lemonade awaiting them; and as Mrs. Norton hovered over them, attending to their comfort, they talked over their impromptu "surprise party," and felt quite like heroes.

The next day when Mr. Norton returned from the redwoods, he commended the boys so heartily, and was so proud of their well-laid plan, that they were both quite elated, and had a "surprise party" of a pleasant nature given them, when Mr. Norton presented them each with a fine bicycle, thus showing a practical appreciation of their wit in outwitting the tramps by the success of their well-planned scheme.

Domestic Economy.

Tough Meats.

[Written for the Rural Press by Mrs. M. B. P.]

[*Concluded from last week.*]

Beef a la Champignone.—Take a piece of beef weighing about five pounds and fry it quickly, turning it that all sides may be browned. Take it up and put it in a kettle, dredging it with salt, pepper, a teaspoonful of ground mace and half a teaspoonful each of cloves and cinnamon. Cover the meat with cold water and stew slowly, keeping it closely covered for three hours; then add a third of a cup of mushroom catsup and simmer half an hour longer.

Stuffed Beef.—Take a round steak. Mix together one-quarter of a teaspoonful of pepper, one-quarter of a teaspoonful of nutmeg, one-half teaspoonful of allspice, one teaspoonful of salt, one-quarter of a teaspoonful of cloves, one tablespoonful of minced parsley, one cup of bread crumbs and one tablespoonful of melted butter. Spread this mixture over the meat, roll and tie with twine. Put it in a saucepan and cover with the following gravy: Put a tablespoonful of butter in a pan. When brown, add a tablespoonful of flour and stir until smooth, then add one quart of stock. When it boils, add one tablespoonful of tomato catsup, one tablespoonful of mushroom catsup, one tablespoonful of Worcestershire sauce, one onion minced and one bay leaf. Pour over the meat and simmer gently three hours. Take out the meat, put it in a pan with a little of the gravy and brown in the oven.

Rolled Beef.—Take a round steak and spread over it one-half cup of finely chopped ham, mixed with one egg, a dash of cayenne and a tablespoonful of parsley. Roll the steak and tie with twine. Roll it in flour. Have some hot fat in a frying pan, put in the steak and brown it on all sides. Put it in a saucepan. To the fat in the frying pan add two tablespoonfuls of flour and one pint of hot water or stock. Stir until it boils. Pour this gravy over the rolled steak. Add a small onion, a sprig of parsley and a bay leaf. Cook gently for two hours.

Beef Braise.—Take a five-pound piece of rump of beef. Dredge on all sides with salt, pepper and flour. Have some hot fat in a frying pan. Put in the beef and turn frequently that all sides may brown. Take it out and put it in the braising pan, with two thin slices of bacon under it and a slice on top. Put in the pan with it a large onion sliced, a sliced carrot, six whole peppers, four cloves, a pinch of thyme and a cup of stewed tomatoes. Add a pint and a half of hot water or stock, cover and simmer for three hours, turning it several times. This is very nice, served surrounded by a macedoine of vegetables.

Chopped Beef.—Take a pound of coarse, uncooked beef, chop it fine. Put one tablespoonful of butter in a frying pan, and when hot, add a small onion minced, and cook until a light brown. Then add the meat and a tablespoonful of chopped parsley, some salt and pepper. Cook about five minutes, stirring constantly. Add half a cupful of hot water or stock, or if you have any gravy use it. Cook about ten minutes on the back part of the stove.

Veal a la Jardiniere.—Lay a scrag of veal in a pot. Over it lay a sliced turnip, a sliced onion and two tomatoes, quartered. Sprinkle with salt and pepper. Add a cup of water or stock, cover and simmer gently one hour. Then turn the meat and simmer another hour. Serve on a hot dish.

Ragout of Veal.—A piece of the breast is very good for this. Roll it in a neat shape and tie it. Dredge with salt, pepper and flour. Lay in a stew pan and just cover with stock. Season with a small blade of mace, a sprig or two of dried herbs and the rind of a lemon. Simmer gently about three hours. Take up the meat, strain the gravy, return to the pan and thicken with a little flour. Let it boil up, then serve poured over the meat or in a gravy tureen, as preferred. Vegetables may be stewed with the meat, if desired.

Veal Cakes.—Take two pounds of veal and chop very fine. Add to it one-half cup of crumbs, one-fourth of a teaspoonful each of sage, summer savory, sweet marjoram and thyme, add half a teaspoonful of pepper and a generous teaspoonful of salt, half a cupful of stock, two eggs, well beaten, and three tablespoonfuls of butter. Mix these ingredients thoroughly and divide into ten parts, which form into oblong cakes. Beat an egg, and after dipping the cakes in the egg, roll them in half a cupful of crumbs. Place the cakes in a baking pan. Put two tablespoonfuls of butter in a frying pan, and when it begins to brown, add a heaping tablespoonful of flour and stir until dark brown. Now add a cup and a half of stock. Boil up and season with a scant teaspoonful of salt. Put the pan of cakes into the oven and cook half an hour. At the end of the first ten minutes, baste with the sauce and baste every five minutes afterward. Arrange the cakes on a warm dish. Scrape all the gravy from the baking pan into the sauce. Let it boil up once and pour over the cakes.

Veal a la Creole.—Take a rough piece of veal. Dredge lightly with salt, pepper and flour. Lay in a stew pan the bone side down. Just cover with rich stock. Add a sliced onion and three tomatoes sliced. Cook slowly for three hours, turning several times. The last time, lay the meat side down. Cook until the meat browns and the gravy is a thick brown glaze. At this stage, it must be carefully watched or it will burn.

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ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 5, 1892.

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BUSINESS ANNOUNCEMENTS.

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☞ *See Advertising Columns.*

The Week.

This week the RURAL dons a light mohair duster and goes south to attend the Southern Citrus fair in Los Angeles. Readers who receive their papers a little ahead of time this week, and clad in its gray traveling garb may at first not recognize an old friend, but look inside, and no doubt will remain—the heart is the same whate'er the garb and the season. We trust to greet at Los Angeles a host of old friends with whom we enjoyed the citrus fairs of the last decade; also a host of new friends whom the grand growth of the South has brought within our circle.

Now that California is advancing so rapidly; now that the old plains and mesas are becoming almost obscured by an overgrowth of orchards, vineyards, and flourishing towns, memories of the past are becoming more and more precious. But happy is the one who knows the past without overpraise, and the present without disparagement. The West seems to give even to its oldest votaries a renewing youth which keeps them infused with the spirit of the progress until the end. In their love and loyalty to the State of their adoption, they sing as Tristam sang to Isolt: "new life, new love to meet the newer day."

California Citrus Fairs.

We believe that the citrus fair is a California invention. There were no doubt very fine displays of fruits from trees of the citrus family long before California achieved a reputation for Hesperidian apples, but special fairs for this line of production, in the manner and for the purposes which have characterized them, originated in Southern California about twelve years ago.

The first exhibitions did not, of course, present much more than a promise of the extent and elaboration which have since been attained, but no one who participated in them can ever forget the spirit which marked them or the indescribable interest which they awakened. They were revelations not alone to the sojourner who visited them, but to those who actually participated in the displays. The growth of citrus fruits as an industry, inviting considerable investment of effort and capital, had but just been entered upon. There were such fruits produced, in respectable quantities for the period, in mission and pioneer orchards, but in the oldest of those colonies which have now become rich and famous through citrus products, only the very few first-planted trees had begun bearing fruit. The majority of the orchard owners at the fairs had as yet not plucked a single orange from a tree of their own, and had never seen a collective display of citrus fruits. Their hopes, expectations and money were all in the business, but they had never seen collections larger than those of the fruitstands in city markets. It is easy then to imagine how they were entranced by the result of their own efforts to secure such displays as the first citrus fairs brought to light. With what pleasure they contemplated what then seemed vast expanses of gold and green; with what interest they studied the varieties shown, and with what enthusiasm they listened to recitals of production and profits. The nuggets of '49 found not brighter nor more longing eyes than the globes of thirty years later.

Thus it appears that the educational value of the citrus fair was clearly recognized and was the moving force in the earliest exhibitions. Local emulation was also a factor then as it has been ever since, but the feeling was milder and better humored than it has been on some later occasions. The boom years at the south and the consequent intense local rivalry made it for a time apparently impossible to hold general citrus fairs, but very fine local shows inflamed local pride and entranced visitors. The educational features, though ever existing, were subjugated to local glorification and property interests. Nor were these characteristics lessened, but were rather heightened by the uprising of citrus exhibitions in the upper half of the State. Under the forcing heat of these contending interests, California citrus fairs became horticultural tournaments, and were almost wholly given over to means and methods which were thought best calculated to attract and enchain the public interest. Horticulture as an art was almost forgotten; horticulture as a favorite of mammon was bedecked and bedizzened and decorated to catch all, for devotees, who had gold in their hands. But, fortunately, there could not be much progress in pursuit of wealth in the line of citrus production without knowledge, and though the fairs were less contrived to teach, they indirectly increased the general information on the industries which had to deal with evergreen fruit trees, and thus discharged an honorable mission.

It was but natural, perhaps, that the feverish impulse to attract the eye and grasp the purse should carry our citrus fairs not alone into an excess of decorative features, but into a strained and grotesque style of decoration which has offended good taste and has crushed art beneath the heel of artisanship. The most fearful and wonderful contrivances which could be given a shell of impaled fruit or could be covered, by aid of nail and glue and twine, with anything which existed on the face of the earth, have been allowed to replace natural and tasteful arrangements of fruits and flowers and foliage. The admirable has been sacrificed to secure the spectacular.

Fortunately, there is indication that this era of the citrus fair is near its close, and that in the future there will be a return to the truer ideas which actuated those who called such exhibitions into existence and were delighted and educated by them. As we have made most notable progress in citrus production, as we have tens of thousands invested where there were but hundreds, and more varieties to discriminate between than there were once individual growers to exercise discrimination, it is imperative now that our citrus fairs should move upon a higher plane and should be conducted upon the highest lines known to those who are experts in industrial exhibitions. The booms are, we hope, all over; the claims of localities, so far as they can be made known by dissolving views, are recognized. What we need now is the closest study of the arts of production and marketing and the means and materials with which these arts have to deal. As the fairs are now provided with State money, there is perhaps the greater reason why the true and high interests of the commonwealth in this direction should be studied by the managers of citrus exhibitions. Let us then see to it that in the future the fairs shall determine which are the best fruits, what climates, soils and methods best produce them, and in what way they can be best brought to those whom they are to nourish and invigorate. And while all these invaluable considerations are pursued, let the splendid display educate the people in the recognition and appreciation of the beautiful in art. We are glad to see that the forecasts of this week's fair at Los Angeles promise something in the directions noted.

There is another and a special reason why California citrus fruit producers should learn as much as possible from the fairs of this and next winter. The World's Fair at Chicago will give the citrus interests of this country, and perhaps of the world, a more close and careful scrutiny than these interests have ever before experienced. Boom displays will not win there. There must be the most discriminating selection of material and the most effective arrangement of it. All that we can learn by experience in this direction will be to our advantage in the contests which are coming. It is also important that the best methods of judging citrus fruits should be practically demonstrated. Valuable work has already been done in this direction by Californians, and will be continued this week at Los Angeles. It is to be hoped that there may be representative Floridians present who can participate in the trial of the California plan. There should certainly be, next winter, or sooner if practicable, an attempt made to agree upon the points which are now at issue between the chief orange-growing States. It is in the adjustment of all such matters, and in the incidental advance in knowledge, which we can all gain by participation in their adjustment, that our citrus fairs, properly conducted, will prove a potent factor in our progress in the art and science of horticulture.

IRRIGATION EMULATION.—It seems from current items that there is so much enterprise and so much water in Kern county that rival water-kings are striving for land to pour them upon. It is said that Haggin & Carr, who own 400,000 acres of land and claim the majority of the water in Kern county, have consented to permit a branch to be constructed from the Kern Island Canal, which will irrigate about 50,000 acres of land next to Bakersfield that has heretofore been held as a desert. They have evidently been stimulated to this by the energy of the officers of the Kern River Canyon Water Company and the Doherty or Baldwin people, who are about to construct their irrigation scheme that will irrigate the noted wood patch country and would cover both systems. Here they are then fairly pouring water on top of each other. This ought to make the desert blossom, surely.

THE CONDITION OF AGRICULTURE.—So we are to have our agricultural condition inquired into! The U. S. Senate is likely to authorize its Committee on Agriculture to make general investigation for the purpose of ascertaining the present condition of agriculture in the United States. This is an eminently respectable thing to do. The English parliament did it a few years ago, and if our memory serves us correctly, the royal commission advised the farmers, in view of the vast imports of American beef, to give greater attention to the home production of plum jam and nosegays, for in those lines there was a long-felt want of supplies. We wonder if our Senate can make such a fragrant and deliciously practical report. We shall see.

PRODUCTION OF FLAX.—The Superintendent of the Census has sent to the press a bulletin on flax productions. It shows the total area of land devoted to its cultivation in the United States in 1889 to have been 1,318,698 acres; production of flaxseed, 10,250,410 bushels; production of fiber, 241,389 pounds; the amount of flax straw sold or so utilized as to have a determined value was 207,757 tons, and the total value of all flax products, $10,436,228. Although flaxseed is reported from 31 States, Minnesota, South Dakota, Iowa and Nebraska produced 80.06 per cent of the total amount.

A SQUARE MILE OF LEMONS.—One of the big things in the air, with reference to citrus fruits, is the report which comes from San Diego that John S. Hill of East St. Louis has purchased 640 acres of land near Oceanside on the Escondido branch of the Santa Fe road, and proposes to plant the largest lemon orchard in the United States. Nearly all the 640 acres will be planted to lemons. Present estimates show that the planting of orange and lemon trees this season will be the greatest ever done in San Diego Co.

LABOR DAY.—Governor Markham has informed the Committee of the Sacramento Federation of Labor that he had decided to declare Labor Day, the first Monday in September, a legal holiday.

The State Press.

San Benito *Advance:* "The recent Legislature adjourned with a notorious bad record. As a political body, it was rotten to the core. The single redeeming feature about the "Legislature of a thousand scandals" was its adoption of the Australian ballot system."

Santa Rosa *Republican:* "Many of our best timber lands are the property of the railroad companies. In their sale no provision is made for forest protection and in consequence there is a reckless destruction of timber. The title in this property being absolute when it is conveyed to private parties, the State is powerless in its efforts at forest protection."

Sonoma *Democrat:* "Now is the time when an organization can be started at the least outlay of capital. The merchant, producer, capitalist and laborer all have a common interest in promoting it. The merchant spares no pains to secure the trade of the producer, upon whom he depends for the profit of his business, and if he helps the producer he certainly benefits himself."

Gonzales *Tribune:* "As long as the land of this State is owned and controlled by absentee landlords and speculators, its further development will be uphill work. Land monopoly is the greatest evil the people have to contend with, and any remedy which may be proposed as a means of getting rid of this curse of California, should be carefully studied by every good citizen, and, if found to be legal and just, should meet with their hearty approval."

Petaluma *Courier:* "It is easy enough to get appropriations to build costly buildings in San Jose, Stockton, Los Angeles, Oakland and San Francisco. It is no trouble at all to get four or five million dollars to improve San Pedro harbor, but it will be a long time before we can get a million dollars to improve the San Joaquin river. And yet the improvement of the San Joaquin river would be a thousand times more valuable to the entire State than San Pedro harbor."

Porterville *Enterprise:* "A man may buy a load of hay and decamp without the intent of paying for it; a man may buy a beef, eat it, and run away without intent to pay for it; a man may buy a suit of clothes and surreptitiously remove with the intent not to pay therefor, and he cannot be prosecuted under any of the provisions of the penal code. Then why should we favor a hotel man, a lodging-house keeper or a restauranteur more than we do a farmer, a butcher or a clothier? The law is not equitable nor just on that point, as it does not treat all alike and should therefore be repealed."

Experience With the Silo.

Recalling the fact that Mr. E. Meeker the well-known agricultural writer of Puyallup, Washington, two or three years ago made a series of practical trials with the silo, the editor of the RURAL a few days ago asked him to give the results of his experience. In response he writes from Puyallup as follows:

When I sold the dairy and moved from the farm, the inspiration of the agricultural writing left me and my thoughts drifted into other channels.

I thoroughly believe in the silo, but some enthusiastic writers have extolled its virtues too high. Ensilage has its value in accordance with the intrinsic value of the material used. For instance, if you use corn, sown thick and without ears, the feed will be inferior to that better matured, just as the same would be without going into the silo. For milk cows in particular, the same material in ensilage is better, and a given quantity will give better results than the same preserved in the ordinary way.

Your correspondent is right when he says that corn ensilage is best when there are ears on the stalks nearly matured.

I did not cut my ensilage as usually practiced, but stored the crop uncut, just as it came from the field. We took good care to tramp down well on the outer edge next to the wall of the silo. Corn was found to be the best, red clover next, then oats; either of these crops made good ensilage.

I formerly looked upon ensilage as a food that must need be used promptly or else lost. The east barn on "riverside" was burned and what ensilage was left in the large silo destroyed; that left over in the smaller silos at the west barn was not finaly all fed out until the second winter, or rather until the ensilage was over two years old. Some heifers were wintered on this, 13 in number, and came out slick and licking their sides in the spring. The ensilage was *still warm* in the silo, although, as I said before, was still over two years old.

I have no doubt but in a dry climate, the pit silo can be used with success.

Advice as well as Criticism.

ATWATER, Merced Co.

TO THE EDITOR:—I notice an article in your columns from some one in this locality who writes over the *nom de plume* "Wanderer." He severely condemns the manner in which grape vines are pruned here, but he fails to instruct us how it should be done. Now, there is very little comfort in being told that we are on the wrong road when the right road is not shown us.

We have here at our district schoolhouse a lyceum which meets every Saturday evening. Debates, recitations, dialogues and essays are among the order of exercises. There was an article in one of our county papers condemning the manner in which these meetings are conducted and signed "Wanderer," doubtless the same Wanderer. Now, what we wish to say to Mr. Wanderer is this: If you know anything worth telling about pruning vines or running a lyceum, out with it! We have had satisfactory results for our manner of running both these institutions, but if you know of anything better, let us have it. Either offer something better or keep silent.

On the 22d inst. there was probably the largest congregation ever known at our schoolhouse. It was the occasion of the flag-raising. It was certainly a grand occasion, and our children certainly have been inspired with love and respect for the star-spangled banner by the eloquent orations of Hon. J. W. Breckenridge and their teacher, Mr. Rector. W. T. K.

[The point is a good one, and our publication of "Wanderer's" musings was for the purpose of drawing out from him and others a discussion which would show whether ruling practice could be improved or not. Sometimes it takes just such a provocation to draw out the facts. Let them come. ED. PRESS.]

The Mission Fathers.

NORTH TEMESCAL, Feb. 20, 1892.

TO THE EDITOR:—The old Catholic missionary padres, who so successfully undertook to christianize the Indians of this coast, were not mercenary, and yet, in the RURAL of this date, you convey the impression that they were, by stating in your notice of the "California Building at Chicago," "their (the padres) idea was to convert the Indians and incidentally take possession of their horses and lands."

Now this would make the priests no better than robbers, yea, even worse, for it would be using the sacred circle of Rome to help them in their iniquity. But the facts prove far the opposite. They were not mercenary, as I stated at the beginning. They were a body of men, as are all Catholic missionaries (and I am charitable to believe all other missionaries without regard to creed), who left home and fatherland to comply with that command of Christ saying "Go teach all nations." They went among the Digger Indians of this State, as they had gone among the more savage ones of the Southern States, as well as the Northern States and Canada, with no other weapons than the Scriptures in one hand and the cross (the symbol of Christianity) in the other. It was with peace on earth, good-will toward men," that they wished to win the savage to a better, a higher life. No matter whether it was the Franciscan friar, the Jesuit scholar, or a priest of any other missionary order of the Roman Catholic Church, the same means were used, the same gospel was preached, the same results accomplished—and all without cheating the poor Indian or teaching him how to drink firewater, as our Government agents have too often done, and, I may truly say, without shedding one drop of the Indian's blood.

Precious few, if any, were the horses the Californian Indians had when the padres set foot at any of the places which they chose to establish as missions. In reading the history of these missions, we find that the live stock of each new mission was brought from some of the missions, those nearest to the new one being usually the contributors, and that each one contributed according to its means. So from this it can be seen that the horses belonged to the missions and not to the Indians, therefore they could not be *incidentally* taken away from the Indians. Another thing, horses were not of much account at the missions. Cattle and sheep were the stock desired, and these were raised in great numbers. Their carcasses could be turned into money by being stripped of the wool, tallow or hides, while the horse's carcass was more ornamental than useful.

Nor are you right in saying that the priests were fishing, so to speak, to strip the Indians of their lands. The missionaries, as I have already stated, do not do such things for one reason, and also for the fact that the land was claimed by the Spanish or Mexican Governments, and if the priests wanted the land they would get it from the Government for the asking. They were not so ignorant nor criminal as to steal it from the natives. No, it was reserved for the whites—the Americans, as the Mexicans call them—to do the stealing, for we have seen too forcibly, by the innumerable land litigations in our courts in years now past, how the Spanish or Mexican owners of the land—men who were, in many cases, decendants of the Indians—were deprived of their patrimony by the greed of the people who flocked to this coast shortly before or just after the discovery of gold at Coloma. Yes, the land was unjustly stolen from many of those old families, and too many of them have since died in the poor-house and lay in graves unhallowed and unwept; and they might have died like lords if thieves did not rob them of their lawful rights.

No greed for pelf nor other of this world's goods can be laid at the early missionaries' doors. If they worked to make their missions rich in wealth, it was for the love they bore the poor Indians, whom they were as devoted to as the Indians were devoted to them. It is said that "he who makes two blades of grass grow where but one grew before is a benefactor to the human race," and there is no doubt of this. Then how greatly blessed must have been the missionary fathers, who not only christianized the California Indians, but made them industrious by teaching them to be citizens and agriculturists. They sowed and they reaped and housed their crops. The vine and the fig tree were planted about the mission door; the palm and the olive were planted in the genial soil of the State, and specimens of these trees set out by the padres' hands can be seen from San Diego to Mission San Jose, if not also at Sonoma and Solano, the farthest north the missionaries went. These men were the true fathers of agriculture and horticulture in this State. It was they who gave us the visible marks that ours is a glorious State, and that it was possible to make every inch of it blossom as the rose. It is to these sturdy missionaries that the agriculturists of the State owe much; it is to them that our agricultural press should sound its praise, for, like the press, were not they proclaimers to the world of the richness of our soil and climate, and was not each mission an agricultural college in itself—an experimental station where the cereals and fruits of the world were tested, some of their tests being so successful that to-day we are reaping the benefit of their grand labors.

Therefore I say, all praise to the Californian World's Fair Commission for honoring the padres by choosing a type of their work—their architecture for California's building at the Columbian Exposition. They were not a lazy lot of monks, as carpers and bigots have said. They were wise men and industrious men, and their work in behalf of humanity in this State will live forever, even if their adobe buildings crumble into dust and pass away, as will all things made by the hand of man. W. A. PRYAL.

There was not the slightest intention on the part of the writer in the RURAL, referred to by Mr. Pryal, to belittle the work of the body of religious men who founded the mission of California. Their virtues are recognized by all who have read their history, and it is well known that they were the real pioneers of this country, finding it in a state of barbarism and establishing the first settlements. The RURAL praised the World's Fair Commission for selecting the type of building which is characteristic of the structures built by the priests who first civilized this section. The remark to which Mr. Pryal takes exception, viz., "that the padres came to convert the Indians and incidentally to take possession of their horses and lands," was made in a jocular spirit and with no malicious intent. At the same time it must be confessed that the padres accumulated a great deal of property and the missions became wealthy, so wealthy that the property was finally taken away from them by the Government. All this is a matter of history. In the preface to Mr. Hittell's "Resources of California," he says:

"The Franciscans held that the chief virtues of life were chastity, celibacy, poverty and abject humility, and the chief duties were the frequent recitation of prayers, the mortification of the flesh, the sacrifice of the passions, and the renunciation of all social pleasures and secular interests for the sake of beatitude in a future existence. Twenty-one missions were founded, none more than 30 miles from the ocean; the first most southern at San Diego, in 1769, and most northern at Sonoma, in 1823.

"The missions were in their best condition in 1814 (after which they were injured by the stoppage of pay and other consequences of the Mexican revolution), but they continued to increase in population and property until 1826, when they had 24,611 Indian neophytes, 215,000 head of neat cattle, 135,000 sheep and 16,000 horses, and harvested 75,000 bushels of grain.

"In 1822 the independence of Mexico was formally proclaimed; and in 1777 the first town was established at San Jose by colonists from Sonora. In 1781 the pueblo of Los Angeles was founded by another party. The rancheros and townpeople never agreed very well with the Mission fathers, who became subordinate in influence to the military and civil authorities soon after the Mexican flag was hoisted. The Indians ceased to obey their teachers, neglected their work, and plundered the mission property. In 1835 the missions were secularized, that is, orders were issued that part of the herds and agricultural implements should be distributed among the neophytes and rancheros, and the remainder should be disposed of for the benefit of the public treasury; but most of the property was soon in the possession of the chieftains and their friends. In 1842 only 4500 Indians remained at the missions, some of which had been deserted by the friars."

From this, it will be seen that considerable property had been accumulated by the fathers, and that it was taken from them. The Indians had been compelled to work at the Missions, very naturally, for civilization really means work. It is true, as Mr. Pryal says, that the Mexicans were badly treated by the Americans after the Americans got possession of the country, in the matter of taking their lands; but it seems the Mexicans had done the same thing to their predecessors. Two wrongs do not make a right, of course, but it seems a case of retributive justice in the end.

As to the remark about the fathers stripping the Indians of their lands, it was true the land was claimed by the Spanish Government, but no possession had been taken until the Mission fathers came. Whether the Indians who were born upon it had a better right to the land, is one of those questions which open up so broad an argument that it is useless to discuss it. It is doubtless a fact that the fathers came here to California in a spirit of religious fervor to christianize the Indians, and not with a desire for this world's goods. But it is also a fact that by the labor of these Indian converts and their own, great wealth was created and possessed by the fathers. The Indians themselves do not appear to have gained any until it was finally distributed among them, by being taken from the fathers, by the Mexican authorities.

The Sour Orange as an Avenue Tree.

No tree makes a more beautiful street or avenue tree than does the Florida sour orange. It is of beautiful shape naturally, and is a strong, vigorous grower, much more so than any sweet orange. It is very hardy and long-lived, and will retain its vigor and beauty for from two to four centuries; and the older it gets the more beautiful it becomes. Many shade trees look handsome for a few years, but as they grow older become an eyesore. Not so with this elegant tree. It has a dark, rich, glossy green foilage, and, being an evergreen, retains its beauty the year round. It bears a medium-sized and very handsome orange, which will hang on the tree for eight or ten months of the year; in fact, the tree has oranges on it the year round, and although it may look very tempting, not even "Peck's Bad Boy" would ever try to eat more than one of them, as they are sour, bitter and astringent all at the same time. So there need be no fear of the tree being molested for its fruit.

What a beautiful appearance would our towns and cities present (especially to the eyes of the Eastern visitors) if our sidewalks were lined with these beautiful trees, laden with the handsome, golden fruit! Were the streets of Sacramento thus ornamented, the tourist and capitalist would at once become enchanted and decide to look no further, but to buy him a home and spend his days (and his money) with us; so that the trees would be not only a source of beauty and pleasure, but at the same time a source of profit. They would add millions to the value of our property and would attract people of culture and refinement.

Now, when we can get a tree possessing all these qualities for about the same money that we would pay for an ordinary shade tree, why should we buy the unsightly deciduous tree that in a few years will become a nuisance and have to be removed? There need be no fear of their not succeeding anywhere in our valleys and foothills, as they are perfectly hardy and have been thoroughly tested in nearly all the different kinds of soil and climates that we have, and have invariably proven a success.

There are many beautiful specimens in Sacramento, and we should plant nothing else for street trees. If we would do this we would have the most beautiful city on the coast, and would double our population and wealth in a short time.—Cor. Record Union.

[We wonder why the writer did not include in his list of charms the fragrance of the blossoms. They are more fragrant even than the sweet orange. But, on the other hand, the objection to evergreen trees in shading streets and roadways in the winter, should not be overlooked. On heavy soils in regions of large rainfall, a row of such trees on the south side of an east and west street will keep the roadway wet or muddy all winter. On north and south avenues the trouble is much less.—ED. PRESS.]

Some Suppressed Figures.

Ventura Unit.

When the railroad companies are asked for a trifling reduction of freight rates to enable their best patrons to escape bankruptcy, they plead that not the least reduction can be made without inflicting a loss upon themselves. The falsehood of the assertion is fully exposed by the following statement of the earnings of the S. P. R. R. for 1891, viz.:

During the last twelve months the gross earnings were $50,440,222, exceeding those of 1890 by $2,096,751. The operating expenses were $31,163,769 or $8,666 more than those of the preceding year. This makes the amount of net earnings $19,285,486 or $2,088,085 more than in 1890.

Mr. C. P. Huntington "did not wish these figures published," but they leaked out somehow, and as they correspond substantially with previous statements they are doubtless correct. Nearly 40 per cent of the total income of the S. P. R. R. is net gain, and yet they cannot afford to reduce the freight rate on one product of this county for a period of a few weeks.

CITRUS FRUITS.

The Orange—From Seed to Fruit.

[*Written for the Orange Belt by I. N. Hoag of Redlands.*]

None but seed from natural or seedling fruit should be planted. Such seed has more meat and native vigor and gives greater strength and a better send off to the little tree. In other words it gives the trees a better constitution.

LOCATION AND SOIL.

Select a sheltered locality protected from prevailing winds and cold frosty currents of air for the seed bed. The soil should be a rich sandy loam, of such a consistency that it will not bake or cake after irrigation. If any manure be added it should be leaf mold or old, well rotted stable manure. But if the soil is rich in plant ingredients and does not contain too much clay, better not add any manure. It is better to sprinkle the required manure on the surface of the bed after the trees have made some growth. The soil should be well pulverized at least 12 to 15 inches below the surface. Do not mix the surface soil with that deeper down in the process of pulverizing. Shovel the surface soil off and replace it after the lower soil has been pulverized and leveled. Plant the seed in rows, two inches apart and two inches apart in the rows. Cover them one inch deep with sifted surface soil, and then add about an inch of fine sand or road dust, also sifted. The bed should not be over six feet wide. Enclose it with boards 18 or 20 inches high, or with cloth in place of boards. If cloth is used it should be strong and well tacked to a good frame. Cover with heavy cheese cloth, so arranged as to roll off handily. Your bed is now complete and the exacting care of your infant trees begins. Sprinkle the bed daily, just so much as will keep the soil well moist all through. Keep the cover close to retain a warm moist atmosphere on the bed. In about three or four weeks your little trees will begin to make their appearance, one by one. The stronger seeds come first and keep ahead.

The little trees should have a dark green color from the first. If they have a yellow sickly look, something is wrong. Too much water will give them this appearance. If they keep good color and grow rapidly all is right. If you want to hasten their growth add about one-fourth as much nitrate of soda, or well rotted and pulverized barnyard manure, as you think they can bear and watch the result carefully. Rake the surface of the bed about once a week, keeping the soil soft and pliable. As the cold weather appears in the fall, have the bed uncovered during part of each day, to accustom the trees to outdoor life and prepare them for winter. As cold weather approaches, keep the beds tightly covered nights and cold days, and open, warm, sunshiny days and the trees will grow all winter.

THE NURSERY.

The nursery should also be located in a sheltered place, both from winds and cold frosty currents of air.

The soil should be a rich sandy loam. A fair quantity of old barnyard or sheep manure plowed under, the year before planting, will improve it. Plow deep and pulverize well, but let the last plowing turn the old surface soil on top. Transplant the trees in March or early in April. Set them in rows, four feet apart, and a foot apart in the rows. Make the holes with a large iron dibble and press the soil tightly around the root with the same tool. Conduct water along the rows in shallow trenches as the trees are planted. Let the trenches be on each side the rows, so that the water will settle the soil about the roots, but not touch the stems of the little trees or cover the surface in the rows. After this, water should be applied only by running through deep furrows made midway between the rows by a shovel plow. At each irrigation a small stream should be kept in these furrows till the whole soil is thoroughly saturated. By this method the moisture reaches the roots from below and the surface soil, around the stems and between the trees, remains comparatively dry and hence will not bake or crust. After each irrigation cultivate deep and well, and hoe around the trees, and about a week later follow with a drag or smoothing cultivator, keeping the surface well pulverized as a mulch to prevent evaporation. This mode of irrigation and cultivation sends the roots deep down and secures a strong vigorous growth from the beginning—a habit which the tree will keep up through life and add greatly to its hardiness and value as a fruit producer.

Mere surface irrigation close to the stem of the tree and shallow cultivation induces the starting of mere surface roots, which are in turn destroyed by the cultivator and hoe, and the tree forms a scrubby habit which it will keep up in the orchard, without great care and labor is bestowed and time lost in trying to overcome it.

PRUNING.

As soon as the roots have gained a strong hold of the soil and the stems are throwing out new branches and new shoots are coming up from the roots, the process of pruning should commence. The design of this pruning should be to concentrate all the vigor and growth of the tree into one stem or body and that nothing shall go to waste, and that no time should be lost in getting ready for the bud.

By degrees cut off all limbs or branches lower than about three inches from the ground and keep down all extra suckers starting up from the roots. Rub off all new shoots below this point as soon as they make their appearance.

By judiciously following up the above methods you will have your trees by fall large enough to bud, and the bodies will be smooth and ready for the operator.

BUDDING.

There are differences of opinion as to whether spring or fall budding is best. Either is good enough if successful. My own practice has been to bud two-year-old stock in the spring, and my practice has been followed by very satisfactory success. Those who follow a different mode of irrigation and cultivation and allow the tree to form shrub habits the first year in the nursery, generally bud in the fall after the trees were two years old in the spring. Trees thus treated are ready for transplanting from nursery to orchard when they are four years old from the seed, while mine are ready at three years from the seed and have the advantage of a year in the orchard—their life home, where they are to produce a revenue, or do business for their owner. I believe it is the general opinion of experienced nurseryman and practical fruit growers, that the younger younger a tree reaches its permanent home in the orchard the better. This is certainly the theory and the practice as to all deciduous fruit trees and ornamental trees and shrubs, and why should a different rule be adopted with citrus trees?

AFTER BUDDING.

Whether budded in the fall or spring, and the buds are set and showing unmistakable evidence of growth, the natural top of the tree must be cut off so as to throw the vigor and sap of the roots into the bud. The practice is to cut all the top off about four inches above the bud. After this, keep all suckers and sprouts appearing below or above the bud closely rubbed off before they have attained any size or strength. If more than one shoot starts out from the bud, rub off all but the stronger. Keep this clear of all side shoots or limbs, thus giving this single stem all the force and vigor of the roots. Irrigate and cultivate the same as the preceding season. When the buds are five or six inches long, tie them loosely to the stub to keep them from injury from wind, and to secure an upright and straight shank for the future tree. After the second time of irrigating, subsequent to budding, stake the trees by driving six-foot stakes close to the north side of the tree next the bud, two feet into the ground. Keep the growing bud tied to this stake with common cotton wrapping twine till it reaches the top, or nearly so. At this point, with the thumb and finger, pinch off the tender point. The tree will then begin to throw out side branches. As these start out they should be watched with care and when more than one start from the same point, all but the most vigorous grower should be pinched off. This secures a strong and upright growth to the remaining branch and makes an upright head for the tree, which will add much to its value when set in the orchard, as it will maintain this upright habit, instead of taking the form of a weeping willow. These drooping branches on young orchard trees do no credit to the intelligence or practice of nurserymen, and add greatly to the labor and expense of the owner, besides retarding the proper growth of the tree and putting off the time of its usefulness or profitable bearing.

TRANSPLANTING TO THE ORCHARD.

The matter of planting in orchard, will be deferred till the disputed question as to taking the trees from the nursery is examined. It has been the almost universal practice in this section to "ball" the trees. That is, in removing the soil from the tree preparatory to lifting the same—to hew out of the dry and baked soil, a block or ball immediately about the crown. Then let this stand, dry and harden to prevent cracking or breaking while handling. The size of this ball varies from six to ten inches in diameter, and from one foot to 15 inches in length. When sufficiently baked or dried, the tap root is cut and the tree and ball are removed and placed in a hole prepared for the same in the orchard, generally with the full top. With this mode of handling, the great pains and work to dig a large hole and pulverize the surface soil to refill the hole about the roots is, in a great measure, dispensed with, and the labor of planting greatly reduced. But let us examine the process for a moment and see if the good of the tree is not at the same time largely sacrificed. First let it be stated that if the "ball" were made large enough to preserve intact the roots of the tree, including the tap root, then this would be an excellent practice, but a very expensive and inconvenient one. By reverting to the surface mode of irrigation and cultivation as noted above, it will be seen that the growth of the roots, especially strong, deep-growing roots are not encouraged. Now, by this process of "balling" all these roots are cut back, the side roots to from three to four inches, and the tap root to a foot or 15 inches in length and the stubs subjected to a process of kiln-drying preparatory to removal to the orchard.

Then all rules of setting trees are violated because you have a "ball" to deal with instead of roots, which need careful handling and covering. It is no justification of this mode of handling that few trees die, and that in time the orchards bear fruit. The weak and drooping branches and the two or three years of nursing necessary to give the trees strength to hold up their branches, to say nothing of the fruit they may be allowed to bear, are damaging witnesses against the whole practice.

PUDDLING.

If you have any number of trees to transplant, dig a trench on one side the row of trees, say eight inches from the same, and two feet or more deep, as you find the length of the tap roots. On the other side of the row dig another trench not so deep. Fill both these trenches with water, keeping both full till the soil about the roots has become perfectly saturated, so it can hold no more. Then turn off the supplying water till that in the trenches has settled to leave them about half full. Now place a spade or shovel down into the soil at the bottom of the shallow trench and pry the tree and accompanying soil over into the deep trench. The process, properly executed, places the tree, with all its roots, uninjured at your disposal to lift out.

When lifted out, the roots come up completely covered with mud, and thus wholly protected from the sun and air. In this condition transport them to the orchard, where large holes two or three feet in diameter, and the same depth, have been provided with heaps of surface soil gathered from the adjoining surface ready to fill in. Let one man hold the tree in place by the guide stakes and board and another manipulate the roots, keeping them in abou the same positions they occupied before lifting, while a third carefully places the pulverized surface soil about them. Allowing for settling, the tree should be planted about the same depth as before. The hole should be filled nearly full and the supporting stake put in place to hold the tree in position before the water should be turned on to settle the soil. When well settled, fill the hole up to a level, adjusting to a perpendicular, and the job is completed in a rational manner, and the tree hardly knows it has been transplanted.

THE ORCHARD.

The work of the nurseryman has now been completed, and that of the orchardist is to begin. Under this rational system of growing, pruning and transplanting, scarcely a leaf will wilt or a branch droop, but the orchardist has plenty of careful and exacting work to perform before he can expect returns from his investment and undertaking.

The first thing for him to do is to examine each tree carefully and become acquainted with it in the whole detail of its condition and needs. Cut off every redundant branch or limb and cut back those that are too long and heavy for their size and strength, and all that are growing across other necessary branches. Let all this be done with a general idea of a future upright and symmetrical form of the tree. As each new growth begins during the season, examine each tree carefully, and wherever more than one sprout is starting from the same point, pinch off all but the most vigorous one, and do the same with all that, in your judgment, will weaken or retard the growth of those branches you have selected to make up a good healthy head.

No unnecessary delay must occur between the time of of planting and the first regular irrigation, as a good supply of water at this juncture will greatly assist the roots in getting themselves adjusted to their new location and surroundings. This irrigation, and all in the future, should be through deep furrows midway between the rows of trees—the water not being allowed to cover the soil at the base of the tree. Each irrigation should be thorough, so as to soak the soil deep down, and should be followed by thorough cultivation, and this by a surface stirring of the soil by a smoothing cultivator at intervals of a week or ten days between each irrigation. In the fall of each year, in the orchard, a fair top dressing of stable manure, to preserve the proper mechanical condition of the soil and to strengthen the growth of the tree the following season, will be a good investment.

In the spring of each year the same examination of trees and lopping off redundant branches and suckers should be followed up as directed for the first season, and so at the beginning of each new growth during the summer. Allow no accumulation of branches from the same point at any time, and you will be troubled but very little with drooping branches, and you will have an upright tree, capable of holding up a heavy crop of fruit. If the trees bloom and set some fruit the first year in the orchard, let them mature it, and thus allow them to form habits of usefulness and thrift while young. The third year, under this treatment, you may expect a crop of fruit to pay at least the expenses of the year's cultivation, and the fourth year a good average crop, and from this on a pleasurable and paying business.

Pruning Year-Old Prune Trees.

About this time in the year, or a little later, it becomes necessary to prune our young prune trees. Personally, I advocate cutting to an inside bud, generally. This will make the tree more compact and will make the connection from the bud, so left on the limb cut off, with the leverage in the right way so that when the tree is grown up and bears its large load of fruit, as our prune trees of this Visalia district are apt to do, it can hold its weight of fruit without breaking. In some instances limbs will have a tendency to grow out of a regular and uniform shape, and perhaps, in cases of that kind, it will be advisable to cut to an outside bud. I have found, however, the best plan to adopt with a limb that in your judgment requires spreading, is to cut a short brace from off the thick end of the branch you have just pruned off and insert that brace against the limb you want pushed out and a stouter one on the tree, and thus you can make that particular limb spread itself. In regard to the actual cutting off of the limbs, of how much or how little ought to be done, as every tree grows somewhat different, you should use your judgment and think for yourself what to do with each and every one of your trees. As a general thing, it is advisable to cut last year's growth back to 12 to 18 inches from the fork of your tree. If your trees grow shapely the second year, I do not advise any more pruning of this variety of fruit tree. Of course, if some of the trees are not in shape, it will be necessary to shape them, but only that, and no more cutting than is positively necessary.—C. J. Berry in Tulare Times.

Spice of Life.

—His honor (to vagrant): What is your business? Vagrant: Looking for a job.

—"Baby growing right along?" "O yes; I think he will catch up with his voice in a year or so."

—Mrs. Bunting: I wonder how that poor man feels who lost both his hands to-day? Bunting: I don't suppose he can feel at all.

—A crusty old bachelor, not liking the way his landlady's daughter had of appropriating his hair oil, filled his bottle with liquid glue the day before the ball to which the girl was invited. She stayed at home.

—"I never withhold anything from my wife. I tell her every night all that I have done during the day." "And do you tell her every day what you have done during the night?" "Well, that's different."

—Photographer: But why do you wish to be taken with your watch in one hand and your pocket-book in the other? Mr. Bascom: I'm a-goin' to send this picter to my wife, young man. When I left home, she said she'd bet I'd be buncoed out o' everythin' I had before I'd be'n in the city two hours.

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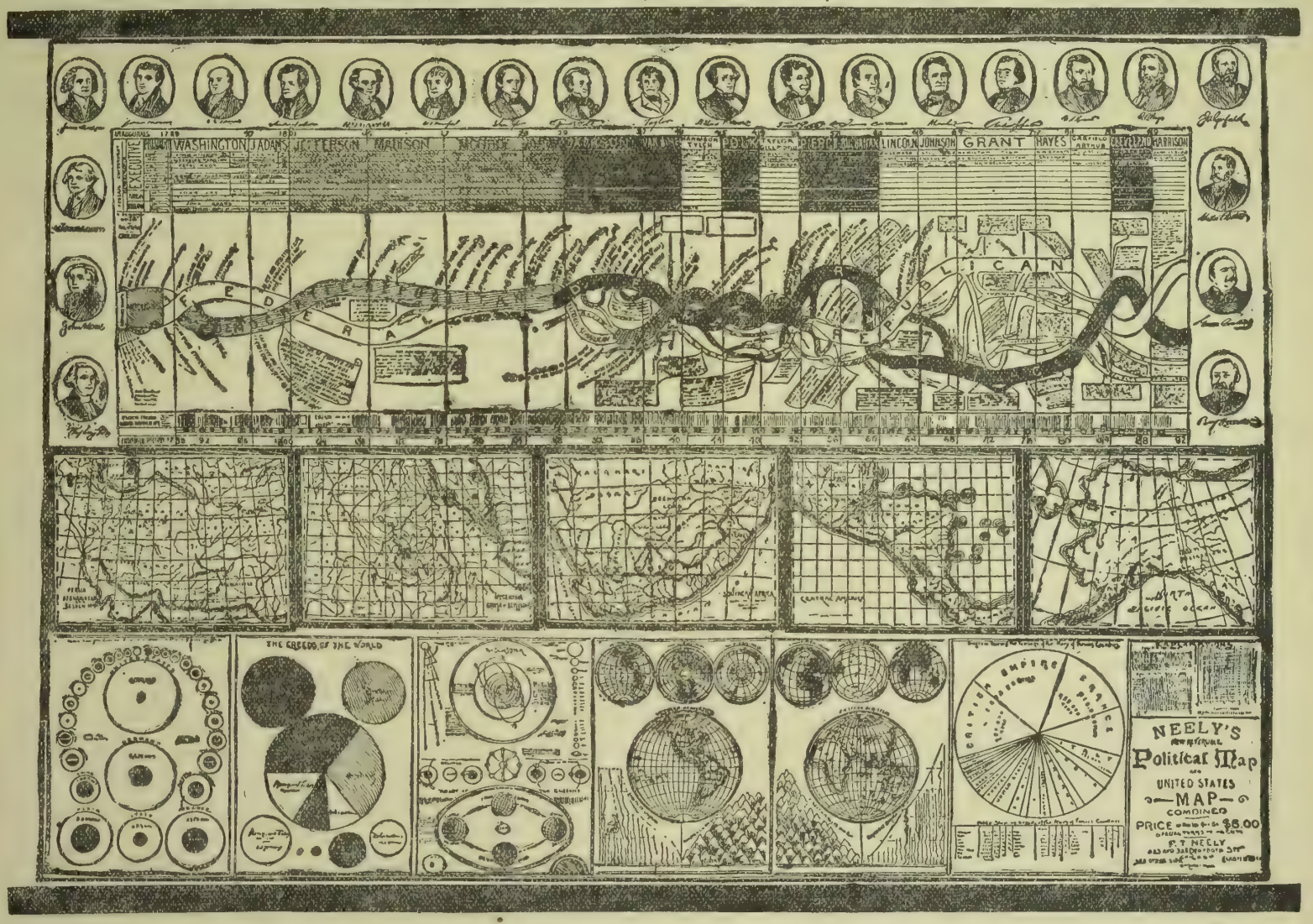
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Review of the Orange Industry in the Southern Counties.—The Colton Fair. The Great Los Angeles Fair This Week, Etc., Etc.

It is more than a hundred years since the Mission Fathers planted the first orange trees in California. These trees, planted near the old Mission at San Gabriel, were considerably more than half a century old before any considerable interest was taken in the project of raising oranges for profit in California.

About 50 years ago, the celebrated Wolfskill and D. B. Wilson orchards were planted—the one in the city of Los Angeles and the other in the San Gabriel valley.

These orchards demonstrated the fact that orange-growing could be made an exceedingly profitable industry in Southern California, it having been shown that these two orchards, at maturity, paid a net profit of from $1000 to $1200 per acre. Following this favorable showing, within a few years there had been planted within the city limits of Los Angeles (embracing an area six miles square) many acres of the trees destined subsequently to play so important a part in the commerce of Southern California.

The second notable step in advance in this new industry was taken at Riverside, at which point, 20 years ago, a number of colonists embarked in the business of raising oranges—with what ultimate success the world well knows—and soon thereafter the Indiana colony engaged in the same enterprise at Pasadena. About the same time, groves were planted at Orange, Santa Ana, Tustin, and Anaheim, as well as at points in Santa Barbara and Ventura and San Diego counties, on a less pretentious scale.

The greatest area set to orchard is in Los Angeles, San Bernardino and Orange counties. The number of bearing trees at the present time being, respectively, 475,000, 390,000 and 90,000—in round numbers, and it is estimated that these counties have planted and not yet in bearing 500,000, 1,800,000 and 50,000, respectively, of young trees.

The San Gabriel valley, in Los Angeles county, will always be noted for its choice citrus fruits, including, as it does, the many favorable localities for the industry commencing at the key of the valley, Pasadena, and embracing Alhambra, Sierra Madre, Arcadia, Monrovia, Duarte and Azusa. There are also the famous Verdugo and San Fernando valleys, which contain some of the best-paying orchards in the county.

There is a well-grounded theory among many citrus fruit growers that the interior valleys are better adapted to the successful raising of this fruit than are the localities along the sea coast. A few writers have lately combatted this theory, declaring that the coast will eventually rival interior localities in the quality of fruit produced. While the consensus of opinion seems to favor the interior for oranges, it is asserted by high authority that the same rule will not apply to lemons, which have been known to thrive to perfection in several different localities on our coast, as is well known of the same trees in Europe.

Only a few years ago, as every one knows, the citrus fruit industry of Southern California seemed in danger of complete destruction through insect pests. Through the agency of predaceous insects, native and imported from Australia and New Zealand, backed by the nerve, brains and energy of the orchardists, this alarm has been allayed, until to-day no apprehension is felt upon this score.

With the enormous increase in orchard area constantly being made, the question naturally arises, "Will there not, ere long, be an overproduction of oranges?" In answer to this query, put by the writer to one of the most prominent orchardists and a leading authority upon all matters pertaining to citrus fruits, he replied: "I do not think we shall ever see an overproduction which will affect the price of oranges. There may be an overproduction in quantity, but it will cut no figure in fixing the prices of good fruit. There are, and always will be, a great many men raising oranges who do not give the proper attention to details, nor show the matter the intelligent care which any business should have in order to insure its success. The natural consequence is that their product is of a quality which does not come in competition with salable fruit. This attention to detail commences with the planting of the orchard, and continues, step by step, to the final marketing of a choice, salable fruit. The whole secret of citrus fruit culture lies in this matter, and you cannot emphasize it too greatly. But no matter how you emphasize it, there will always be a great many growers who will fail to heed the warning—always too large a proportion of orchardists who do not get satisfactory results from their investment of money, time and labor simply because they do not give their business the care which it reasonably demands.

"Another argument against the idea of overproduction—such as increased demand and new markets—has been sufficiently discussed and will not be entered into here. It is safe to say that the production of choice oranges, properly marketed, will never be overdone in California."

The question of satisfactory marketing is one which our intelligent orchardists are now grappling with, and, like any other matter which they undertake, there is every hope that they will ere long bring about a more satisfactory condition of affairs than obtains at present.

During the season of 1890–91 Southern California shipped to market, in round numbers, about 4500 carloads of oranges and lemons, valued at about $3,000,000 on board cars at points of shipment. The shipments of 1891–92 would have exceeded those of the previous season had not the severe wind, early in last December, created such havoc along the foothills in Los Angeles county, followed by Jack Frost's Christmas raid in San Bernardino county.

As it is, the shipments will be very much curtailed and the prices received on ordinary fruit will be materially less than usual, while for choice oranges, known to be entirely free from frost, fancy prices will be received.

As an illustration: L. C. Waite has a 40-acre orange orchard, located in what is known as a practically frostless belt, in Highlands, San Bernardino county. This orchard was planted five years ago last June, and his crop this year is estimated at 2500 boxes. He has refused $4 a box for his crop, delivered in bulk at the packing houses, and he expects to get $5 a box for his fruit—Washington Navels—before the season closes. When we consider the fact that $3 a box for this class of oranges on the tree has been considered a high price, it will be seen that prices on good fruit are still encouraging, although, of course, damaged stock will not sell in any market at satisfactory figures.

In this connection, it might be stated that Mr. Waite refused $100,000 for his 40-acre five-year-old navel orchard, which yields him this year from $10,000 to $12,000, and which is only just beginning to bear. This orchard is considered a model of its kind, and it shows what can be done in a good locality by a man who understands his business.

As an indication of the effect which the cold season and the consequent partial loss of crop have had on the real estate market, it may be stated that in Riverside, where the damage from the late frost was especially severe, orchard property is selling at the same old prices generally, with some cases of actual advance over former sales, and while the demand for that class of property is not expected to be brisk under the present depressing state of affairs, still a good many sales are being made.

The present season has fully demonstrated the fact that in a large section of favored localities in the sloping valley-sides next to the foothills there the thousands of acres of land to which frost is unknown, and where the orange and the lemon can always be grows to perfection, while in a much larger territory the crop can be safely depended upon nine years out of ten—and, probably, nineteen years out of twenty—but where once in many years the frost is liable to do damage.

The proud citizen of Colton and vicinity is wont to boast that the San Bernardino citrus fruits are the best-known in commerce, and that they beat the world in competition at New York, Chicago, New Orleans and St. Louis. Certainly there appears to be a substantial basis for the claim in the growing demand for the fruit.

The cost of a good orange grove, per acre, in this county is estimated by a competent local authority as follows:

Land and water, per acre	$300 00
Preparing and grading ground, per acre	25 00
Fluming for irrigation, per acre	10 00
Trees, first-class, budded, 90 @ $1.00	90 00
Planting and care, first year,	25 00
Total estimated cost, per acre, at end of first year	$450 00
Care and fertilizer during second year, per acre	25 00
Interest on $450 at 10 per cent	45 00
Total estimated cost, per acre, at end of second year	$520 00
Care and fertilizer during third year, per acre	25 00
Interest on $520 at 10 per cent	52 00
Total estimated cost at end of third year	$597 00

At the end of the third year the trees will begin to bear. The yield is estimated as follows:

At end of third year, per acre	$ 50 00
At end of fourth year, per acre	100 00
At end of fifth year, per acre	200 00
At end of sixth year, per acre	400 00
At end of seventh year, per acre	600 00
At end of eighth year, per acre	800 00

After the eighth year the increase in returns is less rapid, still the yield will grow steadily larger as the trees grow older.

The above contemplates the selection of excellent land in a good locality, and it is thought that the estimate is a conservative one in all its features. The intelligent reader is left to judge for himself as to the profits to accrue from such an investment.

The orange and lemon seem to find a natural home in the San Bernardino valley, doubtless owing to the rare combination of soil, climate, elevation and proper distance from the seacoast.

In the opinion of leading experts in the matter, the lemon industry bids fair to "come to the front" in a very rapid and highly profitable way, during the next few years. It is now a settled fact that lemons can be picked in November and December, cured and stored away and kept until the following July or August when they can be marketed at the highest prices of the year. This work, however, cannot be successfully done by every one. It will not pay a man to plant a few trees and from those few trees hope to successfully market his crop. Large orchards will be the most successful, and they must be controlled and managed by men who understand the business, and who are willing to undertake the necessary detail work to make their fruit-curing a success.

As an illustration of this plan of procedure, the Arrowhead Lemon Company of San Bernardino county, has been formed for the purpose of planting a 400-acre lemon orchard on the north side of the San Bernardino valley and has contracted with Messrs. L. M. Holt and T. S. Ingham to plant the orchard for the company and take care of it for seven years, the two gentlemen named taking as pay for their services about one-half of the crop during the seven years. Only the best of trees will be planted, and the reputation of these well-known orchardists is a satisfactory guarantee of the care which their charge will receive. Much interest is felt in the outcome of this venture, and it is believed that it will be the forerunner of many similar enterprises.

The lemon comes into bearing somewhat earlier than the orange, as the tree grows much more rapidly and is able to sustain the weight of a large crop considerably sooner than the latter. One orchard in this section of the State planted five years ago last May, the writer is informed, yielded an average of four and one-half boxes of fruit to the tree—picked prior to the heavy windstorm, in December, which ruined a great deal of fruit.

A story is current in this section to the effect that G. W. Garcelon of Riverside—the best-known lemon grower in California—being pressed by an Eastern newspaper man for information as to the profits of lemon culture, made the following statement: "You may put in your paper that I make $600 an acre for my lemons." A look of incredulity overspread the features of the "tenderfoot," whereupon Mr. Garcelon declared: "I told you that no one in the East would believe the truth if I told it. Now, you may publish what you will, or publish nothing, but I am actually making $1800 an acre off my lemons."

And there is not the slightest difficulty in finding plenty of men in this broad and beautiful valley who will declare that the speaker told nothing but the truth.

That Southern California is growing rapidly in wealth must be conceded; that this fortunate condition of affairs is due mainly to the citrus fruit industry cannot be denied.

As an illustration in this matter of cause and effect, take the case of Riverside. That city has a population of only about 6000, and yet the surplus cash of that population on deposit in the local banks is $1,100,000, nearly $200 to each man, woman and child in the valley, or about $1000 on deposit for each family. It is claimed that no other section of the United States can make, proportionately, so good a showing in this particular.

Riverside has on its assessment rolls property to the value of about $5,000,000, and the actual value of this property is fully five times the assessed value. No one will deny the fact that Riverside's material wealth springs almost entirely from citrus fruit culture.

Ten years ago the assessed valuation of this entire county was about $3,000,000, and in 1891 it was $26,000,000. In 1880 the population of the county was less than 8000, while the census of 1890 placed it at over 26,000.

In 1880 the water in sight for irrigating purposes was not sufficient to irrigate more than 14,000 acres; in 1891 there was available a supply sufficient for 150,000 acres, and the extensive developments of the Bear Valley Co., together with the magnificent project of the Arrowhead Reservoir Co., give assurance that, by the completion of works now in progress, the time is not far distant when these two companies shall be able to furnish water sufficient to irrigate 750,000 acres of land.

With an ample supply of water to bring to life the dormant richness of her fertile valleys, we need have little doubt that Southern California will nobly do her part in helping to work out the destiny of what we are proud to call the grandest State in the Union.

E. C. O.

The Colton Fair

The third annual fair of the Twenty-eighth District Agricultural Association (embracing San Bernardino county) was opened at Colton on Monday evening of last week, concluding the following Friday night.

The fair was held in the cannery of the Colton Packing Company, which had been transformed into a pavilion admirably suited to the purpose in hand. The arrangement of the spacious rooms, the decorations and everything pertaining to the fitting up of the quarters had been accomplished in a manner which reflected the highest credit upon those who had undertaken the task.

At 7:30 o'clock, on Monday, evening the improvised assembly hall was crowded almost to suffocation by people from all parts of the county who were anxious to hear the opening exercises of the fair. On the stage were seated the gentlemen whose function it was to formally inaugurate the exhibition. They were President L. M. Holt; Vice-Presidents J. A. Kelting, M. O. Kelting, Geo. Miller and John Brown, Jr.; Commissioners J. A. Cole, A. B. Miner and I. N. Hoag; Secretary I. N. Davenport, and the speakers of the evening, W. A. Harris of San Bernardino and A. C. Fish of Riverside.

The Arend orchestra of Los Angeles, which had been secured to furnish music every afternoon and evening during the week, opened the programme with an excellent overture, after which President Holt made the opening address. He was enthusiastically received and proceeded in a thoroughly business-like—and, withal, a very entertaining—manner to recite the history of the fair association, with its trials and triumphs since its organization, three years ago, together with an enthusiastic representation of its hopes for the future.

W. A. Harris, the orator of the evening, was then introduced. This gentleman is one of the shining lights of the California bar, and is regarded as one of the most brilliant orators in Southern California. His address was full of wit and wisdom, and the picture he drew by way of comparison between the hard struggle and precarious life of the Eastern farmer and fruit raiser and the comparatively happy lot of the favored Californian in the same avocations provoked vast merriment and enthusiasm on the part of his hearers.

A. C. Fish was the next speaker, and his sole theme was the benefit to be conferred upon California by the completion and working of the proposed Nicaragua canal. He had evidently given the subject very careful study, and appeared to thoroughly impress his hearers with the incalculable advantages to be derived from the great undertaking in question.

Other speakers followed, briefly, their addresses interspersed with excellent music by the orchestra, and the program was concluded with the announcement by the president that the Fair was formally opened.

The exhibits, as a whole, were thoroughly creditable. Competent judges declared, with enthusiasm, that all previous efforts in that line in the county had been eclipsed,

and there were not a few who asserted that no better display of citrus fruits had ever been made in Southern California. It should be stated, in this connection, that citrus fruit was from the start expected to be the main feature of this exhibition. Other features there were, to be sure, in great variety, but they were naturally overshadowed by the regal orange and the lordly lemon.

THE MAIN EXHIBITS—RIVERSIDE.

As would naturally be expected, the Riverside exhibit was one of surpassing excellence, both as to quantity and quality. When it comes to showing to the world her greatest good and chiefest charm, Riverside spares neither pains nor expense. The present instance was certainly no exception to the rule. The display covered a table 8x40 feet in size, solidly covered with fruit, the name "Riverside" being wrought in immense letters with navel oranges, with a background of lemons.

In the same section of the hall were individual exhibits of Riverside growers, as follows: J. W. Roberts, Australian navels and Lisbon lemons; A. C. Fish, two-year old budded navels, with oranges on the limbs—a few of forty trees grown in boxes, to be exhibited at the World's Fair; F. H. Edwards, navels and blood oranges; W. H. Backers, raisins and navel oranges; D. C. Twogood, H. A. Puls and George Duncan, navels, seedlings and Malta bloods.

What was probably one of the most superb exhibits of lemons ever seen on the coast was that of G. W. Garcelon, Riverside's "Lemon King." It occupied a table 6x25 feet in size and formed an ideal presentation of its kind.

SOUTH RIVERSIDE.

This exhibit was more varied and included aside from a very creditable display of citrus fruits, a number of other features of decided interest, in the way of fine brick, sewer pipe, and most interesting of all, a big stack of pig tin from the famous Temescal mines. The bright white metal, about 700 pounds in weight, attracted no little attention from the throngs during the week.

HIGHLAND.

This exhibit, under the charge of T. S. Ingham, one of the best informed of the citrus fruit men in this part of the State, was more than creditable. The oranges and lemons shown were simply perfection and spoke volumes for the possibilities of the section which they represented. Among the principal Highland exhibitors were W. H. Randall, W. R. Ingham, S. M. Tyson, W. H. Ham, L. C. Waite and N. W. Goddard.

REDLANDS.

The exhibit from this city—which is rapidly assuming a leading position in the citrus fruit world—was very large and of the highest merit. It was in charge of I. N. Hoag, ane was composed principally of Washington Navels, although there were numerous other varities, each seeming to be the best of its kind.

RIALTO.

This young colony made a small exhibit, but the specimens were of the highest grade, and were such as to confirm the claims of Rialto's friends of "as good a citrus country as lies outdoors."

OLD SAN BERNARDINO.

This was one of the most interesting exhibits in the pavilion. The most striking feature was a large design in the shape of a yacht, laden with oranges and lemons, and with sails wrought in orange leaves. The after deck was covered with seedling fruit taken from the first orange trees planted in San Bernardino county. A similar design, representing a monitor—also bearing a cargo of the precious fruit—formed another attractive feature of this exhibit. Those who contributed to the fine display referred to were Anson Van Leuven, Will Curtis, Henry Fuller, A. P. Morse, Edmund Rhodes, C. G. Pierson, Doran & Caldwell, Henry Riggins and F. G. Mason. Aside from citrus fruits, there were shown a great variety of plants, trees, shrubs, etc.

COLTON.

When this exhibit is mentioned it means a great deal. The citizens of Colton made a most creditable effort, not only in the way of the "Colton exhibit," but in everything else which could possibly contribute to "the good cause" in general.

Specifically, Colton certainly covered herself with glory in this enterprise. Her showing of citrus fruits was most creditable, the exhibit representing Colton Terrace being one of the very finest in the pavilion, and other exhibits in the way of dried fruits, peanuts, marble, onyx, canned fruits, etc., attesting the claims of Colton to a most honorable position in the list of California cities which deserve honor for what they can produce.

NOTABLE INDIVIDUAL EPHIBITS.

Aside from the citrus fruit and other fruit exhibits, there were many displays worthy of particular mention.

Probably the most striking feature among the individual exhibits was the "Miner's Cabin," built "from the ground up" of oranges. This edifice was about 12 x 16 feet in size, with a very well-appointed interior, including a fire-place, table and settee—the last-named presumably not "practical"—made of oranges. This was the exhibit of A. B. Miner, president of the Colton Packing Company, and no one feature of the fair attracted more attention than did "Miner's Cabin."

One of the finest displays seen in the pavilion was that of the Colton Packing Company. This concern, which is one of the leading canning companies of the Pacific Coast, made a grand effort to outdo itself and every other institution in its line in the way of a display of canned fruits. The showing was thoroughly creditable, not only to San Bernardino county, but to California, for there were not a few competent judges who asserted that the exhibit had never been surpassed on the Pacific Coast in the matters of quality and artistic arrangement.

Another very striking exhibit was that of the Colton Water Works. This was one of the most unique displays shown, and it consisted of a perfect irrigating system in miniature. A good-sized stream of water came rushing down very life like mountains to a sure enough reservoir, whence it was carried through flumes to orchards and grain fields in the valley below. The practical working of the irrigation system as operated in this section was perfectly represented, even to the most minute details, and the flowing water, as it rushed down the toy mountain side, through the tiny flumes, into the "play" valley and between the rows of sprigs which represented really-truly trees set out in orchard form, commanded no end of delighted enthusiasm from the throng.

The Colton Marble Company made a very fine display of monuments and different articles in onyx. This was much admired by all.

John C. King, one of the oldest and most highly respected citizens of San Bernardino county, and an old-time miner, made a most creditable exhibit in the way of minerals. The specimens included gold, silver, lead and antimony, and all were from mines in San Bernardino county. Mr. King's coll tion is the result of years of search, and considered one of the finest in the State. I comprises about a hundred specimens.

Mr. Hubbard of Colton made it his business to show the world that California could raise peanuts to perfection, and he succeeded, beyond all doubt. His display was arranged in very "taking" style, and an expert test of the "goobers" dearly demonstrated the fact that if California was not the home of the peanut, that popular delicacy might easily make itself at home here without much further effort.

Another very creditable feature of this fair was the poultry exhibit. This included a large number of birds of almost all the popular breeds, and—to the credit of local enterprise be it said—almost all of the specimens were from Southern California pens.

There were many other features of interest, and if it were not for that very important matter of "space," they would all be described herein in detail. As it is, only the more important features can be mentioned.

In point of public patronage this fair was the greatest success ever known in San Bernardino county. The attendance throughout the week averaged about 1,500 daily. And as the exhibits were excellent in the extreme and the management in all respects beyond criticism, it may be said that our friends of San Bernardino county did themselves and their county great honor in their effort to show the world what they had worth showing to the world. E. C. O.

Complimentary Samples.

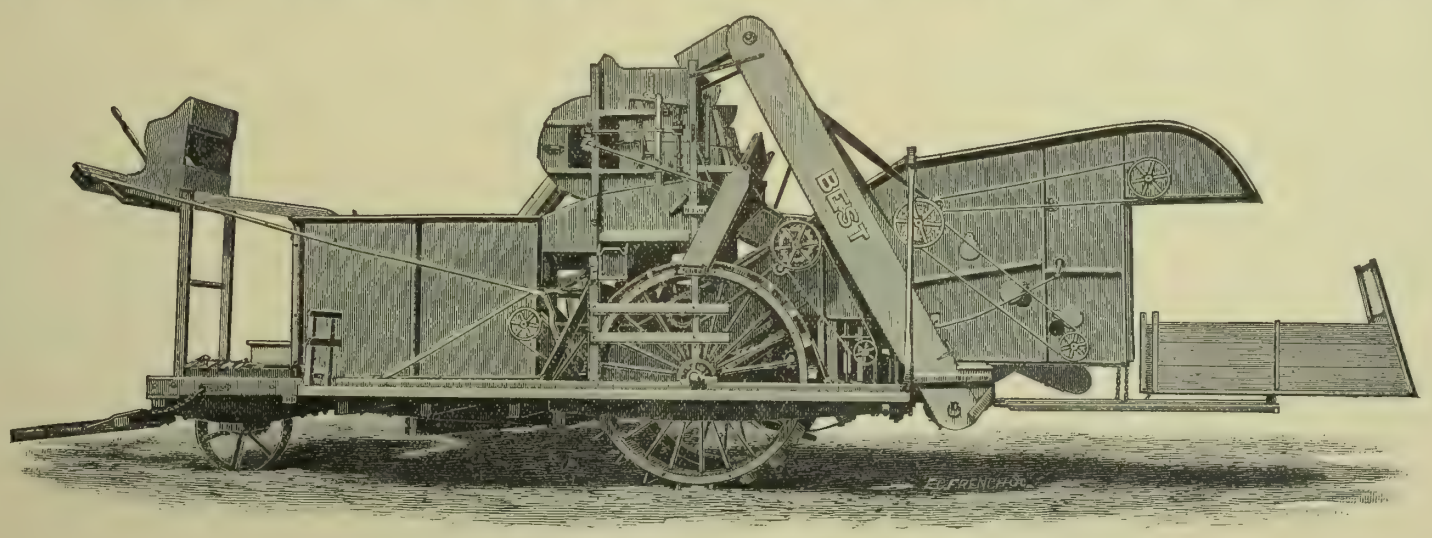
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Three miles from Newcastle; a splendid bargain; 36 acres; 20 acres in fruit four years old; peaches, figs, olives, berries, etc., all in fine condition; good hard-finished house of five rooms, good outbuildings; fine climate; schools and churches near; best Eastern shipment facilities in the State; easily irrigated by ditch on premises. S. J. STABLER, 328 Montgomery St., Room 3, S. F.

AT THE FRONT AND IN THE FIELD FOR 1892.

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LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND BREAK, THE CELEBRATED BEST'S CLEANER, LONG STRAW CARRIER, ADDITIONAL STRAW BEATERS, STRAW DUMP CART, ADJUSTABILITY FOR CUTTING HIGH OR LOW,

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circular. Send for Testimonials. Come and See the New Model for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

The Southern Citrus Fair.

The Third Annual Southern California Citrus Fair will be held in Hazard's pavilion, Los Angeles, opening March 2, 1892.

1. The exhibitor is not required to purchase an entry card. He makes his exhibits without charge of any kind.

2. The total amount of premiums allowed by the State is $2500; this is increased to $2995, the margin to be paid out of door receipts.

3. The exhibitor is provided with free freight to and from the city of Los Angeles for all articles intended for the exhibit.

4. All fruit and other articles intended for the fair will be carted from the depot to the exposition building free of charge.

5. All plain lumber to be used in the arranging of the displays will be provided free of charge.

6. All cambric and cheesecloth necessary for the decoration of the displays will be provided free of charge.

7. At the end of the fair, 50 per cent of all profits will be paid to the exhibitors to satisfy any remaining expenses which they may have incurred in making the display..

The attention of fruit growers is respectfully called to the list of premiums and to the regulations governing the display.

Applications for space must be made early to secure satisfactory location. Apply for space or for information about the fair to C. D. WILLARD, Secretary and General Manager, Chamber of Commerce, Los Angeles.

PREMIUM LIST.

Class 1.—Best exhibit of citrus fruit from any county: first premium, $400; second, $200; third, $100; fourth, $50.

Class 2.—For best exhibit of citrus fruit from any locality: first premium, $150; second, $100; third, $50; fourth, $25.

Class 3.—For best exhibit of Washington Navel oranges by an individual: first premium, $75; second, $50; third, $25.

Class 4.—For best exhibit of budded oranges, other than Washington Navels, by an individual: first premium, $75; second, $50; third, $25.

Class 5.—For best exhibit of seedling oranges by an individual: first premium, $75; second, $50; third, $25.

Class 6.—For best specimens of Washington Navel oranges, not less than one box: first premium, $20; second, $10.

Class 7.—For best display by an individual of Mediterranean Sweets, not less than one box: first premium, $20; second, $10.

Class 8.—For best display by an individual of St. Michaels, not less than one box: first premium, $20; second, $10.

Class 9.—For best display by an individual of Malta Bloods, not less than one box: first premium, $20; second, $10.

Class 10.—For best display by an individual of Valencia Lates: first premium, $20; second, $10.

Class 11.—For the best specimens of seedling oranges, not less than one box: first premium, $20; second, $10.

Class 12.—For best variety of late budded oranges, not less than one box: first premium, $20; second, $10.

Class 13.—For best exhibit of Japanese variety, not less than one box: first premium, $15; second, $5.

Class 14.—For best display by an individual of oranges, not otherwise specified in this list, in quantities not larger than a plateful to each variety: first premium, $25; second, $15.

Class 15.—For best variety of oranges, not specified elsewhere in this list, in quantity not less than one plateful: first premium, $25; second, $15.

Class 16.—For best display of orange wine, $15.

Class 17.—For best display of orange marmalade, $15.

Class 18.—For best display of all products of the orange, $15.

Class 19.—For best display of budded lemons from any locality: first premium, $80; second, $60; third, $40.

Class 20.—For best exhibit of budded lemons by an individual: first premium, $30; second, $20.

Class 21.—For best variety of budded lemons, not less than one box: first premium, $25; second, $15.

Class 22.—For best display of Lisbon lemons by an individual: first premium, $25; second, $15.

Class 23.—For best display of Eureka lemons, quantity not less than one box: first premium, $25; second, $15.

Class 24.—For best display of Villa Franca by an individual, quantity not less than one box: first premium, $25; second, $15.

Class 25.—For best display by an individual of lemons, not otherwise specified in this list, quantities not larger than a plateful of each variety: first premium, $25; second, $15.

Class 26.—For best variety of lemon, not specified elsewhere in this list, in quantities not less than one plateful: first premium, $25; second, $15.

Class 27.—For best exhibit of limes: first premium, $15; second, $5.

Class 28.—For best exhibit of citrons: first premium, $15; second, $10.

Class 29.—For best exhibits of shaddocks or pumelo: premium, $5.

Class 30.—For best exhibit of grape fruit: premium, $5.

Class 31.—For best exhibit of raisins from any county: first premium, $75; second, $50.

Class 32.—For best exhibit of raisins from any locality: first premium, $30; second, $15.

Class 33.—For best exhibit of raisins by an individual: first premium, $25; second, $10.

Class 34.—For best exhibit of 5-pound box of raisins: first premium, $10; second, $5.

Class 35.—For best exhibit of 2½-pound box of raisins: premium, $5.

Class 36.—For best exhibit of dried figs: first premium, $10; second, $5.

Class 37.—For best exhibit of pickled olives: premium, $15.

Class 38.—For best exhibit of olive oil: first premium, $20; second, $10.

Class 39.—For best exhibit of walnuts: first premium, $30; second, $10.

Class 40.—For best display of almonds: first premium, $10: second, $5.

Class 41.—For best display of fruit of the guava: premium, $10.

Class 42.—For best display of the products of the guava fruit: premium, $5.

Class 43.—For best display of semitropic fruit, not mentioned in this list: premium $25.

Class 44.—For best artistic display of citrus fruits: first premium, $100; second, $50; third, $25.

NOTES.

County Premium.—In order to compete for the county premium, authority must be given some person or persons, at a regularly called meeting of fruit growers, to enter the exhibits and receive any premium awarded. The county exhibit will include all individual and locality exhibits made from the county.

Locality Premium.—Any number of exhibitors (i. e. two or more) from any city, township, school district or town, may join together and enter their exhibits for a locality premium, and the money awarded will be paid to anyone authorized by the exhibitors to receive it.

Individual, Locality and County.—The same set of exhibits may be entered for an individual exhibit, and with others by individuals, for a locality exhibit, and with other localities for a county exhibit.

Individual Entries.—In all classes except 1, 2, 19, 31, 32, 43 and 44, entries can be made by individuals only.

Exhibits should be in the city of Los Angeles by Monday, February 29th.

Exhibits must be in position and ready for the examination of the judges before 9 A. M., Thursday, March 3rd, at which time the judging will begin.

A special committee, consisting of J. E. Cutter of Riverside, W. E. Collins of Ontario, and J. R. Dobyns of San Gabriel, has been appointed to report on a standard for the judging of California citrus fruit. This committee has also been asked to draw up a set of rules for government of the judges in their decision as to the merit of the fruit on exhibition. The judges will be selected from every section of Southern California, with special reference to their fitness in individual lines, and every possible effort will be made to secure just decisions.

The following judges of the Fair have been appointed :

Class 1 (county display)—E. W. Jones, Los Angeles ; J. G. North, Riverside, San Bernardino county; R. H. Gilman, Fullerton, Orange county ; Russell Heath, Santa Barbara ; W. L. Hardison, Santa Paula, Ventura county ; W. C. Kimball, National City, San Diego county; Jesse D. Carr, Monterey.

Class 2 (locality display)—H. K. Snow, Tustin, Orange county; W. R. Tolles, San Bernardino; C. H. Richardson, Pasadena, Los Angeles county; Thomas Hosmer, Santa Barbara; H. Crumrine, Santa Paula, Ventura county; L. E. Allen, San Diego; C. M. Wells, Los Angeles.

Class 3 (Washington Navels) and class 6 (specimens Washington Navels)—Stoddard Jess, Pomona; J. P. Jones, San Diego; L. C. Waite, Riverside; A. G. Haight, Redlands; J. R. Dobbins, San Gabriel.

Class 4 (budded, other than Washington Navels)—W. E. Collins, Ontario; M. Balbridge, Covina; C. F. Rudesill, Rivera; J. C. Joplin, Tustin; H. A. Pulse, Riverside.

Class 5 (seedlings, individual) and class 11, same, boxful)—F. A. Kimball, San Diego; J. E. Packard, Pomona; A. H. Fuller, Colton; A. Petch, Hermosa; W. J. Rice, Ventura.

Class 7 (Mediterranean Sweets, box)—Thomas Bakewell, Riverside; S. McKinley, Vernon; W. Ferguson, Glendora; George Hannahs, San Diego; W. B. Hervey, Santa Ana.

Class 8 (St. Michaels, box) — William Chippendale, Duarte; E. J. Waite, Redlands; P. L. Palmer, Pomona; E. E. Leech, Ontario; C. H. McKevett, Ventura.

Class 9 (Malta Bloods, box)—R. H. Gilman, Anaheim; F. P. Drinkwater, South Riverside; C. A. Coffman, Rivera; C. C. Thompson, Pasadena; R. H. Young, San Diego.

Class 10 (Valencia Lates)—W. H. Backus, Riverside; T. S. Ingham, Highlands; J. W. Cook, Glendora; Abbott Kinney, Sierra Madre; N. W. Blanchard, Santa Paula.

Class 12 (late budded, box)—Byron O. Clark, Arrowhead Springs; Andrew Garey, Inglewood; W. R. Barbour, Covina; James Boyd, Riverside; C. F. Eaton, Santa Barbara.

Class 13 (Japanese, box)—J. E. Cutter, Riverside; G. W. Burton, Los Angeles; H. J. Rudesill, Los Angeles; Wm. Friend, Ontario; J. P. Jones, San Diego.

Class 14 (oranges, N. O. S., plate) and class 15 (variety, N. O. S., plate)—Capt. F. Edward Grey, Alhambra; F. A. Gates, Garden Grove; E. C. Kimball, Pomona; G. W. Garcelon, Riverside; W. H. Randall, Highlands.

Class 16 (orange wine)—Eugene Germain, Los Angeles; H. Jevne, Los Angeles.

Class 17 (marmalade)—F. A. Korn, Anaheim.

Class 18 (products)—E. G. Judson, Redlands; R. H. Howell, Los Angeles.

Class 19 (budded lemons)—D. W. McCloud, Riverside; E. G. Judson, Redlands; W. E. Ferguson, Glendora; H. K. Snow, Tustin; E. P. Fowler, San Diego; Joseph Sexton, Goleta; David C. Cook, Ventura.

Class 20 (budded lemons)—J. W. Cook, Glendora; Hiram Hamilton, Orange.

Class 21 (best variety budded lemons)—W. E. Collins, Ontario; J. R. Dobbins, Alhambra.

Class 22 (Lisbon lemon)—C. R. Paine, Redlands.

Class 23 (Eureka lemon)—J. A. Driffill, Pomona.

Class 24 (Villa Franca)—Hiram Hamilton, Orange; John Burr, San Fernando; E. P. Fowler, San Diego.

Class 26 (best variety lemon, N. O. S.)—J. E. Cutter, Riverside; H. H. Sinclair, Redlands; H. C. Ford, Santa Barbara.

Class 27 (limes)—H. O. Fosdick, Tustin.

Class 28 (citrons)—W. C. Kimball, San Diego.

Class 29 (shaddocks)—H. H. Sinclair, Redlands.

Class 30 (grape fruit)—Ernest Watson, Duarte; H. C. Ford, Santa Barbara.

Class 31 (raisins, county)—H. Jevne, Los Angeles.

Class 32 (raisins, locality)—R. H. Howell, Los Angeles.

Class 33 (raisins, individual)—J. E. Cutter, Riverside.

Class 34 (five pounds, raisins) — Adolf Petch, Hermosa.

GOOD HEALTH.

Health of the State.

The report of the State Board of Health for January, gives the mortality returns from 118 cities, towns and villages, having an aggregate population of 819,913. The deaths reported from all causes were 1622, at the rate of 23.64 per thousand per annum. Consumption caused 223 deaths; pneumonia, 285; la grippe, 96; bronchitis, 75; cancer is credited with 44—making that malady the fifth in point of fatalities on the list. Various complaints of the stomach and bowels caused 53 deaths; various throat diseases, 72, and diseases of the heart, 110. There were 595 deaths from various diseases of the lungs in January, as against 706 in December. There was also a falling off of 16 in diphtheria; 9 in typhoid fever; but an increase of 49 from la grippe.

The State at this time is free from small pox, outside of the Government quarantine station on Angel Island. There, however, the disease seems to have taken a permanent hold among the 500 Chinaman recently landed from a China steamer. The large number of cases which have been developing from time to time since the landing, tells in a most unmistakable manner of the terrible scourge with which the State would have been visited had not the Health Board and other proper authorities taken the most thorough precaution to confine the disease among those who are responsible for bringing it here. It is to be hoped the authorities will not relax their precautionary action until the malady is effectually stamped out on the island.

MEETING OF THE CITY BOARD OF HEALTH.

A very lively and interesting meeting of the city Board of Health was held on the 17th instant, at which the subject of small pox and general hospital matters were freely and somewhat forcibly discussed. The Board manifested a most firm determination to do its duty in all matters pertaining to the small pox invasion.

The general subject of the need of further and better hospital accommodation was freely discussed. The importance of more and special accommodations for incurables and cancer patients was referred to. Dr. Regensberger thought it would be wise and proper to call on the Legislature for an especial appropriation for such purpose, as San Francisco was simply a resort for such people from all parts of the State, and necessarily so from the fact that there was no other place for them to go to. It is to be hoped that this matter will not be dropped, but that it will be called up at the next meeting and more fully ventilated.

The Shag Rock business was freely ventilated, and found but one supporter, while all the other members of the Board present were free and generally very emphatic in their denunciations of the project.

The meeting closed with a very pretty and appropriate episode, which consisted in the reading of an interesting and well written paper by Mrs. Ellen A. Weaver, Matron of the Almshouse, and wife of Mr. P. L. Weaver, Superintendent of the same. Mrs. Weaver drew a very beautiful and vivid picture of life in that institution, and described in a striking manner the marked contrast between the characters of those who are obliged to seek that resort from unavoidable misfortune and those who find their way there as a consequence of their own misconduct and downfall. The paper was written for and read before the Century Club, of which Mrs. W. has long been a prominent member, and by special request was repeated before the Board of Health. The address furnished the most striking evidence that the Matron, who is a well educated and polished lady, is the right person in the right place. She received a most hearty vote of thanks for her effort.

RUMSON & MONMOUTH.



NURSERIES.

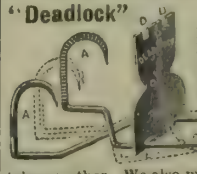
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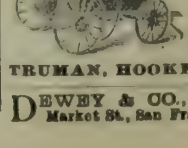
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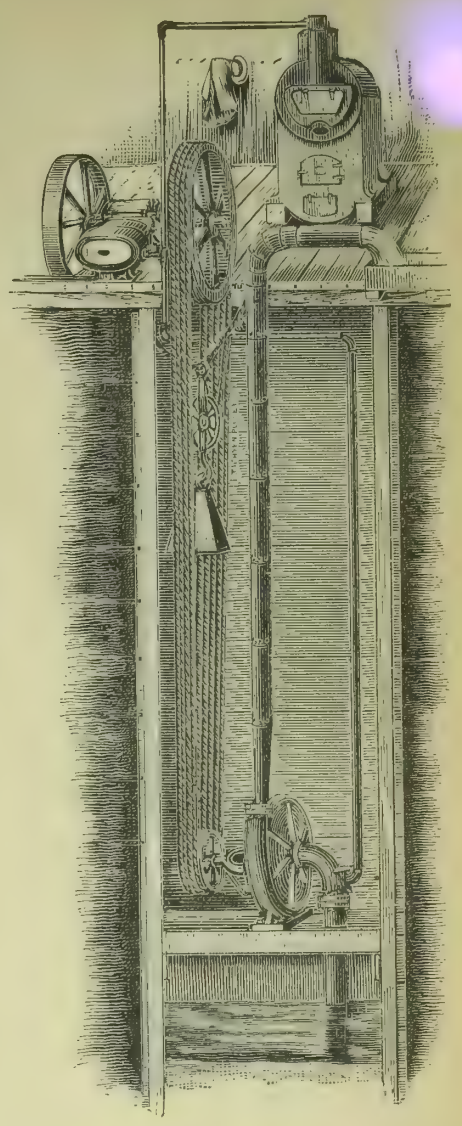
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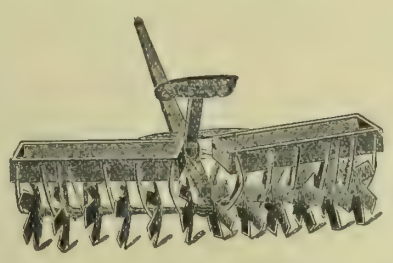
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We have these for both Field and Orchard Use, from 5 to 16-ft. cut. The Reversible or Fruit Growers' and Orchard Harrows, 5-ft. and 6-ft. are made so that the soil can be turned either way, from or towards the tree.

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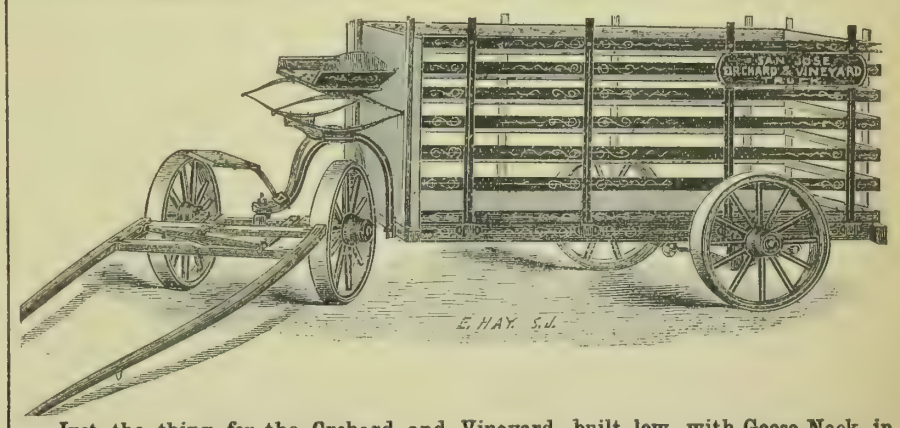
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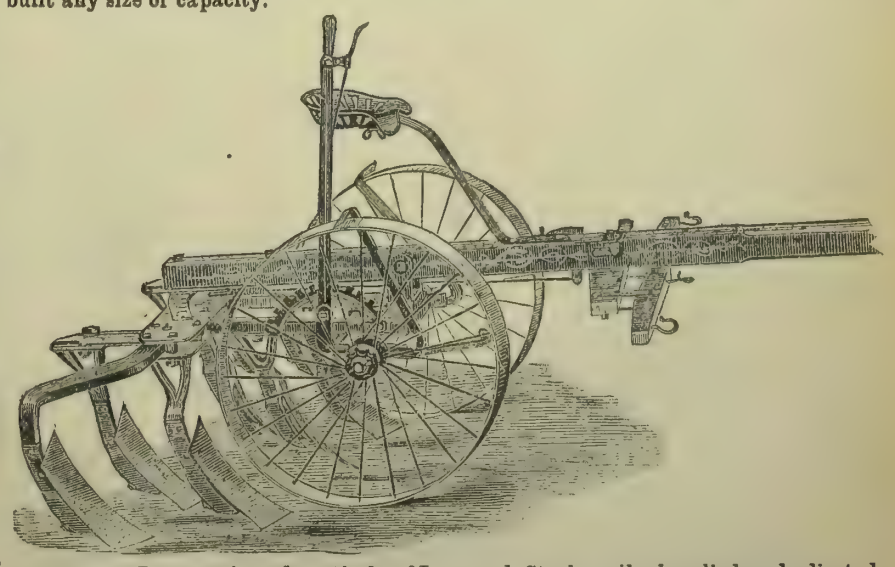
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SAN JOSE AGRICULTURAL WORKS, SAN JOSE, CAL.

Social and Intellectual Features of the Grange.

[Paper read before the Northampton County Pomona Grange by Mrs. James W. Grenet of Seepe, Pa., published in *Farmers' Friend.*]

Worthy Master, Brothers and Sisters: The subject which I have selected is the Social and Intellectual Features of the Grange. The Grange found the patient tillers of the soil, the farmers, isolated, unsocial, divided into parties and sects, considering each other as enemies, antagonists, without any leader of their own class, but following the lead of the artful, designing class, who live at the farmers' expense and and without any organization of their own. One object of the Grange was to break up the isolated, unsocial condition by organizing them into a social Order composed of the farmer and his family, that they might in this social capacity become acquainted, and regard each other as friends, who should labor together to tear asunder the net that has been wily woven, with which, singly, they have unwarily been entangled, to lift the oppressive burdens that have been heavily heaped upon agriculture and learn that by cooperation they can remove every hindrance to the elevation of agriculture, and the farmer. Although they have not yet fully extricated themselves from the net into which they have been lured, yet they have made such progress in the work as to begin to discover their power and demonstrate their ability to paddle their own canoe.

The Grange is bound together with a golden cord more strongly than a thousand tillers of the soil, who every week meet in these Grange halls for social, intellectual, moral and financial improvement. The Grange is stronger and accomplishing more good now than any other organization. The Grange confers its benefits not alone on its own members; neither do farmers only reap its rewards of all. The farmers are the bone and sinew of the land. When they are prosperous we never hear of hard times; but if from any reason there are short crops, low prices, hard times, then it is that the manufacturers talk of overproduction, merchants of dull trade, mechanics and laborers complain that they cannot get work. Individual happiness depends upon general prosperity. The soil is the source from which we derive all that constitutes wealth. Without wealth we would have no agriculture, no manufactures, no commerce. Of all the gifts of the great Creator and Giver of all good, the various productions of the vegetable world are the first in importance.

All history proves that where agriculture has prospered, the nation has prospered. The Grange seeketh the greatest good to the greatest number, and so benefits manufacturers, trade and commerce as well as the farmer and his family. To-day all over the country the farmers, their wives, their sons and daughters control their own assemblies and are honestly considering the deranged state of society, and are discussing the practicability of abolishing the false social institutions that have invariably wronged the farmer and his family. The farmers are beginning to awake to the consciousness that they really have brains—that commodity so essential to law-making—and there are men of their own class who have brains enough, and of the right kind, to make the laws by which the farmer should be governed. Woman, too, is beginning to discover that she has brains and to take the positions in society of true women—to God, herself, society and country true. The Grange is prominently a social Order, excelling all others in opening the door wide and bidding women welcome—welcome on the plan of equality. Thus, that it might be a success in this social feature, it adopted the divinely ordained social principles established at the inauguration of the social relation when God made man a help-meet. The social feature of the Grange in its restricted sense is construed to apply to social gatherings and festivities; but in its extended sense it embraces education in all its departments, cooperations, any and every feature of the Grange, as far as its ultimate object, the uniting of society and elevating it. The plan adopted in making practical these social features is to meet in social gatherings, where is provided not only a feast of good things to refresh and invigorate the body, but also a feast for the mind, a feast of reason and flow of soul. I think none of the Grange features and teachings has ever made man or woman worse, but its lessons all develop the good, the beautiful and true. Not half has been told of its good work, and it can and will do more in the future, because the Grange is founded upon the great principle of truth and justice.

Cooperation in Raisin Marketing.

By the request of the committee which called the Fresno Convention, J. H. LaRue of Malaga prepared the following address, which was not presented at the convention, but which is of general interest:

Being one of your number duly appointed as a member of the committee by the Farmers' Institute at Fowler, I deem it my duty to lay before the committee some of the ideas I have in relation to the point at issue, namely, what plan can be adopted whereby the growers may handle, pack and market the fruit of their labor.

My firm and candid opinion of the matter is that the only salvation for the growers is to pack their own product, and as a means to that end the only means of ultimate success is by complete cooperation, which is very easily accomplished if all will work in strict harmony. There is no denying the fact that the prime interest of one is likewise the dominant interest of all, and harmony is the essential element in the composition of cooperation.

There are now, always has been and always will be those among us and in all lines of business pursuits a certain element whose way of doing their own or other people's business is the one and only way in their own estimation. Consideration for the opinions of others is necessary to the success of organized effort in any and all lines; so let us consider with a feeling of charity the ideas of all, and strive thereby to accomplish the end that we all feel and will be of benefit to the producer.

If cooperative associations can be formed throughout the State on the plan of the Fresno Raisin Company, the Producers' Packing Company, or the Easton Packing Company, and the entire product marketed through one channel, or at least in one way, the question will slowly settle itself. A fruit and raisin exchange is one of the means, and a good one, of bringing about a rapid solution of the problem.

This can be established at some suitable center of trade, with men at the head whose principal interest is not the furtherance of personal ends, but whose ideas are laid out on a broad and liberal principal; and in such a way I fail to see why we cannot obtain fair and remunerative prices for our product, which is all that we can expect. I do not see why the outside packers, those who buy and pack only, cannot be members of the exchange, provided, of course, they will allow themselves to be governed by the same rules by which the growers' associations are governed, as we are all equally interested in maintaining the prices.

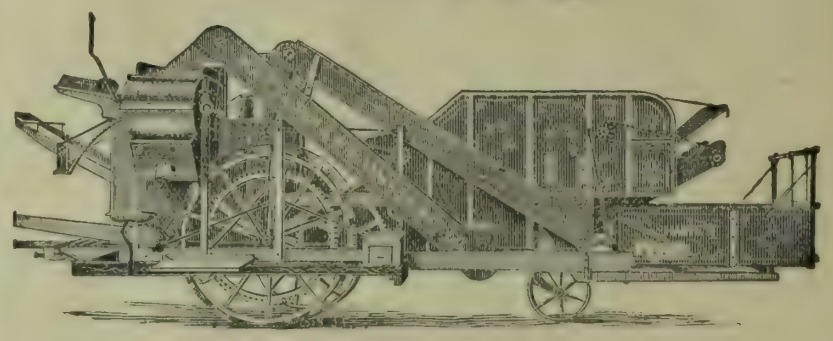
Of paramount importance is the proper curing of the raisins, and the assorting into the several grades, neatly packed in boxes or sacks, and branded or marked in accordance with its grade or quality. I am convinced that such associations or firms can enter into an agreement and place their respective goods on the market through the medium of such an exchange at prices to be established from time to time by a committee to be mutually agreed on by the different interested parties, each party or association to have representation based on its own pack or output, each association or party to the contract to be firmly bound under a sufficient bond to maintain the purpose of the organization.

Now, as to the selling and manner of selling. I am of the opinion that we should profit by the experience of other large establishments, such as manufacturing, for instance. We should so arrange that our business should be in the hands of some well-established house in each State and allow that firm to handle our entire business in its respective territory. However, if suitable arrangements cannot be made in each State, then give more territory to the nearest firm or agent.

20,000 Monterey Cypress
IN BOXES.
Also, Large Stock, Nice Shape
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NO SIDE DRAFT as CUTTER BAR is carried entirely on Main Wheels.
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ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.
Cutter Bar
Has no nuts or obstructions on top; the obliquely
RECESSED GUARDS
Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED. THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

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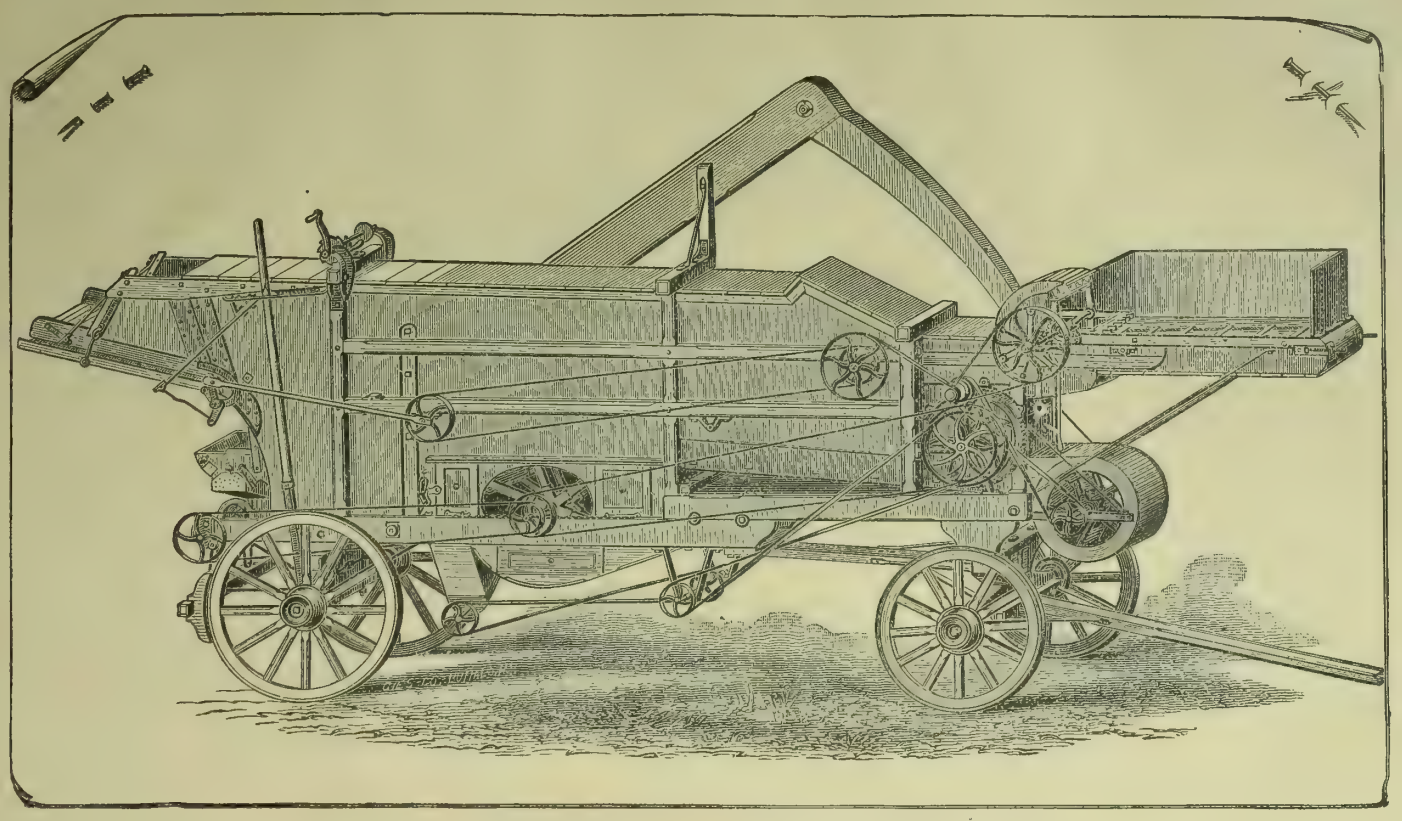
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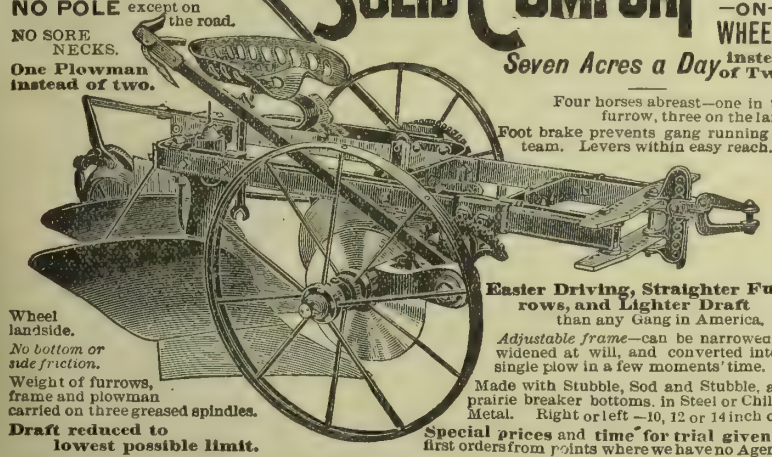
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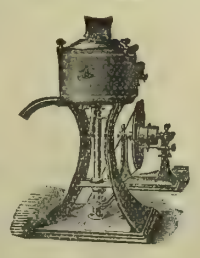


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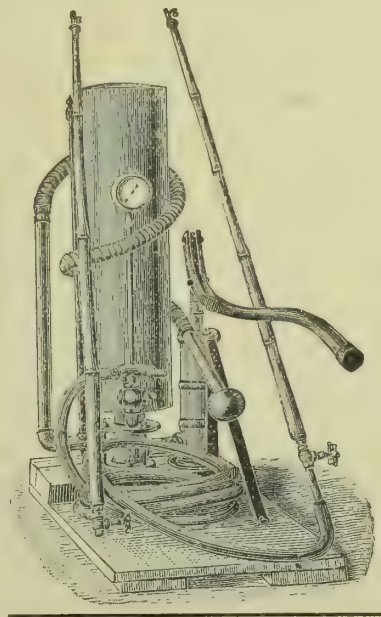
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FRUIT PRESERVATION.

Sulphuring in Fruit Drying.

University Experiment Station Bulletin No. 96.

Of late several papers in this State have discussed the subject of the use of the sulphuring process in fruit-drying, some prefacing their articles with the remark that I had "issued another proclamation" on the subject. I am unable to remember having uttered anything in public relating to the subject since the publication of Bulletin No. 86, eighteen months ago. Since, however, the articles alluded to bring the matter forward, and imply a partial misconception of my views, and of their true basis, I think it proper to put them on record once more.

Sulphurous gas, which is formed when sulphur is burned, is well known, and constantly used as a disinfecting, bleaching and deodorizing agent, second in virtue only to chlorine. The fact that it is the agent officially used in the disinfection of infected houses, ships and individuals is conclusive on these points. It is therefore idle to pretend that sulphuring does not diminish the flavor of fruit or of anything else touched by it. It is perfectly certain that it does so; and the only debatable question is the extent to which it may be used for bleaching fruit without any material detriment to the flavor.

It is in evidence that a reasonable amount of bleaching can be done by applying the gas to the freshly cut fruit without injuring the flavor to a material degree, since the flavor will penetrate from the inside outward to a sufficient extent to compensate for the loss of what naturally belongs to the bleached exterior portion.

The limit, however, is a narrow one, and it is so frequently exceeded in practice (whether intentionally to secure "extra light" color to attract the unwary purchaser or, more commonly, by unskilful or negligent workmen in charge of the sulphuring boxes) as to put upon the market a good deal of fruit that is the reverse of creditable to the State that produces it, and ill calculated to insure a permanent demand. This is especially true of the thinly sliced apples and pears, which are quickly penetrated by the gas and assume a greenish-white tint that, while it may be inviting to equally "green" purchasers, assures the expert that the natural flavor is practically gone. The producer himself declines to put them on his table, but the dealer and the public, as at present informed, are willing to pay an extra price for it. This demand for unnaturally light-colored dried fruit is a "fad" like many others, which will have its day but will inevitably give way, in the course of time, to a preference for the better-flavored product having the tint which insures its being so. So long as the "fad" lasts, so long will producers or dealers sulphur the fruit to suit the eye rather than the palate of the consumer. It certainly seems desirable to hasten the advent of a more rational state of the public mind on this point; quite apart from the sanitary consideration, which, if not of primary importance as regards most of the sulphured fruit now in the market, has nevertheless proved sufficiently potent to cause the practice of sulphuring to be legally prohibited in the old world, where therefore our fruits so treated would fall under the ban of the law. An additional consideration is that this process permits of rendering third and fourth class fruit equal in appearance to the best, and is therefore easily used for fraudulent purposes.

There thus seems to me to be abundant cause for desiring, and working for, the abatement of the public delusion on the subject of light-colored dried fruit, which sacrifices the substance to the shadow and is certain, in the end, to inure to the detriment of our dried-fruit trade. The over-sensitiveness that has of late manifested itself in respect to the maintenance of my position in the question seems, therefore, to be ill-founded.

I hope to find a measurably unobjectionable substitute for the uncertain process as now practiced, in the use of a solution of "bisulphite of soda" (heretofore sold under the name of "California fruit salt") of definite strength, into which the cut fruit can be dipped before drying. In this process, the same agent (sulphurous gas) is employed in the liquid form, but so controlled as to the amount used that the chances of overdoing the sulphuring—now so great because of the convenience with which the fruit can be left exposed to the sulphurous gas for an indefinite time—would be reduced to a minimum. The compound can be produced very cheaply, and the solution used will be very weak.

The exact strength and time required to produce the best results with different fruits will form the subject of experiments at the station during the coming fruit season.

E. W. HILGARD.

Notes on Persian Palms.

The importation of palm trees from Persia made by the United States Department of Agriculture promises to be of much importance to the State. The forthcoming report on station work will contain the history of this fine collection, but the large number of letters of inquiry received makes some additional notes upon the present condition of the palms desirable.

The palms are planted at Pomona and at Tulare. The larger number of varieties and in some respects the best plants were sent to Tulare, as it was thought at Washington that the climate there would prove more favorable. This expectation does not seem likely to be realized, as several varieties that are more tender than others have suffered this winter. Some, however, are eminently suited to the place.

At Tulare Station, also at Pomona, the pistillate or bearing palms are planted in a circle, with the staminate plant in the center. The soil is sandy and free from alkali. Irrigation ceased the first of September. Deglet Nour and M'Kintichi prove to be very poor growers, small leaves, hard to root, and not to be recommended unless the fruit is of peculiar excellence. These two varieties show similar characteristics at Pomona.

The Sultaneh variety, said to be one of the best, is extremely delicate in appearance, leaflets slender and fine, growth slow; suffers from frost at Tulare. This variety does better at Pomona, and is certainly one of the most beautiful of all in an ornamental sense.

Amhat, at Tulare, is so badly frosted that it will be advisable to move it to a better locality. When most of the large leaves of a palm are killed, and protection is needed for the heart of the plant, it is evident that no valuable result can follow further experiment at that point. This variety at Pomona has so far escaped with only slight injury. It is the most tender of all the Persian palms at the stations.

Next to the Amhet is Haraneh, a poor grower, considerably frosted at Tulare, and slightly so at Pomona.

Rashedah and Rass show only medium hardiness at Tulare, losing a portion of the upper leaves. Rass is a remarkable variety of very strong growth, leaves large, light green, and beautiful in appearance. The plant at Tulare has already six small suckers. It is the only one of all the palms that has as yet increased itself by division. The difference in rapidity of growth between such varieties as Rass and such as Sultaneh or Deglet Nour, is as great as that between a Bartlett pear tree and a Seckel.

One palm at Tulare shows marked hardiness. This is Seevah, a compact grower, with small, dark leaves; it is more hardy than the seedling date palms at the station, which latter correspond more nearly in hardiness with such varieties as Rass. In Seevah we probably have a date palm suitable to all parts of the San Joaquin valley; perhaps three or four more of the twelve varieties represented are likely to prove desirable there. But several, as the preceding notes imply, are not likely to withstand the frosts of the open valley, whatever they may do on the foothills. Referring again to the seedling date palms at Tulare Station for comparison, one observes that all are slightly frosted, while two are badly so. The wild date (*P. Canariensis*) would undoubtedly stand the same locality and pass unscathed through the severest winter ever known there, but the species date is merely ornamental; and the seedling date offers no advantages in point of hardiness over any, except a few of the named varieties now at the station, while it is distinctly at a disadvantage in comparison with several of the best.

A curious fact in connection with the date palms is that the large grasshoppers of the San Joaquin valley attack the leaves with a special zeal. Last summer the grasshoppers left fields of grain, and beds of small cultures representing many species of plants, to settle on the palms and eat holes in the leaves. They could hardly be prevented from destroying several varieties for which they showed a strong preference, and they injured nearly all to some extent. Their method of attack is to make dozens of holes, about as large as a dime, in the leaflets. Sultaneh, Rass, and Haraneh are among those that were the most severely injured. Thriftiness, or lack of thriftiness, in the plant seemed to make little or no difference with the grasshoppers. The hardy variety, Seevah, they left entirely alone, and it was the only one that escaped attack. At Pomona also the grasshoppers left other plants to attack the palms, and here, as at Tulare, they showed preferences, though less marked, as their invasion was of much shorter duration.

There has not been any complaint, so far as I know, that the grasshoppers destroy seedling date palms, or the Canarian date, in any part of California. At the stations, as it happens, the seedling palms were uninjured, though this was probably owing to their location nearer the buildings than were the named varieties. It is well known that the locusts of the deserts of Asia and Africa sometimes entirely destroy palm groves, but it is certainly surprising to find that the California grasshoppers prefer the hard, fibrous leaves of the palm to any other green food.

The problems of importance, next to the hardiness of different varieties, seem to be: How soon will the plants bear, and how fast can they be propagated by suckers? When better established, it will be possible to force them into a more rapid division, but this can only be done at the expense of the mother plants. The small number of specimens obtained—only two of any variety and of some only one—precludes the idea of such an early or general distribution as many correspondents appear to expect. Besides, the U. S. Agricultural Dep't has distinctly required the first increase of stock to be held subject to its orders, at least for the present. Those varieties that promise best can be imported by nurserymen in larger numbers, and easily propagated to supply any future demand. The experiment at the agricultural stations fulfils its end, and justifies the cost, whenever those stations have fully tested and reported upon the varieties in their hands.

CHARLES H. SHINN.

Berkeley, Jan. 25, 1892.

The Science of Physiognomy.

Can Character Be Read from Heads and Faces?

The study of character by observing the cast and expression of the human head and face is of great antiquity, and is known by the term "physiognomy." The claim of physiognomy to be considered a science, has been regarded differently by different persons for the last 2000 years. Some are enthusiastic in the affirmative, others as strong against it. Still, it has occupied the attention and study of the brightest men of every age, from the days of Hippocrates about 460 years before the Christian era down to the present time. Hippocrates wrote upon it as then being a subject upon which scholars had long been much divided. Socrates, who was his cotemporary, was a full believer, and wrote the earliest systematic treatise upon the subject which has come down to us.

We have the record that Egyptian scholars, also, wrote largely upon the subject, and mostly in the affirmative. References to physiognomy are also found largely scattered through Greek and Roman classics. The literature upon the subject is very extensive, and of itself would form quite a library. The sixteenth century was quite rich in publications on physiognomy. Some 25 or more noted writers of that time wrote more or less fully upon the subject.

The writers of the following century generally attempted to bring discredit upon it, and more than 30 prominent writers and scientists of that time are recorded as entering upon such discussion mostly in the negative.

The first really elaborate attempt, in recent times, to elevate physiognomy to the rank of modern science was made by Lavator in 1775–8. The first real scientific school of physiognomy was founded by Sir Charles Bell in his "Essay on the Anatomy of Expression," published in 1806. A republication of Lavator's work soon followed, and gave an additional interest to the subject. "The correlation of the physical actions and psychical states" was made a subject of interesting speculation by Spencer in 1855, and those speculations were reduced to a system by Darwin in 1872.

We have been led to these reminiscences by a hasty perusal of two large volumes upon this subject, lately written by a well-known lady resident of this city—MRS. MARY OLMSTEAD STANTON, who has devoted a large portion of her life study to the subject of physiognomy. This lady had previously published several less pretentious volumes, but in the present work, consisting of over 1200 large octavo pages, under the title of

"A SYSTEM OF PRACTICAL AND SCIENTIFIC PHYSIOGNOMY; OR HOW TO READ FACES."

The author has given a most complete manual of instruction in the knowledge of human physiognomy and organism, embracing the discoveries of located signs of character in the body and face. The work is most profusely adorned by elegant and life-like engravings illustrative of the text, and printed on very heavy paper of the finest quality. It is dedicated "to the lovers of science—to the earnest and enthusiastic searchers for truth throughout the world."

These volumes display a most thorough knowledge of the subject, and constitute, really, the most complete formulation of this system of mental science which has hitherto been presented to the world. It is written in a plain, practical manner, such as would readily admit of its being introduced as a text book into our high schools and colleges.

No person can rise from even a cursory examination of the work without feeling that scientific and practical physiognomy should be introduced as a part of our common school education and advanced, by gradation, to our very highest institutions of learning. This study, commenced as it should be with its simplest principles, with the very beginning of our grammar grade of schools, could not fail to greatly advance the mental, moral and physical conditions of all humanity on which it might be brought to bear. Better, perhaps, than almost any other line of study, this study might be made to carry forward the evolution of the race to the very highest type of humanity. It is also well in line with an earnest and religious regard for the young, without the least touch of sectarianism. It is really a study of divinity in its highest manifestations of creative energy, and leads directly into the path best calculated to enable us to make the best possible use of the form and mental capacity with which humanity has been endowed.

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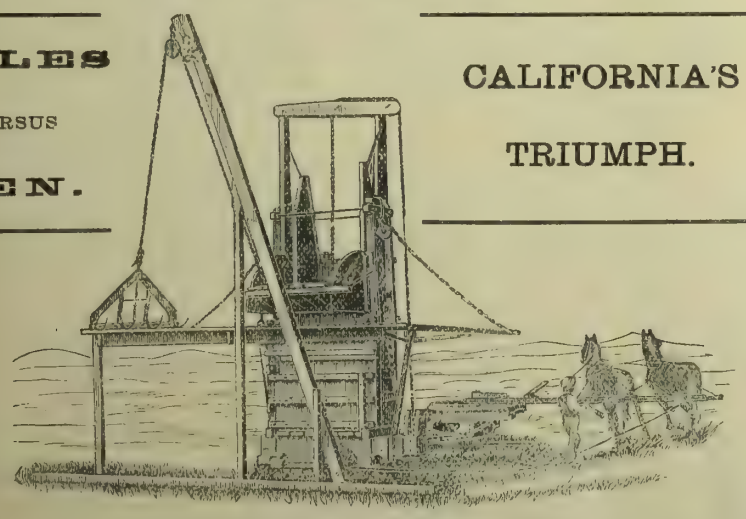
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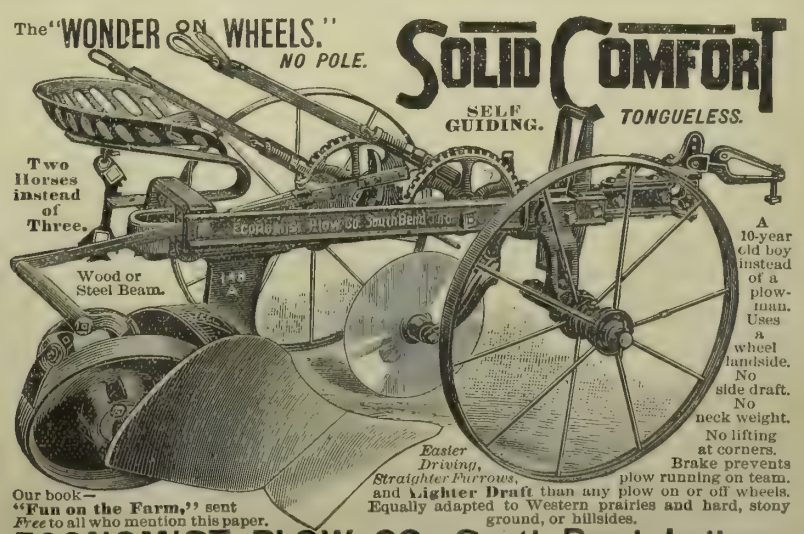
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The Kern River Valley.

Its Fertile Soil and Immense Water Supply—Vast and Comprehensive System of Canals.

BAKERSFIELD, Feb. 21st, 1891.

TO THE EDITOR:—If the reader will consult a map of California he will observe that below the central point of the State the Sierra and Coast Range mountains curve in a wide sweep from either side and finally join in a grand semi-circular barrier to the south. This semi-circle is the southernmost boundary of the San Joaquin valley, which stretches away to the northward for 300 miles or more. For ages, nature has been devoting herself to the preparation of this valley for the behoof of man. Just as man now prepares a perfect seedbed, by mingling the proper elements together in suitable proportions, so has nature, upon a scale gigantic but perfect, been constituting the magnificent seedbed which forms the valley of the Kern river, the great basin which lies at the head of the largest of California's immense twin valleys. Not a single thing has been neglected, but, guided by a master hand, Nature has here worked out in perfection one of her laws, and as a result presents to man a combination of soil and climate which challenges the world for an equal and utterly denes any claim to superiority.

That nature deals in compensations is a well-known axiom, but seldom is it better illustrated than in the present case. Here are millions of acres upon which the rainfall is so scanty, as a rule, that the cereals or other crops cannot be successfully produced. Indeed, the uninitiated may be pardoned for regarding it as little better than a desert under natural conditions. But to make up for the lack of rain, nature has provided an inexhaustible supply of water in the streams that traverse the valley, and the lakes that dot its face, and has so formed the surface of the basin that this water can be readily diverted from its channels and spread in every direction, wherever it is needed. The irrigating canals that already form a network throughout hundreds of thousands of acres render the farmers independent of the seasons, and enable them to produce a succession of crops of almost every conceivable variety in a luxuriance not excelled in the most highly favored portions of the earth. Every cereal, every vegetable, every fiber plant, every fruit of the temperate or subtropical zone, flourishes here in the highest perfection, and the genial disposition of the climate is such that there is no long period of enforced idleness during any season, but the farmer can, if he be so disposed, plow and plant continuously, removing one crop only to make room for another, and thus obtain two and even three harvests in the same period within which the Eastern farmer deems himself fortunate if he reap but one.

But to return to the comprehensive irrigation system of this valley, which has been so successfully inaugurated and carried out by the Kern County Land Co. Away up in the lofty Sierra, region of perpetual snow and ice, rises the Kern river, fed from a source that can never fail. For something like a hundred miles this river's course lies through the rocky defiles of the mountains, where it receives numerous smaller streams into its channel, and finally leaves the lofty ramparts at a point some 20 miles from Bakersfield. From its source to its entry into the valley the river has a fall of upward of 12,000 feet, and the last few miles of its course, prior to reaching the plain, are signalized by numerous falls and cataracts that, as has already been shown, afford a water power of almost incalculable extent.

The immense possibilities of the Kern river, either as a source for irrigation, or for utilization in manufacturing, may be seen from the fact that repeated measurements have shown that its normal flow is equal to that of any stream in the State, while its source of supply is perpetual. Not only can this immense flow be utilized for the generation of electricity and other powers for manufacturing and kindred purposes, but such use will not in the least, owing to the unusually favorable formation of the country, interfere with the further utilization of the water for irrigation, there being sufficient, when properly handled, to supply every acre of the immense holdings of the Kern County Land Company.

The system by which the water of the Kern river is now diverted upon the adjacent lands is the most comprehensive, costly and extensive of any irrigating plant under one management in the entire State. Thirty-two main canals of varying size carry the water in every direction. One of these canals is 120 feet wide on the surface, and 80 feet wide at the bottom, carrying water sufficient for the moistening of more than 200,000 acres. Several other canals are more than a hundred feet in width, and all told, there is a length of over 300 miles of main canal alone in the valley, while the laterals are five-fold greater in extent. The total appropriation made for these canals is upward of 600,000 miner's inches.

Water being so abundant, the cost of irrigation is naturally very low, especially when the immense amount of capital invested in the canals is considered. Several million dollars were expended in developing this vast system, yet the annual charge for an abundant supply of water for individual users is only from $1.00 to $2.00 an acre. What this means can best be understood by comparison with other sections, where the cost not infrequently reaches $7 or $8 an acre annually, and where the results obtained by irrigation are no better or more remunerative than here. The expense for water, required to be borne by the farmer of this section, is so light that it is not felt, and it is rather welcomed than otherwise, since by it he is rendered entirely independent of the vicissitudes of the season, and can plant and sow in the perfect certainty of reaping an adequate harvest in due time.

M. F. W.



A HOME IN KERN RIVER VALLEY.

Stanford University Lectures.

To President D. S. Jordan, Professor Comstock, and the Faculty of the Leland Stanford Jr. University—GENTLEMEN: We the undersigned, on behalf of the California Fruit Growers' Class of 1892, beg to tender our grateful acknowledgments for the very kind manner in which you have received and entertained us, feeding us, with unsparing hand, on fruits plucked from the tree of knowledge.

May this branch of University extension take vigorous root, and under your skillful and fostering care bring forth fruit a thousandfold to the lasting profit and glory of our ever glorious California and to the additional renown of the L. S. J. U.!

We have been made to feel that your University is an institution *for the people*, and as representatives of the *people* we have received a hearty welcome. Trusting that a long career of ever increasing success may be accorded to each and all of you, we remain, gentlemen, yours sincerely,

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COSTA RICA has ordered a large iron building, to be shipped in sections, for a schoolhouse.

FLORIST AND GARDENER.

Annuals for Bedding in California.

A regular meeting of the Southern California Horticultural Society was held Feb. 22 in Los Angeles, J. H. Tomlinson presiding. After preliminary business the following valuable essay was read by John Franklyn:

"The selection and arrangement of annuals for bedding purposes involves several very important considerations. Foremost among these are height, color and time of flowering. With regard to the first, it is very evident that however successful a flower bed might be in other respects, if through ignorance or carelessness the dwarf varieties were planted in the center, and the tall ones at the circumference, the effect would be ridiculous. This of course is true of all bedding plants, but as it is often necessary to sow the seed of annuals in the beds in which they are to flower, it is much more likely to be overlooked in their case than in that of summer bedders which are planted out from the pots.

"The same remarks apply to a judicious arrangement of color, it being necessary for the gardener to produce the desired effect in imagination before he can produce it in reality. But perhaps the most important of these considerations is the one which relates to a simultaneousness of flowering. Nothing can be more exasperating, after having planned a gorgeous effect, than to see it produced in installments, one part beginning to flower after another has ripened its seed.

"In order to avoid such a calamity, it is advisable to plant in the same bed, or group of beds, different species of the same genus only, or, better still, different varieties of the same species. In the latter case at any rate they will be sure to flower simultaneously. It is obvious from the above remarks, that in producing the best results with annuals, a previous acquaintance with them is very helpful.

"The object of this paper is not to discuss the cultivation of this class of plants, but to offer suggestions for its selection for bedding purposes. Perhaps we cannot do better than begin with the aster. This, in its improved form, is a beautiful flower, and embraces many very fine varieties. It also enjoys the advantage over many of its confreres that it can be raised in boxes and transplanted from them into beds. A beautiful effect may be produced by planting in the center of the bed, say the German quilled in one distinct color, next the peony perfection in another distinct color, following with the cocardean and dwarf chrysanthemum, the former having white centers and colored margins; and edging with the pretty little bouquet aster.

"Stocks make excellent bedding plants when in the hands of a good gardener, not otherwise. A bed of good stocks amply repays its owner for all the care bestowed upon it, its fragrance alone being considered sufficient compensation in many cases.

"It is surprising that in a country like Southern California, where the country is so well adapted to them, we should so seldom see the beautiful portulaca. This will thrive in localities where it is too hot and dry for the majority of bedding plants to succeed. It will survive any amount of neglect, though it is grateful for a moderate supply of water. For variety and intensity of color, this genus has no superior, and but few equals; the colors ranging from through white, yellow, pink, purple, and the most dazzling vermilion. The flowers are large, about the size of a dollar, and while the single varieties are beautiful, the double ones are much more so. It is well adapted to bedding purposes, whether in mixture, or distinct colors. With such a list of recommendations this genus should be more extensively cultivated.

"In Phlox Dummondi we have another annual preeminently adapted to the purpose under consideration. If we are searching for numerous varieties of the same species, we have them here. Drummond's Phlox has divided and subdivided until now we have it in many varieties; P. D. grandiflora, also in many varieties; and several of P. D. nana compacta. The range of colors is about the same as in Portulaca, minus the yellow and plus a black. These are varieties of the little purple phlox that Mr. Drummond introduced, and that grows so prettily in the woods of Texas.

"The Tom Thumb nasturtium is so well known and so highly appreciated as a bedding plant that it is unnecessary either to recommend or describe. There is, however, a species of Tropaeolum compared with which the Tom Thumb nasturtium looks coarse and overgrown. This is T. minus coccineum. The habit of the plant is very dwarf and compact, the leaves small and the flowers scarlet. It may be used very effectively either to fill a bed or to edge one composed of the ordinary Tom Thumb varieties.

"The dwarf French marigold must not be overlooked. The yellow and striped varieties are both desirable, and are used rather extensively for large beds. There is a Tagetes that is used much more largely—T. signata pumila. The leaves give the whole plant a graceful plumose appearance; the flowers are small and single, and are produced in great profusion. This annual is very effective where a mass of yellow is desired, and is often used as a substitute for yellow calceolaria. Success with tagetes is better than failure with calceolaria.

"Saponaria calabrica, and its white variety, S. C. alba, are also very desirable. Their habit recommends them, being so dwarf and compact that they give to the bed a cushion-like appearance, that suggests the possibility of standing on it without materially depressing it. Add to this its profusion of pretty stellate flowers, and we have a little garden that deserves to be better known.

"Arctotus breviscapa is a showy annual. It is an orange-colored composite, and very much resembles the gazania. Eucharidium grandiflora, in the size and form of the flower, very much resembles the Clarkia, than which it is dwarfer and more compact, and is more acceptable as a bedding plant. The habit is all that could be desired, and the flowers are attractive, not only for beauty, but for the curious appearance presented by them, possessing as they do the peculiar trilobate petals so characteristic of the Clarkia and its allies.

"There are no plants that flower more profusely than the annual viscarias. The flowers are produced on about the same level. They are dwarf, and their flowering season is considered protracted. A bed of these, with the colors judiciously arranged, and the seed sown rather thickly, so that the plants will afford support to each other, forms one of the prettiest objects imaginable.

"The remarks made on viscaria apply to the annual candytuft and its varieties. For blue, a color always at a premium, we have the ageratums, tall and dwarf; the companula pentagonia. Lorei and speculum; nemophila insignia, etc.; while for annuals with ornamental foliage, the most prominent are perhaps Perilla nankinensis, with leaves that appear to have been dipped in ink; and amaranthus melancholicus ruber.

"Time fails me to write in detail of the Godetia, with its large and brilliant flowers and many varieties; of the superb but little known Salpiglossis, the double Jacobaea, silene pendula and many others. I cannot close the list without calling attention to one other genus—eschscholtzia (California poppy). Under favorable circumstances it is liable to become perennial, and so is the nasturtium; but no list of annuals would be complete without the latter.

"In addition to E. Californica, yellow, and E. crosea, orange, there are others which are the outcome of cultivation and selection. E. rosea has petals which are white on the upper, and rose on the under surface; while E. mandarin is yellow on the

upper, and red on the under surface. There is also a white and a double variety.

"In conclusion let me offer two suggestions. First, when colors are planted separately, and intended to form a design however simple, always plant the individual colors in sufficiently large masses, especially when the plants are inclined to be tall, the stems weak and the flower heads large. Otherwise the bed is liable to become a mixed one. Take for instance, the larger varieties of Phlox, planted in narrow concentric circles. The weight of the blooms will cause the stems to decline from the perpendicular; when the pink will become mixed with the scarlet, the white with the purple, and the whole be hopelessly blurred; while if the zones were wider, though the continuous edges might become more or less intermixed, the general effect would be preserved.

"Secondly, use solid colors. Flowers with spots, stripes, etc., are often very pleasing when we have time to examine them individually; but as effective bedding plants they are often a failure. What can be richer than a mass of nearly black flowers brought into contrast with golden or yellow; or what more chaste and pretty that a sky-blue in company with a pure white?

"Such combinations attract us in spite of ourselves, and it is certainly better for the effect to compel the admiration, than for the eye to have to seek the effect."

The thanks of the society were voted to Mr. Franklyn for this instructive essay, and, as he will soon leave the city, his name was placed upon the roll of honorary members.

COMMENDATION OF H. M. LA RUE.—At the Fresno Fruit Growers' Convention the following resolution was adopted:

Resolved, That we, the fruit growers of the State of California, in convention assembled, earnestly recommend the appointment of the Hon. H. M. La Rue of Sacramento for the position of Chief Viticultural Commissioner at the World's Fair.

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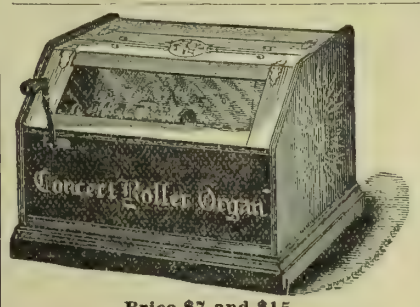
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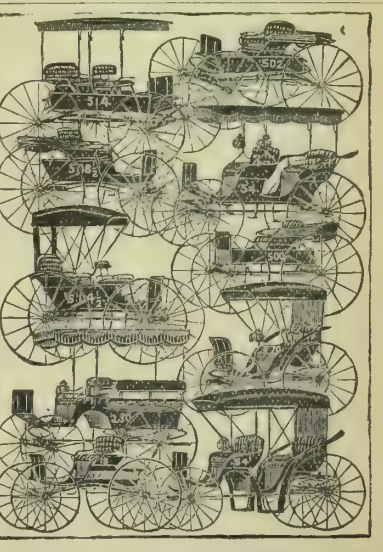
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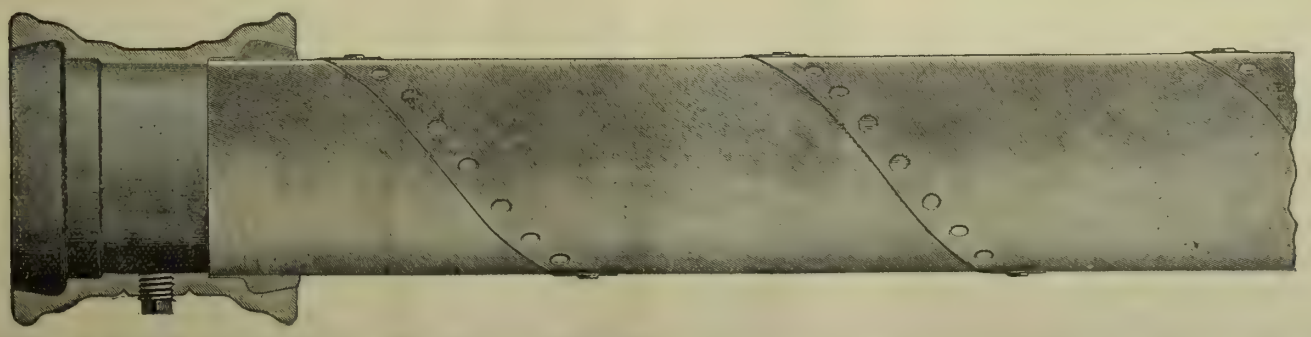


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The Philosophy of Electrical Action on Vegetable Growth.

TO THE EDITOR:—From recent experiments in France and other localities, so frequently alluded to of late in your columns, it has been demonstrated, beyond all doubt, that the application of the electric current to certain species of vegetation has the effect, in some mysterious manner, of accelerating their growth. The question therefore naturally arises, by what law are such effects produced upon vegetation. Is it true, as was formerly the general belief, that electricity is a fluid substance, contained by all material things, and that this fluid is composed of, or contains, the necessary fertilizing properties, sufficient to produce such effects upon the growth of vegetation? If such is the fact, then the application of electricity to the barren lands in certain sections of our country would have the effect to clothe them with vegetation and give value to the sterile and barren wastes upon our planet. But, owing to the advance in thought of the present century in relation to natural phenomena, the conclusion adopted by our more advanced scientists is that electricity is not a fluid substance, but that it is a force or a form of energy. If such is the case, and it does not contain within its composition those elements necessary for plant life, by what law then (would be naturally asked) does simple force or energy have the effect to stimulate the growth of vegetation?

In order to give a satisfactory answer to this question, it is first necessary to understand, or, at least, to have some idea of the process by which plants are caused to grow. Now, the phenomenon of the growth of all forms of organic life is due to a combination of the elementary atoms contained in the soil, and it is only when such atoms are in activity that their combination and crystallization into organic substance is possible, and that such combinations and the solidifying of the atoms is an effect of the interference of their motions. We arrive at this conclusion from an investigation of other phenomenon, as, for instance, in the phenomenon of light. It is demonstrated by experiment that an interference in the motions of the atoms which give to our minds the conception of light, have the effect to destroy the phenomenon and to produce darkness. So, also, in sound it is found that an interference in the sound waves has the effect to produce silence. For such reasons, we are justified in the conclusion that if the atoms which compose the various elements were at rest, the formation of substance would be impossible, but that it is in consequence of their continual activity and as an effect of their interference that solid substance is produced. The reasons why such effects are the result of an interference in the motion of the elementary atoms, the peculiar process by which such effects are produced, as well as the operation of the laws which regulate their motions, is, of course, beyond man's conception; yet we find that the law is uniform and constant in its operation, a fact of which the existence of the universe, with its endless variety of phenomenon, furnishes sufficient evidence. Under such circumstances, it is evident that any means that it would be possible to adopt, which would have the effect to accelerate the motions of the elementary atoms contained in the soil, would, from the nature of things, accelerate the growth of vegetation upon its surface, since the interference in their motions and consequently their combination, would proceed at a more rapid rate, and their crystallization into plant life would be accelerated in a corresponding ratio. It is for such reasons that vegetation under glass, as well as steam pipes buried beneath the soil, have the effect to put into greater activity the elementary atoms of the soil, by a contact of atoms and to accelerate the growth of plants.

For such reasons as given, we are justified in the belief that this mysterious phenomenon known as electricity is simply the motion of atoms of some one of the elements, varying, of course, according to circumstances, or of the conditions under which such motions are produced; for instance, there are reasons for believing that the lightning flash is an effect of the intense motion of the atoms of oxygen gas which has accumulated in excess in the atmosphere above, set free from the surface of the waters of our planet by evaporation, while it is possible that the phenomenon of plant growth may be accelerated by stimulating the motion of the atoms of carbonic acid gas within the soil by imparted motion, produced in the battery by the decomposition of metallic substances; and in my opinion, it is this motion imparted by contact to the elementary atoms of the soil, by the intense motion of atoms of certain elements from without, which is termed the electric current, that explains the mystery of the increase in the growth of vegetation, as an effect of its application.

The evidences presented by the fossil remains of various forms of organic life, found beneath the earth's surface, show us that in prehistoric ages all forms of life were of a gigantic growth, compared with the present; hence the question would naturally be asked, why are all forms of life gradually decreasing in dimensions? Is it because the elements of which they are composed are being continually lost or destroyed? No; but since experiment has demonstrated the fact that in order to increase in dimensions the growth of vegetation it is necessary to stimulate the atoms of the elements which compose them into greater activity, it is therefore evident that the gigantic growth of organic life in the past, was owing to the greater activity of the elementary atoms. But why their motions should gradually decrease, or by the operation of what law such effects are produced, or for what special purpose, is, of course, beyond man's conception. At any rate, judging from the present growth of all forms of organic life, compared with their dimensions in the past, it is evident that the elementary atoms are tending to a passive state, for which reason we must assume that a state of rest is the normal condition of the elementary atoms of which the universe and all things are composed. It is therefore only a question of time when the universe, with its myriads of celestial bodies, will become, like our own satellite, a cold, lifeless collection of dark masses, having fulfilled their destiny, as designed by the Creator and Ruler of all things, have now become a collection of cold, lifeless and dark objects, like old abandoned hulks upon the ocean, floating at random in space.

C. W. HASKINS.

Canals and Deep Water Ways.

A large amount of interest seems to be engaged, just at this time, in opening up water ways for transportation in various parts of the country. In our own State, much interest is felt in the proposed canal through the San Joaquin valley; and no wonder, when the railroad charges are as much for haulage from Visalia to San Francisco as for the same amount of transportation from Visalia to St. Louis.

Careful estimates show that a good and continuous water way can be opened from navigable water on the San Joaquin to Buena Vista lake, a distance of about 220 miles, for about $1,205,000, an average of about $5,500 per mile; thus opening to the cheapest kind of transportation one of the grandest and most productive valleys in the world; and one capable of supporting about as large a population as is now found on the entire Pacific Coast.

With such a canal, and a proper location of feeders in the shape of cheap electric roads along both sides of the canal, there is no estimating the amount of products which might be marketed, or the wealth of land which might be thereby created. That such a work will soon be accomplished there can be no doubt, and it should be constructed as far as possible, by persons having interests in that valley which call for cheap transportation. Such a work should never be allowed to fall into the hands of outside owners whose charges might be "all that the traffic will bear." This subject will soon be before Congress. The Secretary of War has already transmitted Major Heuer's report on the practicability and need of the improvement.

Another important California improvement is the projected canal from the head of San Francisco bay to San Jose, so as to connect that growing city directly with all the great water ways of the State.

DEEP WATER WAYS AT THE EAST.

The combinations of railway facilities is everywhere driving the people to protect themselves by going back to the old time systems of transportation by canals. There is a determination to secure cheaper transportation between the Great Lakes, into the vast country bordering upon Ohio, by a deep water ship canal through the center of that State to the Ohio river. Preliminary surveys have been made and there is no doubt but that a practicable and easy deep water way can be found.

Energetic measures are also being taken to secure a first-class ship canal—sufficient for war ships from New York inland to Philadelphia, connecting the Delaware and Chesapeak Bays. Such a canal will be but the beginning of a grand inland water way throughout the entire distance of the Atlantic coast to the Gulf of Mexico, and possibly through the upper portions of Georgia, Alabama and even to the Mississippi river, some two or three hundred miles above New Orleans. Such thoughts are even now in the minds of enterprising, progressive capitalists and engineers.

Such a work may appear chimerical, just now, but there is no computing its value both in peace and war. When this nation again doubles its population, which it will do during the lives of many who are now in the meridian of life, and we number over 120,000,000 of people, no useful project will be too great or too costly to be accomplished.

Our lake shore traffic has already reached a magnitude which no one could hardly have dreamed of 50 years ago, and it is growing with a rapidity absolutely startling. What it will be by the middle of another century no man can tell—no man will venture to compute. The eyes of the entire nation are now turned in that direction and estimates and calculations are being made for improvements which are greatly needed, and which will soon become indispensable. Our neighbors on the other side are outstripping us in this direction, with possibly a more special eye to the probabilities of some future international conflict as well as to the needs of commerce.

A 21-foot channel around all obstructions to natural navigation, is what is needed and demanded from Lake Superior to the Atlantic, by those who are urging active measures in this direction. Canada, with her three millions of people, has already spent $60,000,000 in perfecting a deep water way on her side; while this country with its sixty millions has spent less than half that sum.

Even with that small expenditure the *saving* in transportation during the last year only, is said to have been $150,000,000 more than the total cost of those improvements. It is claimed that only $3,000,000 more of expenditure would give us 20 feet of water. Congress will be urged at its present session to grant that sum. Who would oppose it? Even if destiny should so order that our neighbors and ourselves should become one and the same country, the improvements on both sides will be an urgent necessity for commercial purposes alone, within a very few years.

At the recent Deep Water Way Convention held in Detroit, it was stated by one of the speakers that when Canada has completed her improvements now under way, unless corresponding improvements are made on this side, "the United States could no more compete with Canada than a wheelbarrow could with a freight train." Our shipping interests on the Lakes, large as they now are, would be vastly increased if our lake vessels could only get to the ocean and engage in ocean business during the five months of the year in which navigation is practically closed in those high northern regions.

The improvement of the Lakes also implies an early deepening and widening of the Erie canal to a deep water ship way. That work would also be as much needed under a political union of the two countries as now.

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Time and Date.

Time of day is expressed in either of two ways:

1. By düp (hour) followed by the proper ordinal.
2. By GLOK (clock) governed by the preposition SU or LEN.

Düp telid, two o'clock (second hour).
Tel su glok, two o'clock (two on the clock).
Düp telid e lafik } half-past two o'clock.
Tel e lafik su glok }

In expressing dates the order is year, month, day.

Balmil jöltum zülsetel balul telsekilid (or 1892 balul 23d).

January twenty-third, eighteen hundred and ninety-two (or January 23d, 1892).

Complements of time, measure, weight, etc., are expressed by the nominative.

Oblibos is dels fol, we shall stay here four days.

Paun de kaf kostom sentabs fols, a pound of coffee costs forty cents.

The suffixes UL (from MUL, month) and üdel to the cardinal numbers give respectively the names of the months and the days of the week.

Balul, January (first month).
Lulul, May (fifth month).
Kilüdel, Tuesday (third day).
Velüdel, Saturday (seventh day).

Exercises.

Malüdel binom del mälid viga—Velul binom mul velid yela—Man at ebinom is dels fol, äkömom al dom obik al selön obe dogis e nimis votik kelis älemom evigo—Dogs nemödik, binoms gudik ab votiks valik binoms vemo badik, no lemalöd omis—Golob ko ol len düp mälid e lafik—Kimna esedol evigo flolis jiblode omik?—Li-sevol plobo cilis et, binoms vemo flenik—Baiul binom mul balid yela e velul binom velid kel labom delis kilsebal—Kiöp äbinom ädelo düp kilid blod olik?—Kikod no goloms in fot kö nims so mödik binoms?—Binoms mälüdels lul in balul—Balüdel binom ai del balid viga, ab no ai del balid mula; del balid de balul at äbinom mä'üdel.

Which day is the first of the week?—Will you come to my uncle's house to-morrow at four o'clock? Why do you ask me to buy coffee at forty cents a pound when my brother sells it at twenty-five cents a pound?—I was at your friend's house when your brother came there and gave the children some string with which to tie their flowers—I am at home to-day, but to-morrow I shall be at your grandfather's house, where I shall remain two or three days until his sister comes—What do you know of that man who sold your brother a horse day before yesterday?

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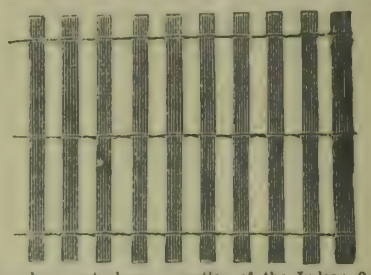
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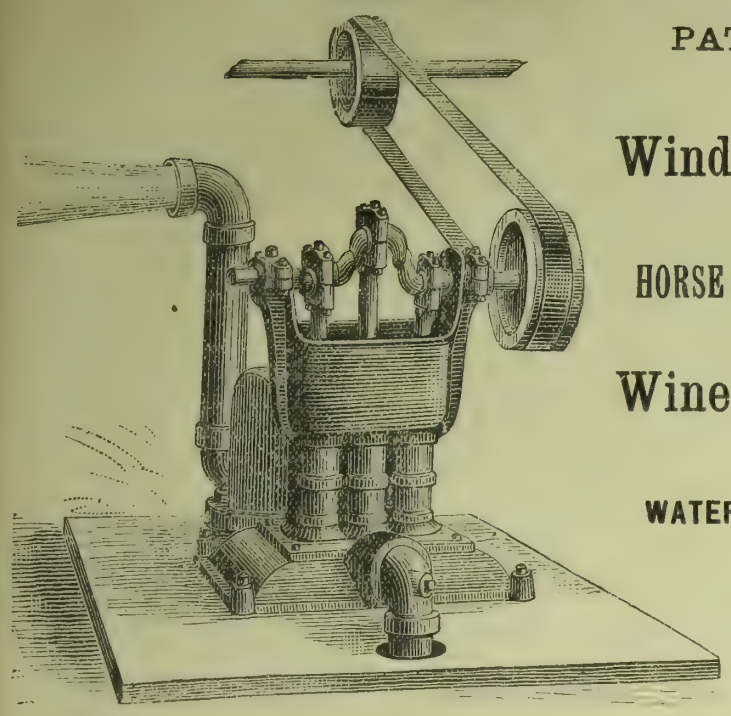
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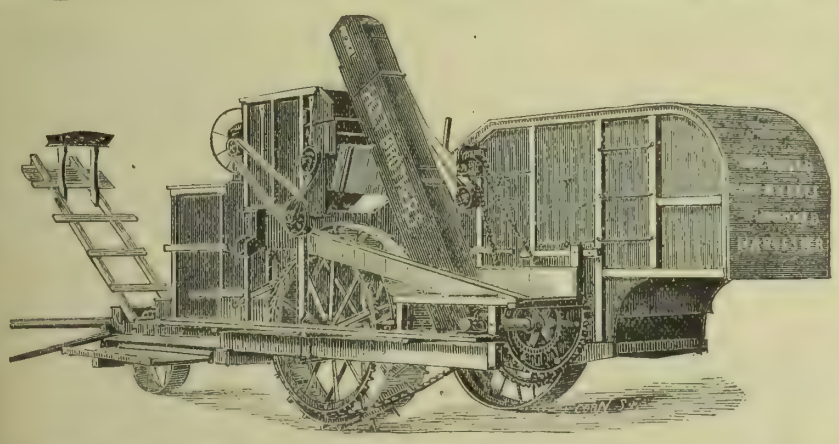
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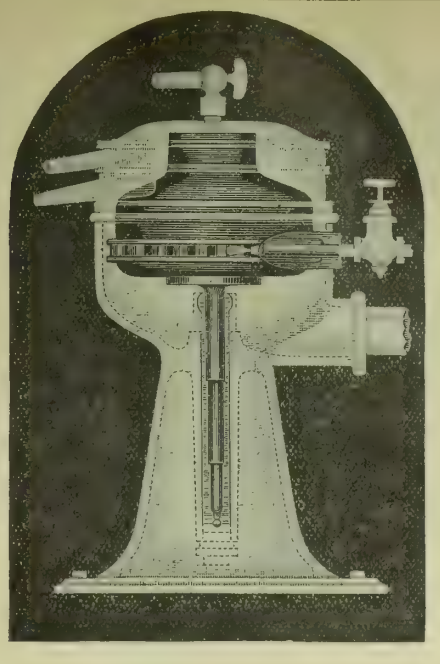
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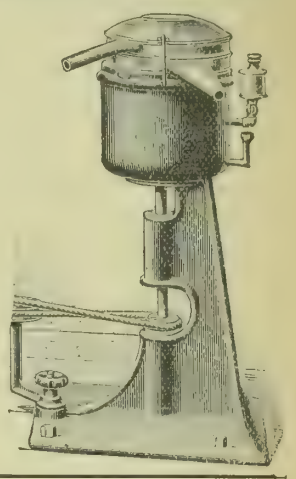
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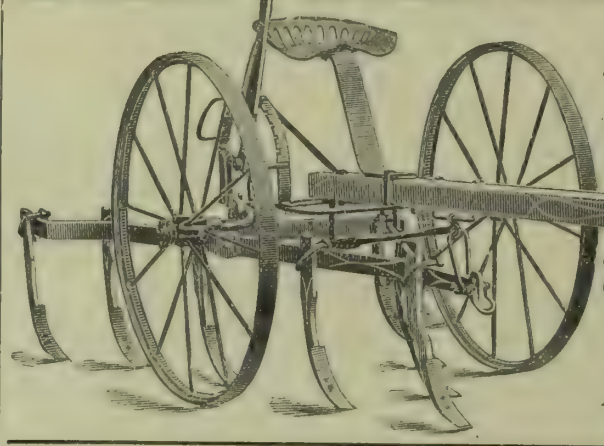
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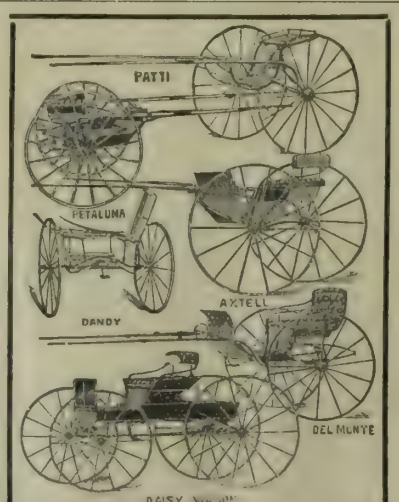
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PIANOS

Farmers' Institute Organization.

We insert the following for the information of those who have or are about to organize local associations for holding farmers' institutes:

Constitution of the Fresno County Farmers' Institution.

Preamble.—Realizing that in "union there is strength," in many counsels there is wisdom, and that the farmer has need of keeping pace with those engaged in other pursuits in intelligent and progressive movements; also that great benefit and pleasure have been derived from the session of the Farmers' Institute held here under the auspices of the Board of Regents of the State University: We, the people of Fresno county, hereby form a permanent organization, to be governed by the following Constitution and By-Laws:

Constitution.—*Article I.*—Section 1. This organization shall be known as the Fresno County Farmers' Institute.

Sec. 2. It shall have power to adopt its own Constitution and By-Laws, rules of order and order of business.

Article. II.—Section 1. The officers of the Institute shall consist of a President, two Vice-Presidents a Secretary and a Treasurer.

Sec. 2. These officers shall constitute an Executive Committee, for the transaction of all business that may come before the Institute when not in regular session.

Sec. 3. The term of office of each officer shall be one year, the officers to be elected by ballot.

Article.—III. Section 1. The annual meetings shall be held in April of each year, the exact date to be fixed by the Executive Committee, and shall be held in the city of Fresno, at which time officers shall be elected and other business transacted. Visitors shall be invited, both from home and abroad, and a program of exercises shall be previously prepared for the entertainment of those present, including addresses by noted individuals upon subjects of especial interest to farmers.

Sec. 2. Similar quarterly meetings shall be held in the months of January, July and October, the exact time and place of meeting to be determined by the Executive Committee.

Article IV.—Section 1. The duties of the Executive Committee will be to arrange programs for the Institute, audit bills and the books of the Secretary and Treasurer. Three members may form a quorum.

Article V.—Section 1. The duties of the President shall be to preside at all Institute meetings and at all meetings of the Executive Committee; to call such meetings when necessary; to appoint committees and to cast the deciding vote when there is a tie.

Sec. 2. The duty of the Vice-Presidents shall be to preside in the absence of the President.

Sec. 3. The duty of the Secretary shall be to keep a record of the proceedings of each meeting, keep a roll of its members, attend to the Institute correspondence, send to each of the county papers, one month in advance of each meeting, notice of such meeting, together with a program of exercises; to receive all moneys paid to the Institute and turn the same over to the Treasurer, taking the Treasurer's receipt for the same.

Sec. 4. The Treasurer's duty shall be to receive all moneys paid over by the Secretary and pay out the same on warrants drawn by the Secretary and approved by the President. The Treasurer may be required to give bonds.

Article VI.—Section 1. Any person of good moral character over 18 years of age may become a member of this Institute; if a lady, by signing the roll of membership; if a gentleman, by signing the roll and paying in advance the yearly dues, 50 cents; this being for the fiscal year of this Institute, no deduction being made for the first year, though it is less than twelve months.

Article VII. Section 1. All proposed amendments to the Constitution must be submitted at a regular meeting of the Institute and lay over for consideration for at least one quarter, and a majority vote of all members present will be required to adopt.

Danger in Wearing Rubbers.—A chiropodist says: Since the streets became so muddy I have had a number of sufferers apply to me for relief. If a man has a corn I can take it out and relieve him, but if he is suffering from what I call "rubber fever" I can't help him and can only prescribe liberal foot bathing and a removal of the cause of the trouble. Rubbers should only be worn to keep the wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he had waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger and the cause of many more serious colds than they avert. —St. Louis Globe-Democrat,

A New Book for Farmers.

Readers of the Rural Press who desire to inform themselves of the modern machinery adapted to farm work, should write to Baker & Hamilton, San Francisco, for a copy of their latest catalogue. It is a handsomely illustrated book of 216 pages, and describes every implement used by the farmer. It will be sent free to any person sending for it. In writing, state that the catalogue mentioned in the Rural Press is desired.

Try.

A correspondent of the *Farm and Fireside* who has had considerable experience in such matters, suggests the following:

For sore throat, inflamed tonsils, quinzy and even diphtheria, try a gargle made of equal parts of soda and pulverized alum, with a little carbolic acid. Put in a large bottle and add water.

If any one should have occasion to use, as I have had, a poison antidote, it would be well to know that the white of an egg will absorb a metallic poison, giving a little time to procure the proper emetic. I have heard but recently that tobacco tea is an efficient antidote for arsenious poisons.

If an insect crawls into the ear, close the other with a finger, shut the mouth and pinch the nose. The insect will crawl rapidly out.

If the child pushes a bean, kernel of corn or other obstruction into its nose, rub the nostril with Scotch or other snuff to provoke sneezing.

If anything gets into the little one's eye, a mother would not refuse to wipe it out with her tongue when she has learned that it would cause an irritation to do so.

For catarrh I use one-third pulverized burnt alum and two-thirds refined borax. Mix well and snuff up the nose a very small pinch of it both night and morning. If the throat is inflamed I take a pinch of the mixture and let it dissolve in my mouth. For a cold in the head the above snuff is excellent when snuffed up the nose.

Another Horticultural Society.

Centerville, Feb. 27.

To the Editor:—A farmers' and fruit growers' society was started in Washington Township, Alameda county, on Wednesday evening, Feb. 24th. The officers elected for the ensuing term of six months were: H. Overacker, Jr., President; J. C. Shinn, Vice-President; H. E. Mosher, Treasurer; J. E. Jacobus, Secretary. Regular meetings will be held the third Saturday in each month, and interesting speakers will be engaged whenever possible.

The society will be known as the Farmers' and Fruit Growers' Association of Washington Township, and the aim, as set forth in the constitution, adopted: "To improve ourselves by exchange of ideas at regular meetings, and guard the welfare of our business." Mr. Craw was present at this meeting with his microscope and a collection of scale insects and parasites that proved very interesting and instructive to all present. Member.

About San Jose.

In a recent trip to this charming city of orchards, rather than "Garden City" as they are accustomed to call it, the writer saw realized, his ideal of what the greater part of California fruit lands are likely to become some day. Grain fields have pushed back the pastures, fruit trees the grain fields, and now they are uprooting orchards to make room for residences. All property for sale seemed to be at steadily advancing values, and an air of general prosperity pervaded the city and surrounding country. Offices of great packing, shipping and fruit-drying houses gave every indication of the transaction of a large amount of business.

A GREAT HOTEL.

Probably these considerations, and a constantly increasing patronage prompted Tyler Beach, the veteran hotel proprieter, to add the annex to the St. James Hotel, which gives him 212 sleeping apartments besides large offices, dining-rooms, a new hydraulic elevator, etc. He has a farm three miles away, where a large part of the supplies are produced. The eggs are on the hotel table before the echoes of the cackle have died away. Milk comes in while it is still warm from the cow, and the butter has that quick, fresh flavor that you will not get at more than one place in a month's travel. Believing it to be an impression current among the ladies, that the shortest road to a man's heart is by way of the stomach, it occurred to us while noting the extensive improvements going on at the St. James in a city where there are so many good hotels, that the increase of business calling for the annex arose from the uniform excellence of all supplies provided for the table, coupled with fair rates and uniformly courteous attention. In future, when visiting San Jose, we shall remember the St. James.

F. S. C.

Good Butter.

Speaking of good butter, an English exchange says: "There are five things to aim at in making butter for the best market. These are uniformity in color, in texture, in salting, in packing, and leaving no water in the butter."

Uniformity in color is the most important, and this cannot be had unless good coloring is used at this season. There are many colors on the market ranging from poor to good, but the best dairymen—those who have a reputation for choice butter—use and endorse Wells, Richardson & Co.'s Improved Butter Color. They unite in affirming that this color is the strongest, the most natural and the one make that is always the same in strength and color. When the best costs no more than inferior kinds, why not use the best?

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It contains more fresh and useful agricultural information for the readers of this coast, by far, than can be obtained through any other publication issued here or elsewhere.

Its market reports are prepared thoroughly and with the greatest care possible for the benefit of the producer.

Its illustrations are probably the most practical, original and helpful of any agricultural journal in the world.

The Rural has long been noted for its fidelity to the farmers' cause and its vigorous advocacy of progressive principles, its exposure and denunciation, in unmistakable terms, of oppressive monopolies, corrupt legislative and judicial practices, political frauds and public abuses, wherever found, and has no occasion or disposition to take a back track as to discharging its representative duties.

To extend and solidify the farmers' organizations by better education and reliable information as to their natural rights and powers, the unwarrantable encroachments of powerful combinations and unscrupulous trade rings, political demagogues, and barefaced frauds and insidious enemies that beset the pathway of honest men, are leading objects of our vigilance.

California is a great and rapidly developing State. Its agricultural, horticultural and livestock interests are becoming second to none in the Union. The Rural will endeavor to do its whole duty in aiding its true progress.

To make our efforts effective, our enterprise must be supported by the great body of farmers, substantially, by prompt and liberal subscriptions to the paper, correspondence for its pages, and the unhesitating and unqualified backing and defense of its honest acts in behalf of the leading interests of our rural population

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Holt Brothers' Improved Link-Belt Harvester.

In the inland valleys of the Pacific Coast the Combined harvester has become the universal machine for harvesting. There is a unanimity of opinion that makes this mode of harvesting a settled question and a necessity so vital, that our great grain growing farmers would hesitate to put in large crops if they had to harvest in the old way.

One of the great difficulties in using these Combined Harvesters has been that of cutting on hillsides and uneven land. For the last two years Holt Brothers' Company has given a great deal of time and thought to perfecting a machine that would cut on uneven ground, as a large portion of our fields are on the hillside. During the last year, one of these side-hill Combined Harvesters was thoroughly tested on rolling and hill lands, and proved itself capable of adjusting the machinery part so that it remained on a level.

This side-hill harvester went through the whole season of 1891, and in every way fulfilled the most sanguine expectations. In a word, men who raise grain on rolling and hill lands must have a side-hill Combined Harvester to harvest it, or be at the enormous expense of getting their crops in the old way.

Detailed and particular information can be had of the benefits of this side-hill Combined Harvester by addressing the Holt Manufacturing Company, Stockton.

Oliver Chilled Plows.

During all the years of civilization the plow has been the chief implement used by man to till the earth. The forked stick used by the Mexicans, and the so-called bull-plow used by our forefathers, have been superseded by the light-chilled steel plow of modern times.

It is a tribute to the genius of American industry and skilled mechanism to know that the manufactory at South Bend, Ind., has succeeded in making a plow that is used in all parts of the world, and the demand has become so large that their plant is now the largest manufactory in the United States of America, or the continent of Europe.

They make an exclusive business of manufacturing only plows, but their line of goods constitutes the gang for the prairies and the wheat fields of the northwest, as well as the single plow for the farmers in the East, and the vineyard plow for the horticulturists and the grape grower.

It is not too much to say that in economy, durability and efficiency, the Oliver Chilled Plow is equal to any.

This great American institution has gained a popularity, not only by the merit of their plow, but have followed a system of liberality and fair dealing to dealer and farmer, so that they are enabled to have agencies in all parts of the United States, and in the principal countries of Europe, Asia and Africa.

Their agency at 37 Market St., San Francisco, has been in the hands of men who have followed one line of fair dealing and liberality, till it has become one of the largest distributing points for the plows in California.

H. C. Shaw Plow Works.

The activity and bustle incident to filling orders and shipping agricultural implements from this great establishment was forcibly illustrated by the large line of goods that were packed, addressed and awaiting the draymen in front of their store. Our reporter, as a matter of interest and curiosity, made a record of the following addresses to which the goods were to be shipped, viz: Napa, Davisville, Ukiah, Healdsburg, Bakersfield, Hanford, New Zealand, Santa Barbara and Saticoy. Mr. Shaw has kept abreast of the times as a manufacturer and dealer in agricultural implements for the last 20 years, and sagacity and long experience have enabled him to provide for this season a full line of the best mowers, headers and cultivators, among which is the celebrated Morgan Spading Harrow.

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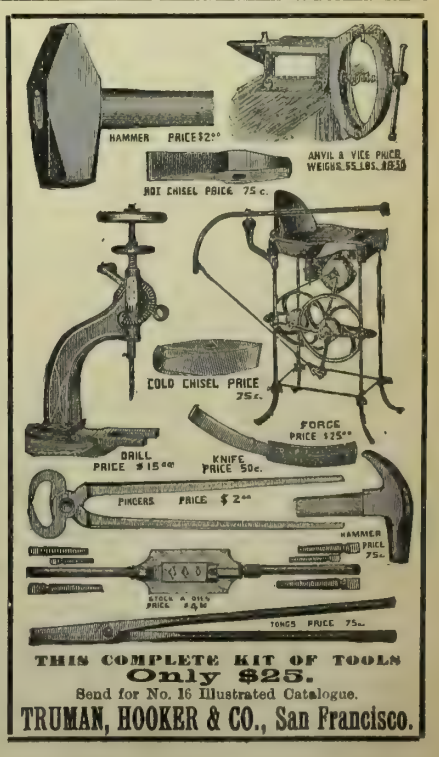
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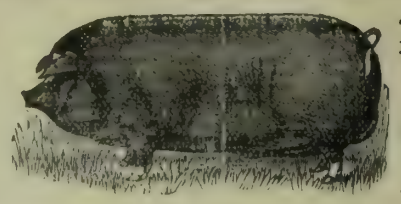


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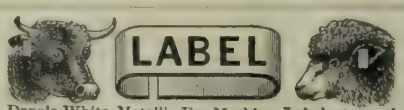
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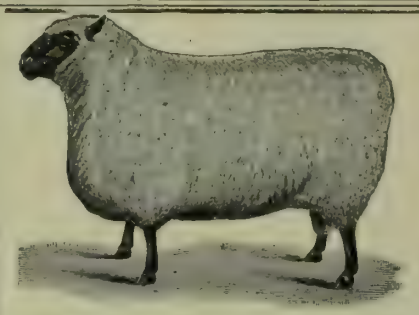
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 29, 1892.

General trade in farm products continues only fair, being restricted by light obtainable supplies and buyers more or less offish. Weather continues unusually favorable for growing crops and outdoor work, causing interior exchanges to predict larger cutturns of all kinds of crops than in any former season. There is a large list of deep-sea vessels in port which causes low outward charters to obtain. This large tonnage is rather a hopeful sign for next season's wheat growers, for it insures against exorbitant outward charters. The money market is fairly easy, with term loans securable after assessment day at favorable rates of interest to borrowers on gilt-edged security. The same conditions appear to obtain in the Central States, for a New York financial journal says: "It is doubtful whether the West as a whole has ever enjoyed a prolonged period of as low a rate for money as has prevailed there."

Foreign Hop Review.

Mark Lane Express, Feb. 8: A rather better demand for 1891 English hops has prevailed, but the principal transactions, however, have been in Californians, some heavy sales having been effected at prices fully equal to late quotations, Most of the Pacific Coast hops sent over to this market are already ordered, and, consequently, there is no accumulation in merchants' warehouses. Consumers appear pretty well salisfied with the quality and condition of these hops, and, moreover, the prices are considerably lower than for the leading grades of English, the latter being too scarce to admit of their sale at such values as Californians. Continental markets have become more active, and there is a corresponding improvement in the currencies, a general recovery being noted. Reverting to our own market, it may be mentioned that the few holders of last season's crop continue very firm in their demands, and it is probable that when the spring trade sets in they will be able to obtain the higher prices that they are now asking. In regard to old olds the situation remains unchanged. There is only a small inquiry, and values keep low.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June
Thursday	8s00¼d	8s00¼d	8s00 d	7s11½d	7s11 d
Friday	.....	7s11½d	7s11½d	7s11 d	7s10 d
Saturday	7s11d	7s11 d	7s11 d	7s11 d	7s09¾d
Monday	.....	.....	.....	.....	.....
Tuesday	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s0d	40s3d	40s d	Steadier.
Friday	40s	40s d	40s	Quieter.
Saturday	40s	40s d	40s	Steady.
Monday	....	....	....	
Tuesday	....	....	....	

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	175¾	175¾	176	172½	170
Friday	174¾	174¾	174¾	171⅝	168¾
Saturday	174¾	174¼	174¾	171⅝	168¾
Monday	....	....	....	....	....
Tuesday	....	....	....	....	....

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Sept. H.	L.	Seller 1892. H.	L.
Thursday	169½	167½	145½	145¼	143⅝	143½
Friday	167½	166⅝	....	....	143⅝	143⅝
Saturday	167½	166½	....	....	143⅝	143⅝
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	....	....

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892 H.	L.
Thursday	99½	99	....	....	....	....
Friday	100	99½	....	....	....	....
Saturday	101½	100⅛	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	....	....

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 19.—Bradstreet's: Wool trade quiet, but prices hold steady at a decline. Goods market has been in such a sluggish condition that manufacturers are not inclined to buy wool beyond their immediate wants, and there now appears to be reason for believing that prices are going lower on both domestic and foreign wools. Importations of these wools have been large, and dealers have been forced through competition and the inferior quality of the wool to offer their stocks at much lower prices than they did last year. On choice Australians values are firm and unchanged, but the greater part of imports are defective wools and below the average of last year. While the buyer has obtained his wool at lower prices, concessions made by the dealer have not been in most instances commensurate with the difference in quality of wool bought now and in 1891. At the London sales over 9000 bales have been taken for this country and Canada. There has been a moderate demand for fleeces, and prices are said to be fairly firm, but it is noticed that dealers are becoming tired of holding their stocks. Very little is being done in either California or Texas wools.

NEW YORK, Feb. 26.—*Bradstreet's* says: The distribution of wool has been heavier in all the leading markets. The improved condition of the goods market has encouraged manufacturers to buy and dealers are now willing to make the desired concessions. The decline in prices has been caused largely by the buying of foreign wools. The manufacturers bought freely at the London sales, and a large part of the direct imports from Australia were purchases of the manufacturers. This, coupled with the dull market which we have had for months and a prospect that large stocks from last year's clip would be left over, has caused the dealers to weaken and accept the prices offered by buyers. Not only are domestic wools lower, but Australians show even a larger decline from prices of a year ago. The sales of California wool show good increase, but prices were lowered considerably, some lots of defective fall having sold at 9c. Stocks of Territory wool are large and holders are anxious to dispose of them. Good lots of Territory wool would not bring 58c, although 60c has been paid within a few weeks for the same. Carpet wools are quiet, owing to a better demand and higher prices for carpets; quotations are unchanged and firmer. Stocks are not excessive in any American markets.

NEW YORK, Feb. 28.—With the approaching date for the new clip, and more than possible outside additions to the supplies, there has been a decided pressure to place stocks, and manufacturers have taken every advantage of what is unquestionably the lowest general market known for a number of years. Fortunately the business has closed out many lines of inferior wool that have clogged the market for some time. It is reported that Montevideo will seek this market. Importers claim that the product can sell here on a basis of 60@62c cleaned. This would be close to much of the Territory. The closing of the London auction, February 20th, showed a net decline of 10 per cent from December, which were barely above the lowest point ever reached. Sales at New York were 809,000 domestic, and 495,000 mostly common foreign. Sales at Boston were 3,500,000 pounds, 800,000 of which was foreign. Some choice Territory brought 28c, but 15c to 20c covers most of the sales. Six hundred and fifty thousand Australian was sold at 34@42c. Philadelphia did a fair trade with the assistance of Eastern buyers.

Eastern Hop Market.

NEW YORK, Feb. 28.—Hops met little brewing attention and no export call; spot Pacific and State ranged lower and alike; common to choice '91s, 20@25c; options have ruled closely to cash; California closing, April, 22½@24c bid and asked; May, 23½@25c; June, 24¼@25¼: exports for the week, 490 bales. Revised crop figures put the State at 140,000 bales and Pacifics at 95,000.

Eastern Dried Fruit Market.

NEW YORK, Feb. 28.—The stock of unpeeled peaches has been perceptibly worked down by recent easy figures. Reports of 100 carloads of prunes on the coast are credited to the extent that it makes buyers somewhat indifferent. Good ungraded small are quoted at 6@6¼c, and are scarce. Forties to fifties brought 10c; fifties to sixties, 9c. Raisins are a drug. Two-crown bags are quoted at 3⅞@4c; Three crown, 4¾@5. The lower price is for prime, but damp for keeping in stock. The large ones sell where they can be used and not displayed. Boxes range from $1.05@$1.35 for loose and the low style of layers here. Apricots have unaccountably lost their customary precedence, though cheap peaches may form an incident. Boxes, 8@8½c; bags, 6½@7c. There are offers to land them here at 6@6½c.

Miscellaneous.

NEW YORK, Feb. 28.—Honey, quiet; some Philadelphia owned was offered at 7¼c. Lima beans are in useful demand; choice are slow and weak; best foreign, $1.30@$1.31; California, $1.30.

General Remarks and Statistics.

Cereals.

The London *Times*, *Mark Lane Express* and *Dombusch* all agree that the wheat acreage of the United Kingdom this coming year will be the smallest on record. Not more than 2,250,000 acres are likely to be sown, and the normal outturn on such an area will not be more than 68 000,000 bushels.

The Cincinnati *Price Current* makes an estimate of the wheat surplus on hand for March 1st as follows: The visible supply and farmers' stocks last year, March 1st, were 135,000 000 bushels. Adding the crop of 1891, 612,000,000 bushels, makes a total of 744.000,000 bushels. The exports for the year ending March 1st are 205,000,000 bushels; consumption and seeding, 360,000,000; making a total of 565,000,000 bushels. This leaves 182,000,000 bushels as the logical indication of the farmers' stocks and visible supply on March 1st. If this is correct, the consumption during the next three months will absorb 100,000,000 bushels, spring seeding 15,000 000 bushels, leaving 67,000.000 bushels only for visible supply, 'farmers' reserves and exports.

The local call board wheat market continues to move in sympathy with the erratic course of the Chicago market for futures. There does not appear to be any well-grounded reason for it, seeing that the speculative option in Chicago is May. The statistical situation is in favor of better markets; the serious drawback is the very low price of silver, which, as stated by *Money*, a leading financial journal of London, England, insures to Great Britain cheap wheat from India. As India is our great wheat competitor with England, it is readily seen why the English are such strong gold bugs.

In the sample market, wheat has held fairly firm under low outward charters and firm holding. It now looks as if all the obtainable wheat before assessment day has been marketed, and that persons now holding will not press the market, There is a growing conviction in certain quarters that higher ranges in values will obtain before the close of April. Receipts from up north are lessening. This is due to low outward charters ruling at Portland and at Sound ports.

Barley in the sample market is firm, notwithstanding that the strong bear pressure heretofore reported appears to be stronger. Why this is the case, it is difficult to say. There are those in trade who claim that it is due to a general combination among large speculative dealers to keep the market depressed, to enable them to operate to better advantage at low prices in nezt season's grain. The feeding consumption is said to show no marked falling off and consequently the visible supply is growing beautifully less.

Oats are weak and generally in buyers' favor, notwithstanding receipts show a falling off There is a general desire among dealers not to operate much, if any beyond their immediate requirements. The supply up north is said to be light for the season.

Corn continues to hold its own under light receipts and a steady home and export inquiry. The stock in the State is reported light.

Rye and buckwheat are dull, but no lower.

Feedstuff.

The market for ground feed is fairly strong under a continued good feeding demand. The high range of prices for bullocks, mutton sheep and hogs, with green feed not well matured for fattening, causes feeders to use ground feed, which absorbs the output. This demand will probably soon begin to fall off.

With continued favorable growing weather, there has been and still is a general desire to market the surplus hay, yet even this strong selling pressure has not had very much of an unfavorable effect on market values. From all we can learn, it looks as if the next crop will come on a well cleaned up market.

Dairy Produce.

Butter has continued on the down grade, closing the week under large receipts and dealers not disposed to buy beyond immediate wants. There is a continued free inquiry for hard pressed choice to gilt edge, for shipment up north.

Cheese has set off the past week, closing barely steady at the lowest prices. Receipts are not large, neither is the stock here, but buyers holding off cause sellers to make concessions so as to induce them to take hold.

For eggs, the market is more or less demoralized. Heavy receipts in this city with all interior distribution points supplied locally, cause dealers to look for slightly lower prices than are now quoted. The consumption is stimulated to a larger extent than usually obtains this early in the year.

Vegetables.

It is quite within the range of truth to claim that never before has the season been so favorable for gardening and the growth of vegetation. It now looks as if market prices for spring garden truck will be as low toward the last of March as usually obtaines a month later. Onions are lower and weak at the decline. Receipts are large and the mild growing weather causes consignees and dealers to force sales. It takes very choice good keepers to fetch one cent a pound. To say that the potato market is demoralized, faintly expresses the situation. Forced sales are the order of the day. It takes very choice to fetch outside quotations and even then they can only be placed in a small way. Sweets are weakening.

Fruit.

Common, poor keeping apples are hard to place, and for such, prices favor buyers. Choice, good keeping apples are wanted and fetch good prices.

Advices from all parts of the State are confirmatory of the outlook favorable for a very early season.

Limes and lemons are fairly firm at quotations.

The market for oranges is overstocked with trashy to fair, but good to choice are scarce, while fancy are seldom seen. The market for scrubby stock is demoralized and hard to quote. Even trucksters have a hard time to work off poor, trashy oranges, and as choice are too high for their trade, they deal largely in bananas. In to-day's tour of the city, we found that the stock of oranges is very heavy and trade light.

The market for dried fruits is being slowly but surely cleaned up. Poor oranges and high apples cause consumers to take more kindly to dried fruits. Holders are disposed to clean up, fearing the early season for fresh fruits.

So far as we can learn, overland railroad freight rates have not been changed. It does appear singular that the railroad company wants to throttle the growing industry by their exorbitant freight charges

Live Stock.

The market, although quoted weak for bullocks and mutton sheep, appears to have an undertone of strength that may soon bring out better prices for the former. Hogs are firm, with those suitable for the block fetching full outside prices.

Miscellaneous.

From reliable advices up to Feb. 29, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	218,692	269,273	*128,807	88,346
San Diego	21,231	10,905	2,377	.....
San Pedro	1,952	6,433	463	
Oregon	21,172	32,704	29,173	15,877
Puget Sound	13,718	17,809	.....	
Totals	275,755	337,124	160,819	104,223

*Engaged for wheat, 1892, 37,937; 1891, 73,915 †For new crop loading, 1,746.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 25th, are as follows:

	1891.	1890.
Wheat, ctls	11,247,025	8,228,850
Flour, bbls	743,436	787,313
Barley, ctls	785,340	205,476

Bags are strong at 7⅛@7¼c.

Poultry has ruled fairly firm, with choice, well-conditioned readily placed at full prices. Scrubby fowls, as usual, are hard to sell.

Beans are firm, with all indications pointing to better prices. High freight rates eastward are against growers. As yet the railroad has not been induced to lower freights Free shipments are being made to New York by seagoing vessels.

Hops are scarce and firmly held at full figures. For next season's crop the average contract prices range from 12 to 13 cts.

Wool is in light stock. With a continuance of present weather the clip will come in much earlier than usual.

Honey is in light supply. The market is reported firm.

Broom corn is very high. The best will fetch $150 a ton or 7½ cents a pound. The supply on this coast and at the East is cornered. Even second crop on this coast will fetch high prices.

Produce Receipts.

Receipts of produce at this port for 5 days ending Feb. 29, '92, were as follows:

Flour, qr. sks	65,318	Bran, sks	8,076
Wheat, ctls	76,497	Buckwheat "	
Barley, "	23,585	Middlings "	2,465
Rye, "		Chicory, bbls	90
Oats, "		Hops, "	
Corn, "		†Wool, "	6
*Butter, "	628	Hay, ton	1,390
do bxs	357	Straw, "	44
do bbls		Wine, gals	169,350
do kegs		Brandy, "	1,910
do tubs		Raisins, bxs	300
do ½ bxs	192	Honey, cs	
†Cheese, ctls	347	Peanuts, sks	
do bxs	71	Walnuts "	25
Eggs, doz	43,582	Almonds "	12
do "Eastern		Mustard "	
Beans, ctls	4,722	Flax "	
Potatoes, sks	12,573	Popcorn "	
Onions, "	1,352	Broom corn, bbls	

*Overl'd, — ctls. †Overl'd, — ctls. ‡905 bales, Australia.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Feb. 21, '91.	July 1, '91 to Feb. 20, '92.
Flour, ½ sks	203,627	335,904
Wheat, ctls	995,347	1,136,083
Barley, "	231,396	22,099
Oats, "	268,482	329,754
Wool, bales	5,798	5,978
Hops, "	392	396
Rye, sks		3,299
Potatoes, sks	45,397	72,073

Best's Agricultural Works.

A RURAL PRESS reporter visited the great agricultural works at San Leandro last week. A large force of men is engaged principally manufacturing Best's Model Combined Harvester Traction Engines and gas or gasoline engines. There were 12 New Model Combined Harvesters in the paint shop and yard ready for painting, and the foundation timbers for 12 more New Model (horse power) Combined Harvesters were laid and ready for woodwork. Four new boilers were set up and the parts of the engine and frame were being built around these boilers. In the center building the workmen were constructing 20 gas engines, one of these being a double engine for the motor running out from San Jose to Alum Rock, this being the second ordered for this motor road. Among the number of visitors at the Agricultural Works, numbering 10, were one from Fresno, one from Colusa, one from Grand Island, one from Marysville, one from Petaluma and one from San Francisco, who were negotiating for harvesters or other articles in the line of goods manufactured by Mr. Best.

It is a matter of much interest to any one concerned in the mechanical progress of our State to visit this great agricultural plant within a 40 minutes' ride from San Francisco.

Grown Popular.

The Ongerth Liquid Tree Protector has grown popular as a protection against scale bugs and all insect pests from its very effectiveness, and all who have used it have found it the best they have ever tried. The office of the Ongerth Grafting Compound Company is at No. 212 Davis Street.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 29, 1892

BEANS AND PEAS.			
Bayo, ctl	2	@	2 20
Butter	2 30	@	2 80
Pea	2 50	@	2 80
Red	2 20	@	2 50
Pink	1 90	@	2 05
Small White	2 40	@	2 70
Large White	2 30	@	2 60
Lima	1 80	@	2 15
Wid Peas, blk eye	1 30	@	1 60
Do green	1 30	@	1 50
Do NLes	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, ₱ lb	15	@	22½
Do good to choice	26	@	—
Do Giltedged	—	@	30
Do Creamery rolls	—	@	30
Do do Giltedge	—	@	31
Eastern	16	@	20
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	—
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	—	@	—
FEED.			
Bran, ton	20 00	@	22 50
Feedmeal	28 00	@	29 50
Gr'd Barley	23 00	@	24 00
Middlings	23 00	@	25 —
Oil Cake Meal	— 00	@	35 00
Manhattan Feed ₱ cwt	7 50		
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oats	12 00	@	—
Wild Oats	11 00	@	—
Manhattan Egg Food ₱ cwt	11 50	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	50	@	60
GRAIN, ETC.			
Barley, feed, ctl	92½	@	1 01½
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 10	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 25½	@	1 30
Oats, milling	1 37½	@	—
Feed, Choice	1 32½	@	—
Do good	1 30	@	—
Do fair	1 25	@	—
Surprise	1 50	@	—
Black Cal	1 35	@	1 75
Do Oregon	1 25	@	1 40
Gray	1 20	@	—
Rye	1 60	@	1 72½
Wheat, milling.			
Gilt edged	1 72½	@	—
Do Choice	1 70	@	—
Do fair to good	1 68½	@	—
Shipping, cho'ce	1 68½	@	—
Do good	1 66½	@	—
Do fair	1 63½	@	—
Common	1 57½	@	—
Sonora	1 57½	@	1 70
FLOUR.			
Extra, City Mills	5 00	@	5 25
Do Country Mills	5 00	@	5 25
Superfine	3 15	@	3 45
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
NUTS—JOBBING.			
Walnuts, Cal. ₱ lb	5	@	—
Do Choice	7	@	—
Do paper shell	7	@	—
Almonds, sft shl.	11	@	—
Paper shell	12	@	14
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3	@	4
Filberts	11½	@	14
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Ch'e	95	@	1 05
Fair to Good	60	@	—
Cut	45	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	45
Do do Salinas	75	@	90
Do do Oregon	60	@	80
Do Humboldt	60	@	80
River Reds	25	@	40
Sweets	1 75	@	—
POULTRY			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 00
Do young	7 00	@	9 00
Broilers, small	4 00	@	—
Do large	5 00	@	—
Fryers	6 00	@	—
Ducks	6 50	@	—
Geese, pair	1 75	@	2 25
Turkeys, Gobl'r.	12	@	14
Turkeys, Hens	14	@	17
Do Dressed	15	@	19
Manhattan Egg Food ₱ cwt	11 50	@	—
PROVISIONS			
Cal. Bacon, be'vy, ₱ lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	12	@	13
White	20	@	—
Flaxseed	2 50	@	2 60
Hemp	3½	@	4
Mustard, yellow	3 25	@	3 75
do Brown	3 00	@	3 25
WOOL			
SPRING, 1891.			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	
S Joaquin valley	13	@	—
do mountain	15	@	—
Cala's & F'th'll	16	@	—
Oregon Eastern	14	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
WhiteComb, 2-lb	10	@	11
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap, bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed		@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2½	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap, unpe'l'd, choice	7	@	—
Do do fancy	8	@	9
Evap, peeled, in boxes, choice	15	@	—
Do do fancy	16	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	—
Do ring do	10	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₱ box	$1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₱ bx	1 25	@	—
Loose Muscatels, common, ₱ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₱ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₱ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 29, 1892

Limes, Mex	4 00	@	5 00
Do Cal	75	@	1 00
Lemons, box	1 25	@	3 50
Do Sicily	5	5	@ 6 50
Oranges—			
Butte County	1 50	@	2 25
Yuba do	1 50	@	2 25
Do Seedlings			
*Riverside	85	@	1 50
*Los Angeles	65	@	1 25
Do Navels—			
*Los Angeles	50	@	1 25
*Riverside	1 00	@	3 00
*Duarte	1 00	@	3 00
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.			
Apples, box	75	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	2 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	—
Garlic, lb	2	@	3
Squash, Mrft, tn	6 00	@	10 00
Do Summer, lb	20	@	25
Pumpkins, ton	7 00	@	—
Tomatoes, box	1 25	@	—
Asparagus, lb	7	@	17½
Peas, green, lb	8	@	11
Rhubarb, lb	9	@	11
String Beans	15	@	—
Cucumbers, doz	1 00	@	—

Live Stock.

BEEF.			
Stall fed	7	@	—
Grass fed, extra	7	@	—
First quality	6½	@	—
Second quality	6	@	—
Third quality	5½	@	—
Bulls and thin Cows	3½	@	3½
VEAL.			
Range, heavy	5	@	6½
Do light	7	@	8
Dairy	8½	@	10
MUTTON.			
Wethers	10	@	10½
Ewes	9½	@	10½
Lamb, yearling	11	@	12½
Do Fall	15	@	—
HOGS.			
Light, ₱ lb, cents	4½	@	5
Heavy	4½	@	4½
Feeders	4½	@	4½
Stock Hogs	3½	@	3½

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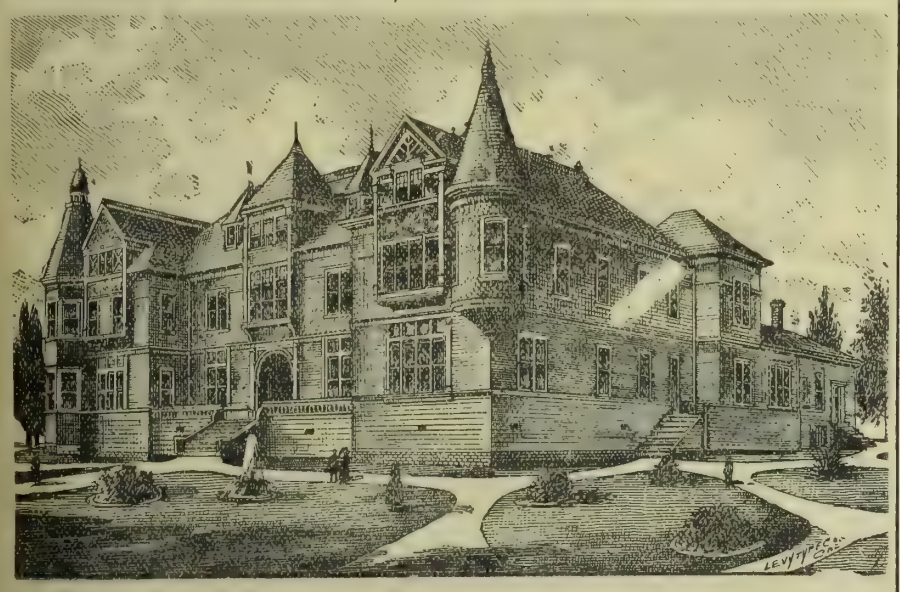
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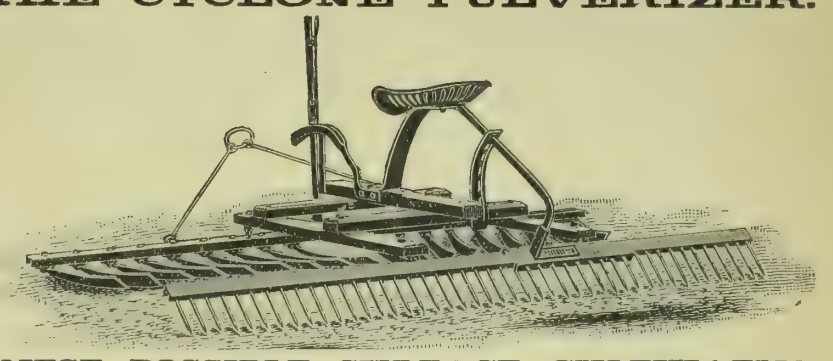
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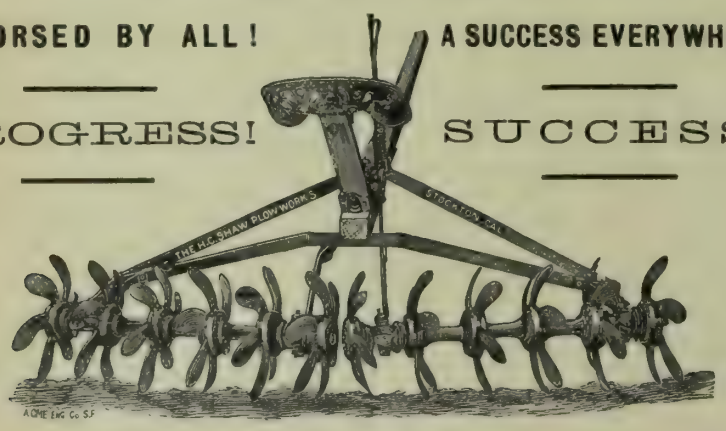
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TESTIMONIALS.

SACRAMENTO, CAL., April 23, 1891.
H. C. SHAW, ESQ., Stockton, Cal.—Dear Sir: The Spading Harrow, which you sent us to Sacramento, has given good satisfaction, and our foreman at Acampo says he likes the way the machine works very well. We shall be pleased to recommend it to any one who inquires of us. Yours truly, W. R. STRONG COMPANY.

MADERA, CAL., Dec. 22, 1891.
H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow we bought through your agents, Messrs. Cargile & Turnbaugh, is the best pulverizer in use. We have tried it in dry work and find it will do all that is claimed for it. Yours respectfully, D. E. LEWIS and L. W. FOX.

BERENDA, CAL., Dec. 17, 1891.
H. C. SHAW, ESQ., Stockton, Cal.—Dear Sir: Enclosed please find check to pay for the 12-foot Spading Harrow, the best implement ever invented for the cultivation of the soil. Respectfully, J. F. WARD.

VISALIA, CAL., Dec. 5, 1891.
H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Your Morgan Spading Harrow, as a cultivator, is a comp'ete success, and I heartily recommend it to all orchardists and vineyardists as being a perfect machine. Respectfully yours, L. C. RICE.

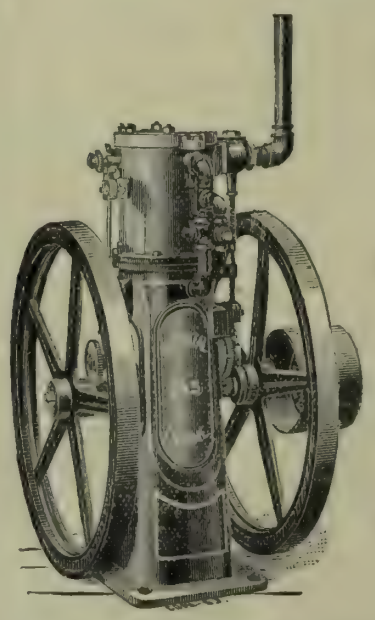
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PACIFIC RURAL PRESS

Vol. XLIII. No. 11. SAN FRANCISCO, SATURDAY, MARCH 12, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Business vs. Political Methods.

Mr. Sherman Hoar, of Massachusetts, has introduced a bill into the House of Representatives looking toward the organization of a permanent or promotive postal system. His plan is to appoint postmasters in the more important places from among those whose service in similar positions elsewhere has been most efficient. The idea is precisely the same as that upon which promotion in railroad and other business enterprises are made. Nobody thinks of selecting a manager for a railroad or a steamship line, or for a commercial house, because of his established citizenship in any particular locality, or because of his opinions respecting the tariff, or because of his personal preference as to Mr. Blaine or Mr. Cleveland. Managers of large business enterprises are chosen from motives very different and very much more rational than these. A man who has made a success in a small administrative way is usually called to larger affairs, and successively promoted as his experience and efficiency increase.

Why not so with the postal service? This vast business is now conducted upon principles which would be ruinous for any private enterprise, and nobody would think of applying such principles to ordinary business concerns. What the public wants in the postal service is not a series of "places" for political workers or for public or private favorites, but a systematic, businesslike management of the mail traffic. The efficiency of this service is related to the convenience and to the interest of every citizen, and the first consideration should be the work itself, and not by whom it is done.

Of course the professional politicians and office-holders will cry out against this plan as un-American. But it is no more un-American than the ordinary methods of carrying on general business. Surely we are carrying our "Americanism" too far if it makes the taxpayers of the country pay double rates for poor service in the postoffice or in any other department of governmental administration.

The proposition of Mr. Hoar respecting the postal service is one that should commend itself especially to those who are urging a broader relationship of governmental administration to public affairs. For example, those members of the Farmers' Alliance who want the Government to own and control the railroads, should hail with satisfaction a proposition that will test the plan of large governmental administration in a continuous line. The chief objection at this time to the governmental ownership of the railroads is that it would create a vast army of employes, subject to change with changing administrations, and of course interested in maintaining whatever political regime may be presently in existence. In other words, it is feared that, by multiplying the spoils of office, it would make it practicably impossible for the people to control their Government and to change its administration from time to time. But if a railroad service could be organized entirely apart from and entirely independent of ordinary political changes in the Government, this great objection would be removed and a long step would be made toward the end to which the reformers are so anxiously looking.

Mr. Hoar's plan should be given a trial. It proposes the application of a sound business principle to a department of administration which has no legitimate relations to ordinary politics, and which is purely and simply a matter of business. It is very much to be doubted if Congress can be brought at once to enact this measure, because it would, of course, destroy the political serviceability of the postoffice department. But we believe the plan will commend itself to the public at large, and that in time the postal service will be established on a right basis, and that its powerful and exceedingly bad influence will be eliminated from our politics.



PROFILE VIEW OF NEVADA FALL, YOSEMITE VALLEY.

GASOLINE FOR GROUND SQUIRRELS.—A correspondent living at San Jose writes us that "87° gravity gasoline will kill (by smothering them) squirrels just as readily as bisulphide of carbon, and it costs but little more than one-quarter as much." Who can advise us of results in this direction? Our opinion, without trial, would be that gasoline, because of the lightness of its vapor, would not behave in a squirrel hole as does the bisulphide vapor, which is heavier than air. However, experiment is the teacher. Who has satisfied himself in this line?

Nevada Fall in the Yosemite.

We return from our wandering amid the grand scenery of the Columbia river to view again the scenic resources of our own State, and we are prone to confess that, grand and charming as are nature's works in other States, California has no occasion to be envious of them. Our artist takes us again into the Yosemite and presents us a glimpse of a noted waterfall of that valley from a point of view unlike anything before enjoyed through our columns, although we have in past years paid due homage to the Nevada fall.

The picture gives a profile view of the upper half of the waterfall. It well presents its volume and grace but does not give adequate notion of its height, for the mass of water shown in the lower right hand corner of the picture has struck upon the ledge of rock from which it falls again in thinner sheet to the foot of the fall. In further characterization of the precipitation shown in the engraving, we shall use the appreciative words of W. G. Marshall, an English tourist, who gave an account of the Yosemite in his work, "Through America," which was published abroad eight or ten years ago.

The Nevada fall merits all the eulogy which has been heaped upon it by its admirers, for it is indeed a glorious leap, and one possessing some very remarkable and lovely features. It plunges 700 feet, yet this plunge is not perpendicular, for not many feet below where it has topped the precipice, it strikes with its full force against a ledge of rock, and this causes it to shoot out anew into a still wider sheet; for, expanding now to a width of 200 feet, it descends the remainder of the distance in a network of fleecy curls with an effect which is exquisitely beautiful, and which lends to the fall a peculiarly distinctive charm. The curled, crisp appearance of this fall constitutes one of the striking sights in the Yosemite. One might liken it to the arrangement or disposition of the sea waves as they gently break upon a flat, sandy shore. But to this must be added the active force with which each wave is thrown out; and then if it is also borne in mind that there are hundreds of such wave jets in this one grand sheet—hundreds shot out at the same time followed by hundreds more while these are dying out of sight—some idea, incomplete though it will be, may be obtained of the remarkable form of this most beautiful fall.

THE AUSTRALIAN BALLOT.—In the city election at Sacramento, on Tuesday of this week, the Australian system of voting was employed, and was found to work admirably. One thing which commends the process to the decent and honest citizen is the fact that it is heartily condemned by the "ward worker," who finds that it requires much more hard work to "fix" the voter than under the old system, and, consequently, progress in his unholy endeavor is necessarily curtailed. This feature of the matter is bound to popularize the Australian system among all people who would see an end to the ballot-box corruption which has long been a disgrace to our civilization.

PUTS AND CALLS.—The directors of the Chicago Board of Trade have issued an order intended to put a stop to dealings in puts and calls, which have been carried on in violation of the rules of the Board.

SWINE YARD.

Farrowing Time

NILES, ALAMEDA COUNTY, Feb. 27.

TO THE EDITOR:—The most common and, at the same time, most costly neglect of his live stock of which the average farmer is guilty, is at the time they are born. Confining our observations entirely to pigs, as that is what we are thinking about and where the neglect is most common, it is an everyday occurrence to lose by carelessness a litter worth $2.50 apiece, say $15 in all, at weaning time, equal to the value of many a scrub cow with her first calf.

It is caused by the farmer's sturdy refusal to recognize the fact that among brutes, as well as human beings, when the young are born the dam is ill and "out of sorts." She may pull through without help, but she may need it, and if she does she needs it badly. Yet the average farmer will go to bed and to sleep while his female animals of all species are in throes that often kill the hardiest of wild animals as well as the highest bred domestic ones. He pays $1000 for the sire and loses his offspring through neglect at the most trying time of its existence and its dam's.

There is probably not a lunatic asylum in the civilized world which does not contain more than one inmate whose insanity was initiated—I would hardly hesitate to say developed—at this trying time. There would be many more if medical skill were not called in to tide over the period.

Leaving this delicate subject, but profiting by the hint it gives us, how can we wonder that dams in that stage get down, and never get up? How can we wonder that sows lie on their pigs or eat them? To the farmer with a small herd, the pig she lies on or eats might have been worth hundreds of dollars before it died a natural death, but of course he cannot afford to spend any time on a mere sow, and goes to bed.

A little attention at farrowing time will avoid much of this loss. I have had a little experience which may help to prove my proposition, and thus save some trouble or loss to others.

Anticipating trouble, and being warned of it by the loss of a pig, I took the rest away from the dam, and kept them away until she got over her sickness, which was perfectly natural. I had them carried to her as often as they made signs of being hungry, and she was always glad to see them and prepared at once to give them what they wanted. She weighed 550 pounds, and during her illness could not command the strength and patience to take the care required to keep from lying down on some of them. In three days she was able to do what she had known all the time to be her duty, and took care to do it. The pigs were left with her, and not one was "overlaid."

The sow who eats her pigs usually does it during the hysterical excitement of the first few hours. A dose of camphor and laudanum in her ear to make her sleep, or taking the pigs away until she has got over the puerpural excitement, and got back to something like her natural condition, will almost invariably save the pigs, and she may prove the best of mothers.

What is more common, in the treatment of other animals as well as swine, is to give them a kick for every eccentricity due to the trying, often fatal, throes of parturition. The kicker ought to lose money, and I am glad to see him suffer the usual disastrous consequences of his heartlessness. But if anything I could say would save any poor dumb brute a pang of pain, I should be glad to know it, and glad I had said it.

HELP IN RINGING HOGS.

Mr. H. E. Dye (Feb. 13, page 134) wants help in ringing his hogs, and you invite suggestions. I offer two:

First, the lasso. A slipping noose on the upper jaw ought to hold the hog—at least it is the approved instrumentality for that purpose. Any way to get the noose in his mouth will do. I could do it with most of my hogs with my hand. It may sometimes be done with a stick or pole, as the butchers put the bull rope on beeves' horns. As described in his letter, I should think Mr. Dye had his hog in a place where he could have noosed him. Once in the noose he is helpless. The noose can be slipped in when he opens his mouth to squeal. Mr. Dye will know how far back to slip it. Piggie can be brought to any desired position. A stanchion trap is used for the same purpose. The catch-bar is sometimes bow-shaped, to fit the neck, and likewise the stationary bar against which the other side of the neck is pressed. When the trap is open, the hole is so large that the hog may put his head through in the hope of escape. The moment he does so the stanchion is closed and fastened adjustably to the size of his neck, and he is fast

Suggestion No. 2 is a dose of laudanum taken in some slop, or 40 drops in 3 drachms of spirits of camphor injected into one ear. The latter is a treatment used for sows inclined to eat their pigs. They lie down on that side and take a long nap, during which the pigs nurse and get strong, and the dam wakes up with a subdued feeling toward them. Chloroform will conquer the hog, and both chloroform and laudanum are often found in the swine breeder's medicine chest. Both are dangerous in the hands of novices who decline to study their use, and especially the chloroform; but a little investigation and careful experimentation will make them safe and extremely valuable. They are merciful to the brute and make his master's life much better worth living. HENRY J. PHILPOTT.

Special Berkshire Premiums.

SPRINGFIELD, ILL., Feb. 10.

TO THE EDITOR:—The American Berkshire Association will, in accordance with resolution below, offer the following special premium at all State and Provincial fairs in 1892:

Resolved, That exhibits of Berkshire swine at all State and Provincial fairs, where separate classes are provided in 1892 for recorded Berkshires, be encouraged by the American Berkshire Association by the offer of a special prize of the first ten volumes of the American Berkshire Record, valued at $50. Said prize to be offered for the best recorded sow and litter of not less than five recorded pigs under six months of age.

The conditions of the competition for this premium to be as follows:

1st. That there shall be not less than three competitors for the prize of $50 offered above.

2d. That the competing animals be recorded in the American Berkshire Record prior to date of entry at the fairs, and that lists of such entries be furnished the Secretary of this association at the close of the fair.

3d. That a copy of these resolutions be printed in the premium list of the fairs in connection with the classification of swine, or that reference be made at the close of the classification of swine, to the publication of this announcement elsewhere in the premium list.

BERKSHIRE TRANSFERS.

The following are recent transfers of recorded Berkshires: Matilda 20,994, T. D. Allen, Silverton, Oregon, to R. W. Carey, Macleay, Oregon; Maid of Silverton 27087, T. D. Allen to J. W. Hobart, Silverton, Oregon; Champion 26,837, John Craig, Macleay, Oregon, to T. D. Allen, Silverton, Oregon; Dalmore 26,838, John Craig to J. M. Reene, Salem, Oregon; Hero 26,839, John Craig to Jasper Wilkins, Coburg, Oregon; Cherry Blossom Dale 26,877 and Utah Belle 26,878, A. J. Lovejoy & Son, Roscoe, Ill., to Ben R. Eldredge, Provo City, Utah; Ensign 22,281, James Dunn, Corvallis, Oregon, to H. C. Dunn, Corvallis, Oregon; Fred. Sevan 27,217, Henry Johnston, Frankfort, Kansas, to Tyler Beach, San Jose, Cal.; San Jose Belle 27,235, J. S. Conner, Santa Ciara, Cal., to Edward Younger, San Jose, Cal.; Annie Laurie 27,248 and Nanon 27,249, J. E. Pleasants, Santa Ana, Cal., to Geo. H. Clark, Fairview, Cal.

JNO. G. SPRINGER,
Sec'y American Berkshire Ass'n.

ARBORICULTURE.

Planting Pecans—Nuts vs. Trees.

FORT WORTH, TEXAS, Feb. 24.

TO THE EDITOR:—Will you kindly give me space in your columns to explain to your readers why the pecan tree is an exception to the general rule of transplanting trees. Like the hickory and black walnut, the pecan grows a long taproot, which must not be disturbed by attempting to transplant, the result being failure of ultimate success. When the young pecan tree is eight inches above ground, the taproot has grown to the length of two feet, and one foot below the surface is larger than at the top of the ground. This result of root growth prevents the removal of the young tree, which cannot be done without breaking or injuring this long taproot, which, if once destroyed, *will never grow another*. With the taproot broken, it is a waste of money and time to attempt transplanting.

Many nurserymen are not aware of these facts and are offering the pecan trees for sale, with no intent to defraud or mislead, supposing there would be no more difficulty than in ordinary transplanting. Experience shows that you may transplant them with apparent success, but trees have been taken up after seven years' growth and found without a semblance of a taproot. They had dwindled along and made but a sickly growth, while trees on the same ground raised from seed planted where they grew were vigorous and thrifty, and, though three years younger, were much larger than the transplanted trees.

In view of these lately developed facts, it is a waste of money to plant anything but the pecan nut where the tree is to stand. Those who want to plant pecans this spring will find a great gain in soaking the nut four or five days before planting, which gives nearly the same results as if you had planted last fall. You gain one year by planting now that you would lose if you waited until next fall to plant.

Domesticating the wild pecan is very easy, as it responds to cultivation, producing more and larger fruit, thinner shell and improved flavor, bearing at four and five years as productively as the wild tree does at six years. With wild trees here earning for their owners from $50 to $80 per annum, it don't take long to figure up their value under cultivation.

I paid a man last year $57.60 for the product of one tree, and the same tree had earned him for three previous years $50 annually. Here is one wild pecan tree, on which the owner had never expended one dollar, earning him on an average of four years $51.90 per annum, costing only the expense of gathering and taking the nuts to market. This tree is worth $519, because it is earning annually 10 per cent on that valuation. Take ten acres of such trees, and when they come into bearing they earn more clear money than either oranges, lemons, figs or olives can possibly do.

Planting 35 feet apart gives you 36 trees per acre. In between these you can grow other fruits with profit, making your ground vastly more valuable than if only in the ordinary orchard products. In planting the pecan, you are annually adding material wealth to your land, for when your other crops fail, you have here an income at very small cost, and one which lasts for generations. Taking the profits of the pecans on the above basis of earnings, and divide by four, and you have a sum of money per acre that would keep a good large-sized family from going to the poor-house.

Ten acres of 360 trees, with each bearing as much as this one wild tree earned annually for its owner, and your earnings are of more clear profit than a bank ordinarily earns with a capital of $200,000. Then, too, this wealth is obtained at a very small cost, either for the pecans for planting or the care of the trees. The planting per acre does not cost to exceed $3 for the pecans of the best Texas thin shell, which have the best reputation in all the markets, being favorites over all the others.

For windbreaks for orchards, the pecan is peculiarly valuable in this particular, that it rarely ever is torn up by the roots; the long taproot going so deep prevents it. Planted 35 to 40 feet apart, in a few years the branches touch, and by that time it has reached a height of 50 to 60 feet. Lasting for hundreds of years, its value can hardly be estimated as a protection for orchards, besides the crop of nuts annually, which earn a handsome sum of money. The enemies of the pecan are nothing compared with other nut and fruit trees—hardly worth taking into account.

Unlike ordinary orchard products, the pecan keeps for months, so that the market need not be overcrowded when they are first harvested. Here is an enterprise that can be carried on with great profit by cooperative companies, and plant hundreds of acres at small expense, but giving enormous earnings, lasting indefinitely. One thousand acres planted in pecans, when in bearing, earn, even if you cannot get but half earnings, of the above mentioned wild tree, upward of $90,000 per annum. Divide this sum by two and it is very satisfactory earnings. Nothing in the vegetable product pays handsomer profits for the cost of the enterprise, and California is well adapted to the growth of the pecan.

HERBERT POST.

HORTICULTURE.

Prevention of Sunburn and Borers.

TO THE EDITOR:—Please give a recipe for preventing borers from killing young fruit trees—M. L. H. SELMA, Cal.

We suppose you refer to the small boring larva known as the "flat headed borer." It works in the stem and larger branches of trees which have been sunburned. There are other borers, as for example the crown borer of the peach which has gained access to some parts of the State. It works just at or a little below the surface of the ground and does not depend upon sunburn.

The cure for the common flat-headed borer and for other borers working in the stem, and branches is to prevent sunburn by protecting the bark from the sun on the south and southwest side. This may be done by wrapping with paper, sacking or other materials, or by the use of the advertised paper "tree protectors" providing they are not made of black paper, which has been found to absorb heat enough to scald the bark under them. Probably the most popular method at present is to cover the bark of the young tree with whitewash which reflects heat and prevents sunburn. Following is the remedy: "Take one pound of whale oil-soap and dissolve in one gallon of water and add whitening enough to make a good whitewash, and then applying to the body of the trees from the forks down to the surface of the ground, you will not be troubled with borers or sunburn."

This prescription has been largely used by other fruit growers and widely approved.

The Lemon in California.

No fruit grown in California is attracting as much attention as the lemon, and this is particularly true in the southern part of the State. Large areas are being planted, stimulated largely by the experiments that have been made by Dr. Gareelon of Riverside, Mr. Hatch of Ontario and others, in curing this fruit so that it can maintain a standing in the markets of the world when offered in competition with the imported article; and they demonstrated the fact that California grown lemons can be cured so that they will keep in perfect condition for six months at least. This gives our growers the choice of a market and is an important factor in inducing men of various trades and professions to engage in their culture.

When a person has determined that he will plant a lemon grove, the first thing that will present itself to his mind after securing the land, will be what variety shall he plant and on what stock shall they be budded, and much of his after success will depend on the answer to this question. There is hardly a variety of lemon grown which is not the favorite of some one.

Many will tell you to plant the Eureka, while it is well-known that it is a tree of straggling growth and scant foliage. Such a tree does not give proper protection from frost in winter or from sunburn in summer. Their are other objections. The fruit has a very bitter rind and is often coarse and overgrown. Its best quality is its early and prolific bearing.

What is known as the Sicily lemon is grown from seed from fruit imported from Sicily, hence the name, and as many varieties are grown under same general name they will not do to tie to. A safe procedure would be to take buds from a tree, no matter what the name, if in fruit, curing, and growth it meets your idea.

The Villa Franca, the favorite Florida variety, is a tree of much promise, it being a medium as to growth, foliage and early fruiting between the Eureka and the Lisbon. It is a new variety here, having fruited but two years in Southern California. The rind of this lemon though sweet is rather coarse and thick, but this is characteristic of the lemon on all young trees and will probably be cured as the trees attain age.

The Lisbon lemon tree was imported from Portugal and has been thoroughly tested and seems to meet the requirements better than any other. The tree is a vigorous grower and attains a large size; does not fruit much until the third year. Its habit is to put on wood rapidly. Trees are often found 10 to 12 feet in height and well proportioned at that age, giving abundant limb surface for the immense crops that are to follow. The only objection that is urged against this tree is that it is very thorny and it is claimed by persons well qualified to judge, that about 25 per cent of the fruit is made unsalable by thorning.

The fruit is oblong rather than roundish, very uniform in size, rind thin and sweet, cures perfectly and is the best keeper grown. As to thorns, prune them off. This will require labor, but believe me, it will be time well spent.

The Bonnie Bray is the most beautiful lemon grown. Its rind is smooth as a kid glove and so very thin that

many think it cannot be shipped to distant markets. I am not prepared to accept their judgment as final.

I feel very much like an importer of citrus fruits did whom I met at the southern district State citrus fair, and that is, that the appearance of the fruit will sell it in any market of the world and that I would take them to that market even though I were obliged to ship in egg boxes or those made on a similar plan.

The Belaire Premium lemon originated in Florida, and in form is the most perfect of any known. I have one tree, sent me by a friend, which has fruited a little for two years. The tree is perfectly thornless, but not a very vigorous grower; rind rather coarse and thick, but sweet; acid very strong and of excellent flavor. A lemonade made from it will retain its quality for 24 hours if kept cool.

I think it preferable to bud the lemon on some kind of sour stock, and would state as a reason, that most sweet stock is subject to foot rot or Mala de Goma to some extent.

As to cultivation, it cannot be too thorough. A medium amount of water and a thorough stirring of the soil after each application is the correct thing and trees so treated will be far ahead of those where the water is allowed to run along the rows for several days, chilling and souring the ground and often causing foot rot and gumming.—J. P. JONES, San Diego.

SHEEP AND WOOL.

Angora and Cashmere Goats.

COLUSA, CAL., Feb. 27, 1892.

TO THE EDITOR:—A gentleman at Vina, Tehama Co., has been residing in Asia Minor, later in France, and now is among us. His personal knowledge of the goat at his home is the cause of his interest taken, and a desire to present his enclosed article for publication in the RURAL (wherein he saw my report and memorial) was transmitted to me. The article may do us some good. Therefore, as scribes among goatmen are very scarce, I hope you will give our friend some space and have it appear in the RURAL at any time as soon as possible. The bill for a Government Breeding Farm of Angoras was presented by Hon. Felton in the U. S. Senate and by Herman in the House. It was referred to Committee on Agriculture, so I hope for success. JULIUS WEYAND.

VINA, Tehama Co.

TO THE ANGORA GOAT BREEDERS:—On the occasion of the Memorial presented to Congress at Washington by Mr. Julius Weyand, Secretary of the Angora Breeders' Association for the improvement of the Angora goat in this country, and also for the bettering at large of the mohair industry, I judge it timely to state some facts concerning the industry of the Angora.

I have followed with much interest the experiments you have been doing with the Angora goat, and certainly I will not be able to teach anything but a few particulars, and will consider myself well repaid if the following would prove of some interest.

Let us now enter the study of the caprine species, say the goat. The caprine species belongs to the group of *Artiodactyle Pachydermata, i. e.*, thick-skinned and double-fingered, or cud-chewing mammals. This group is divided by naturalists into two genera—the ovine genus, or the sheep, and the bovine genus, or cattle.

The genus Ovis or sheep comprises five species, but the one I have reference to is the Ovis Capra or the goat. This classification can systematically be represented as follows:

Artiodactyle Pachydermata Mammals... { Bovine genus { Ovis Aries; Ovis Moutana; Ovis Ægagrus; Ovis Ibex; Ovis Capra { European, Asiatic, Nubian } Goat. } Ovine genus }

Of goats, there are three races named from their habitats. The European goat inhabits Europe, the Asiatic one, Asia, and the third race, Nubia, which one inhabits also Abyssinia, Egypt and other Mediterranean districts.

The Asiatic race is the one which has the most interest for us, and comprises the breed of Angora and the breed of Cashmere. This race is a native of the mountains of Himalaya and Thibet, and lives in dry, rocky, brushy districts of Asia.

The breed of Angora goat—the one you succeeded in acclimatizing in the United States—I am going to have reference to.

The Angora goat is found all over Asia Minor from the border of the Black sea up to the provinces of the Caucasus; but its center and the area where it seems to be at its best is the Vilayet of Angora and adjacent districts, and namely, on the plateaus at a good altitude in the districts of Angora where the best individuals of pure blood are to be found.

The body of the Angora goat is covered with hairs, and between is found the down or soft, fine woolly growth. The fleece is long, and has a bundle-like appearance namely on the flanks and under the belly, and reaches commonly up to 20 or 23 centimeters in length. The members are medium high, and the general stature is inferior to the European varieties of goat.

From the economical standpoint, there is no breed of goat superior for the mohair production. Its meat is more palatable than the meat of other goats. Its downy wool or fleece is made use of in the manufacture of shawls and other fine clothes and its hair also in the manufacture of second grade goods.

FECUNDITY AND BREEDING.

The doe is apt to reproduce its kind at the age of between nine and ten months, so is also the buck. The does and bucks intended for breeding have to be selected with great care among the individuals that represent the best characters of a good fleece producer in quantity and quality, and the pairing be watched. The time when the doe wants the male is very transient and seldom lasts over 35 hours. It is known by a peculiar bleating and by local manifestations. The buck is very prolific. The pairing occurs at large or in an enclosure. When in the field or at large, one leaves the buck roam together with the whole flock for two months, but the best way to do is to practice the pairing in an inclosure, putting into some kind of stall both doe and buck. By this method, no abortion can occur, as is many times the case in pairing in the field. If the contact has been successful, the doe shows a kind of quieting down, and the swelling of their organs do not more appear till *yeaning* time. From that time they have to be cared for to some extent and possibly be fed. The pregnancy lasts, as for the sheep, five months, and unlike the lamb, the kid is able to hustle for himself when he is only six weeks old, his digestive organs being much stronger than those of the lamb at the same age. Immediately after the weaning, selecting the best stock for breeding purposes has to be resorted to, and the balance or second grade stock has to undergo the castration.

In order that all these operations should be carried on satisfactorily, the breeders might give an interest in the business to the men managing the flock; and though this policy might seem hard to practice, still it is well worth thinking of, and its discussion might disclose whether there is advantage to put it into practice or not.

Let us say two words about the Cashmere goat. The Cashmere breed lives in the valleys of Persia, Afghanistan and Beloochistan. Her fleece is very valuable in those countries, and is put to use in the manufacturing of fine shawls and tissues. It would be very interesting to secure some individuals of this breed and give it a trial in the United States. This breed, besides its fine fleece, has this peculiarity—that the clip comes off spontaneously every year.

MODEL BREEDING FARM.

Establishing a model breeding farm, and keeping a pure-blood breed, is the surest and quickest way to infuse pure blood and to improve any kind of stock. In this same way the French Government undertook the introduction and the improvement of the Merinos. The Merinos have been imported from Spain into France since before 1760. At that date the French Government entered into negotiation with Spain and secured a flock of pure-blood Merinos that were placed at Montbard in the Department of Cote-d'Or and immediately after the model breeding farm of Rambouillet was established and skilfully managed by the Abbot Tessier. That institution did a great deal for the Merino industry to get a good footing in France, and subsequently contributed to her prosperity. Now, thoroughbred Merinos are found all over the world by millions—in France, Italy, Germany, Hungary, Russia, India, America and Australia.

We arrive at the conclusion that the introduction of thoroughbred stock and the establishing of a model breeding farm in the United States, as pointed out in the special Memorial presented to Congress by Mr. Julius Weyand in the name of the Angora Goat Breeders' Association, would promote the mohair industry and improve the breed and bring prosperity and riches into this favored country.

The plateaus and hilly districts are the best adapted for Angora raising. An investigation about the conditions of climate and soil of the Vilayet of Angora may be done, and would likely result in disclosing some facts hitherto unknown.

The analyzing of the soil, the observation of the Flora, the registration of the climatic conditions, the observation of some peculiarities in the care of the goats, if there is any, once known, it would not be impossible, in my opinion, to find in this vast United States similar climate and conditions to the plateau of Angora, where this valuable breed could be raised to perfection.

R. TCHERASSY,
Graduate of the College of Agr. of Lyons, France.

THE ORNITHOLOGIST.

The Game Birds of Lassen County.

We find in the *Weekly Mail* of Susanville, Lassen county, a very interesting popular article on the game birds of that portion of California, and as the same species are visitants or residents also in other parts of the State, the account will be generally interesting.

While the natural histories placed in the hands of our young people give much information concerning the game birds of all countries, there is no list showing the child what birds are found here. In this article we have called attention to the principal game birds of this county, giving at the same time, some data about their size, color, habits, number of young reared, etc.

These facts should be placed in the hands of every child in the county who is old enough to read well, and each schoolroom ought to contain this matter in some conspicuous form for the use of both teacher and pupils.

One of the finest game birds of Lassen is the dusky grouse which lives in the mountains, while the sage hen, another grouse, inhabits the valleys. The dusky grouse, during the summer, feeds upon berries, seeds and grain, but in the winter, when the mountains are covered with snow, it lives upon the buds of the fir trees. When it is flushed or started from the ground, it rises with a loud whirr and seeks shelter in a neighboring tree, where it remains so silent and motionless that it is almost impossible for the untrained eye to detect it. Should the sportsman see his game, he can often kill two or three birds, if he takes care to fire and bring down only the lowest bird first and then the next higher. This grouse is about 20 inches long, is dark brown above and lead color beneath. The mother bird makes her nest on the ground, using slender twigs and fine grass; lays 10 or 12 eggs and takes care of her young in the most watchful manner when they are hatched. These birds frequent the roughest and most difficult ground, and are not easy to find. Their flesh is dark colored, but is sweet and delicious.

The sage hen is another of the grouse family, and is one of the largest and finest. They have a varied plumage of black, brown, gray and white, their tails are long and pointed and contain 20 feathers. The male bird weighs five or six pounds, but the female is fully a third smaller. They do not fly readily when disturbed, but squat down or attempt to hide, apparently thinking they will not be seen. They fly with a loud whirr like the rest of the grouse family, but their flight is slow and laborious compared with the dusky grouse. They live in the dry, treeless and waterless plains of the Great Basin, but here are found both in the open valleys and in the timbered hills. The male bird has large flame-colored patches on the sides of its neck that are greatly distented during the mating season, but these are hidden by his feathers at other periods. They build their nests on the ground, beneath low bushes or high tufts of grass, and the mother bird lays from 13 to 17 eggs. These require from 21 to 22 days to hatch.

Owing to their food being very largely the leaves of the bitter sage brush, the flesh of the old birds, especially in winter, tastes very strong; but the young bird, in the fall of the year, is delicious. Hunters assert that by emptying the stomach and crop of the bird as soon as killed, the strong taste of the flesh is avoided. One curious fact about this grouse is that it has no gizzard like other birds.

THE QUAIL.

A third favorite game bird is the quail, and this is found in nearly every part of Lassen, from the open valleys to the highest mountains. These birds associate in flocks of from 15 to 20, and live upon seeds, berries and insects. Of the latter, they destroy immense numbers. They do not perch upon trees like other quail, but roost upon the ground. The upper parts of the birds are olive brown, the breast and neck lead colored and the abdomen white. They have two long, straight feathers rising from the back of the head like a plume.

Their nests are formed upon the ground, and from 10 to 15 eggs are usually laid, but some nests have been found with 20.

A quail, when shut up and the eggs taken away each day, has been known to lay in one season over 70 eggs. These eggs are speckled, like the eggs of a turkey. One of the most curious facts about the roosting of the mountain quail is its habit of watching against danger. The birds will all form in a circle, standing some distance apart, then they will back up till their tails touch each other and then they drop upon the ground, knowing that nothing can approach them without being seen or heard by some of the flock.

When the flock has been scattered, owing to an alarm, the birds call their mates with a clear, shrill whistle, much like a man whistling to his dog, and hunters take advantage of this to call these birds, for the purpose of killing them.

Each spring and fall there are many swans, for a short time, in the various valleys and lakes of the county. These birds stop for a few days to rest and feed, on their annual migrations north to Idaho, parts of Washington, and to British Columbia, where they breed and rear their young. Of the swans, there are but two varieties that visit our county—the American and the trumpeter. The flesh of the young birds, called Cygnets, is palatable; but that of the old swans is tough and stringy. The American species is five feet long from the point of its bill to the tip of its tail, and six feet across its extended wings. Its plumage is snowy white, but the feet and bill are black. It is a shy, wary and watchful bird and is seldom killed, but belongs to the game birds of Lassen. It builds its nest about two feet high and several feet across. The time required for hatching the eggs is from five to six weeks.

The trumpeter swan receives its name from a harsh, loud cry that it gives, and this is a larger bird than the American, measuring nearly five inches longer.

THE GEESE.

These birds pass through our county twice a year, both in going to their northern breeding grounds and south to their winter pastures. All varieties are noted for their sharp ears, sharp eyes and keen smell. They migrate in flocks of from 10 to 100. They always, like the swans and ducks, fly in the form of a triangle, with the strong and tough old ganders in the lead. Geese can readily detect noises that indicate danger. Thus, birds or fish may plash the water upon every hand, limbs may fall, and other noises be heard, and they will not indicate the slightest warning to their fellows; but let the step of a hunter be heard, or the swish of his paddle in the water, and instantly the leaders give warning and the geese quickly take wing. We have counted 29 flocks of geese in the air, at one time, moving toward the north. The largest and finest for table use is what is known as the "honkers" or Oregon geese. These on the Atlantic coast are known as Canada geese. They are 40 inches long, and a very large and fat one will weigh 16 pounds, or as much as a big turkey. The honkers usually fly by themselves, but the other geese may be seen in the same flock. The head, neck, feet and bill are black.

The brants are only about half the size of honkers; they are a dark-grayish goose, with black legs and feet.

The speckled breasts are next to the honkers in size, and are the next best for the table. They have pale or yellowish legs and feet.

The snow geese is a fourth species that is often seen. They have reddish-yellow legs and feet. While their plumage is snowy white and they are very attractive-looking birds, they are the poorest game bird among the ducks and geese that frequent our lakes.

In the Sacramento valley, all these geese make their homes in the vast tule swamps, but fly to the grain fields each day and have to be frightened away by men who shoot at them to keep them from eating up the grain. In our mountain valleys, occasionally, a goose will make her nest and rear her young, but this is seldom the case, and when it occurs, hunters think that the bird is a wounded one that is unable to keep up with its fellows in their northern migrations. In returning from the north, the geese make short halts, while the ducks remain in Modoc, Plumas and Lassen until about the second snowstorm, when they take wing for the Sacramento and San Joaquin valleys.

[*Concluded next week.*]

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

County Deputies have been named this week. They have much important work to do at once. All the meetings to be held by Grange speakers should be attended by the County Deputy. But better than that, he should see that the members of each subordinate Grange in his jurisdiction fully prepares for these meetings. See that local notices are posted, and that local newspapers give the matter some consideration. Of one thing all may feel sure, viz., the newspapers are true friends to the Grange. Let every County Deputy go to work at once, and with a will. Don't hesitate to help an Order that is the farmers' truest friend.

The Executive Committee is going to considerable expense to revive the Grange cause in California. It hopes every Patron will assist in the good work.

Look out for another Grange, and that soon!

San Joaquin County Pomona Grange had a very large class for the fifth degree at the meeting held in Lodi last month. Full particulars will no doubt appear in another column.

Help to revive some of our old time Granges! Look toward the dormants! The live Granges will care for themselves.

The Grange does not call on you to forsake your church, to abandon a well-founded creed, or to leave a political party; but it does ask its members to be temperate, studious, virtuous, independent, just and progressive, to strike a blow at anything that is wrong, and commend anybody or anything that is right.

Some of the Eastern States have a "Grange Opening Song Card." Seems to me a good idea. Then every Grange in the State would soon have an opening song with which every member of the Order is familiar. And oh, how nice it is if every member will but join in singing the opening and closing odes! The more familiar the tune, the more touching the song! There is something touchingly penetrating about the old tunes. Who does not like "Auld Lang Syne?"

The Michigan State Grange, at its December session, ordered the "Silver Wedding Proclamation" of the National Grange "printed in pamphlet form for free distribution among farmers and neighbors that they may learn what the Grange has accomplished for the farmers."

If your Grange meetings seem a trifle stupid or slow, or there is apparently nothing to do, just remember you are a member! Ask yourself whose is the fault. What have I done to make business for the Grange? Then remember there is always work for willing hands, and if there is nothing on the program, that perhaps it is your fault and you ought to put yourself down for some work. Try to make a short talk, one of these times, when there is nothing doing under Good of the Order.

Now that Grange speakers are to visit your Grange, try to have a class of candidates. One Grange has set out to have a class of 20 members, and they will succeed, for that Grange is a working body. The members know that to get results, work must be done; and they work in unity and with a will.

Congress has been in session three months. What has been done? Well, every member has drawn his salary; that is one thing that has been done. Now you please tell something that has been done by Congress at this session.

Fraternal Visit to Oregon.

By request of the Master of the National Grange, and repeated invitations from Master Hayes of Oregon State Grange, E. W. Davis, Overseer of the N. G. and W. M. of Cal. S. G., intends to visit (with Mrs. Davis, we hope) the annual session of Oregon S. G., at Albany on Tuesday, May 24th. For the four last sessions we have been promised (more or less positively) by a score or more of good Patrons in California, that they would attend the approaching session of Oregon State Grange, but the 700 miles distance over mountain barriers, at the cost of $50 per round trip including sleeping-car fare, has, with other drawbacks, prevented the appearance of over a half-dozen Californians at any session during the four years.

Now, California Patrons, please do your best to make up for the good, but broken, resolutions made to visit our northern neighbors, and accompany your Worthy Master on his fraternal pilgrimage, and our word for it you will not regret it. The Patrons of Albany are making due preparation, we learn from Mr. Train, to provide excellent entertainment for the coming session. No people on earth can be more cordial in their fraternal greetings than the P. of H. of Oregon and their neighbors of Washington. A. T. D.

From Washington.

Ella Wheelock writes from Vancouver, Feb. 24th, saying: The RURAL PRESS makes its weekly rounds filled with many good things, but no department for Oregon or Washington. What ever is the matter; by our silence does the world think we are sleeping? I do not know how it is in Oregon, but in Washington the Order is as wide-awake as ever, and working for the good of the farmer and all mankind. Fruit Valley Grange elected at our last meeting 14 candidates to become members of our Order, also received applications for several more. I. Diedtrich is W. M. and Miss. Wheelock Sec. of Fruit Valley Grange.

EDEN GRANGE will soon announce a special meeting and Harvest Feast.

Monterey to Santa Barbara County.

J. V. Webster, P. M., writes that he will accompany W. L. Overhiser, P. M., in his special Grange meeting lecturing tour from San Miguel to Arroyo Grande, and Hon. Geo. Steele will be with W. L. O. at Salinas and so south according to the following appointments:

Salinas, Tuesday, March 22d; San Antonio Grange at Jolon, Thursday, 24th; San Lucas, Friday, 25th; Bradley, Saturday, 26th; San Miguel, Monday, 28th; Paso Robles, Wednesday, 30th; Creston, Saturday, April 2d; Arroyo Grande, Monday, 4th; Cambria, Wednesday, 6th; Carpenteria, Saturday, 9th.

KIBBESILAH GRANGE will consider the matter of the Patron's Relief Association at the next meeting, March 5th. Wm. Taylor, Sec'y, writes that some members think persons over 60 years of age should be admitted to its protecting fold. The limit of age for joining at 60 gives ten years more than most other safe associations on the plan adopted. On full consideration, we think all will admit it is best to keep within safe bounds and in our Grange business affairs not try to travel on what others have found to be unsafe ground. The organization is such that no one can lose much by joining it. They never pay but $1 for insurance in advance after the membership fee is paid. They can stop at any time, and there can be no claims made.

FROM PESCADERO.—A class of ten (five males and five females) were initiated in Pescadero Grange on the 5th of March, 1892, and two applications for membership (one male and one female) were received. The usual harvest feast and social enjoyment followed the labors of the day. The communications from S. G. Ex. Com. were received, and a committee appointed to carry out instructions. Pescadero Grange is certainly in a prosperous condition.

I. C. STEELE.

SONOMA COUNTY POMONA GRANGE.—The next regular meeting occurs on Wednesday, April 20th, at 10 o'clock A. M. in Two Rock Grange Hall. The fifth degree will be conferred on a large class. At the January meeting, Dillon's Beach was chosen as the place of meeting for the next "Children's Day" and Two Rock Grange requested to take charge of preparations therefor. A resolution opposing any appropriation being made by the Supervisors of Sonoma Co. for the Columbian Exposition was adopted.

CHANGE IN DATES.—To give longer notice in advance (or other cause), the special meetings to be addressed by E. W. Davis, W. M., and S. T. Coulter and Wm. Johnston, Past Masters, have been changed since the announcement was first made in the RURAL PRESS to the following dates in March: Roseville Grange, Monday, 14th; South Sutter, 15th; Wheatland, 16th; Yuba City, 17th; North Butte, 18th; Gridley, 19th.

CALIFORNIA GRANGE.—Ed. F. Mugler, W. M., writes from Athlone, March 5th, saying: "We expect a large class about the last of April, at which time we hope and expect J. D. Huffman, W. L., to be with us. A Grange picnic is contemplated for the same day." All Patrons of California and neighboring Granges should bear the above in mind, and use their best efforts to have successful meetings.

THE MASTER'S DESK and some other Grange matter was left over last week on account of closing our forms two days earlier than usual.

FARMERS' ALLIANCE.

Current Alliance Chat.

Homer (La.) *Farmer:* Sentiment encourages crime. It sheds tears for sin and makes it seem lovely.

Dallas (Tex.) *News:* Take out of politics the greed for office, and both the old parties will die in a week.

Omaha (Tex.) *Siftings:* The most expensive luxury in life is getting mad and using physical capital that can never be replaced.

Wytheville (Va.) *Alliance News:* It is a fact that national banks make 172 per cent on their investments, while the farmer—oh, pshaw.

Kosse (Tex.) *Cyclone:* Postmasters ought to be elected by the direct vote of the people in the territory in which the postoffice is located.

San Antonio (Tex.) *Stockman and Farmer:* Under our present system of railway management, discrimination is made in favor of those who need it least.

Wytheville (Va.) *Alliance News:* The financial question is the absorbing one of the hour. The fate of the republic depends upon its proper and speedy solution.

Chicago (Ill.) *Express:* It is a fact that about all the prosperity in this country of ours is enjoyed by those who do nothing but scheme and scheme to rob labor.

Grand View (Tex.) *Sentinel:* While you are interviewing the leading men of our Government, why don't you ask them the reason there are so many millionaires and tramps?

Kosse (Tex.) *Cyclone:* Senators should be elected by a popular vote of the people, for oftentimes their election by the legislature fails to reflect the wishes of the people.

Texas Farm and Ranch: There is such a thing as a naturally sensible man remaining in office until it makes a fool of him. You would not have to search the skies with a telescope to find an example.

Patterson (N. J.) *Labor Standard:* John Jacob Astor's baby boy will inherit more than $150,000,000 and yet his father did not earn $1000 of it. How is it? Who did earn it? How does so much of the people's money come to be in the possession of one man?

NOT AGAINST BUSINESS INTERESTS.—The Cincinnati *People's Aid and Alliance Review* says: Business men should stop long enough to study the demands of the farmers, before they decide that the farmers are working against their interests. What benefits the farmer benefits the business man. When the farmer prospers the business man will share his prosperity. Reduce the farmer to a mere living and who would expect him to buy luxuries? The demands of the farmer are as necessary to the success of the merchant as they are to the farmer. If any merchant will stop and think, he will find that the 15,000 failures of the year will teach him that bankruptcy is coming closer home every year, and that he has no time to lose, but should join the farmers in forcing their demands to adoption. We hope our readers will join with us in promulgating this great project of "unity" between the farmer, the merchant, and business men in general. When fully consummated it will be a grand thing. Why not?

MEMBERS of the F. A. & I. U. formed more than a sprinkling of the attendance at the Alameda County People's Party Convention at Niles, published in this issue.

Political Mention.

[Political announcements published under this head at the rate of 25 cents per line of agate space.]

Alameda People's Party Organization.

Pursuant to the call of the Chairman, E. M. Wardall, through H. B. Valpey, member for Alameda county of the State Central Committee of the People's Party, a mass convention was held in the town hall at Niles Saturday, March 5th. There was a comparatively fair attendance. H. B. Valpey, of Warm Springs, was chosen President and H. W. Finson of Oakland, Secretary.

Professor Henri Fairweather and wife enlivened the occasion with patriotic songs and music. Mrs. C. P. Stetson of Oakland read an admirable poem and made able remarks during the session. James Ashbury Johnson, delegate to the recent St. Louis Industrial Convention, gave an interesting account of the doings of that remarkable assemblage, which embraced leading minds of the progressive farmers' organization Knights of Labor, woman's suffrage and temperance national organizations. His report showed that it was a very inspiring gathering, whose work culminated well for the encouragement, future progress and final success of the People's party.

A noonday basket lunch was spread by the ladies, with abundance of good things, of which some fifty enthusiastic supporters of the cause partook. Toasts and minute speeches were indulged in, which made this a specially happy feature of the day to all fortunately present.

The proceedings of the convention were harmonious throughout. The following committees faithfully performed their duties: Enrolling Committee—A. R. Dunning, of Pleasanton; M. L. Gray, of North Temescal; J. W. Craycroft, of Warm Springs. Order of Business—A. T. Dewey, A. R. Dunning, Mrs. K. S. Nevins, of Oakland. Ways and Means—A. R. Dunning, N. A. Walker of Oakland, M. L. Gray. Resolutions—A. T. Dewey, E. Kelsey, of Oakland; A. F. Childs, East Oakland; C. C. Chase, of Irvington; Nominations—M. L. Gray, A. R. Downing, N. A. Walker.

Letters regretting absence were read from A. Cleveland of Alameda; Daniel Inman, of Livermore; and Liberty Perham, of Haywards.

Stirring speeches or brief remarks were made by Dr. Childs, Messrs. J. B. Rigdon, Walker, Kelsey, Dr. Renken, Dewey, Valpey, Finson, Gray, Craycroft, A. Huff, W. H. Buckley, E. J. Cole, James F. Ford, Chittendon, Shaw and Mrs. K. S. Nevins, Mrs. S. G. Smythe, Mrs. R. A. Loomis and others. Though meeting for the first time the meeting soon assumed the spirit of a pleasant gathering of old friends, earnest in the faithful performance of duty.

Several proposed amendments to the State and national platforms were received and by vote recommended to the favorable consideration of the next State convention of the People's party, viz:

To substitute the "Finance and Commerce bill" for the Sub-Treasury plan; to add to the section in favor of Government ownership of railroads, telegraphs, etc., a provision for a special department, the managers of which shall be elected by popular vote; to change the (Australian) ballot law so that important questions can be submitted and printed on the ballots under the same requirements as for placing the names of candidates thereon.

Complimentary resolutions were passed to the officers of the convention and speakers Johnson, Stetson, Rigdon and Nevins, and to Prof. and Madame Fairweather and the ladies' piano committee of Niles.

After adjournment of the convention, the County Central Committee elected, organized temporarily by the election of H. B. Valpey, chairman, and A. T. Dewey, secretary. It was voted to meet for permanent organization and transaction of business at Liberty hall, No. 1065 Broadway, Oakland, at 1 P. M., Thursday, March 17, and to hold a reception meeting at the same place in the evening to representatives from the St. Louis National Industrial Convention and members of the State Central Committee; also, a mass meeting to be called at Haywards, at 10 A. M., on Friday, March 25. At these meetings, all interested in the People's Party cause are invited to be present. Able speakers and excellent music will be provided.

The County Central Committee, to consist of 17 members, was appointed with power to fill vacancies, and now stands as follows:

Oakland City—C. S. Lane, N. A. Walker, Mrs. O. M. Sanford. Oakland Township—M. L. Gray of N. Temescal, E. Kelsey. Alameda City—A. Cleveland. Brooklyn Township—A. F. Childs, H. Sedgwick of E. Oakland. Eden Township—Liberty Perham of Haywards. Washington Township—H. R. Shaw, J. W. Craycroft of Warm Springs. Murray Township—A. R. Dunning of Pleasanton, Daniel Inman of Livermore. At Large—A. T. Dewey, Oakland, and H. P. Valpey, Warm Springs.

Agricultural Notes.

CALIFORNIA.

Alameda.

The Warfare on Scales.—Niles cor. San Francisco *Call*: For the past four years there has been a most systematic spraying of all orchards hereabouts, and without doubt the several scale enemies have been destroyed at the same time, thus it has hardly been possible to judge of the extent of their usefulness. Different bugs, in fact half a dozen different varieties of scale-eaters, three or four of them said to be the true Australian lady birds, have been brought into the valley from time to time, and fully as many more insects that have evidently made their appearance in the course of nature, have been busy the past two seasons in the unequal warfare. But what real good they have done it would be impossible to tell. It is, however, true that, taken generally, the trees are much freer from smut, that the first hatching of scale were not nearly so numerous this season, and the second hatching has been even less.

Butte.

Orange Planting Notes.—Oroville *Register:* E. A. Mount, who has had charge of the Villa Verona orange grove for the past four years, says that orange-growing here is yet in its infancy, and that he expects to see thousands of acres planted within the next few years. He says: "Men make a mistake by planting trees on unsuitable ground. They must learn to avoid cement beneath the surface or else blast it or put in a drain so that the water will not stand about the roots. I put a few trees on this land and the strong lower roots died and the tree had to live on a few surface roots. When I removed these trees and set them in good soil they at once made a vigorous and active growth. The V. V. Co., sent me last year a lot of Mexican fertilizer which I put on the trees at the rate of about three pounds per tree. It acted well and helped the trees wonderfully, but it does not make the soil mellow like common manure. The best orange in my estimation is the seedling for profit. After this I would place the Parson Brown, then the Mediterranean Sweets and then the Navels. The Browns and Sweets are heavy bearers and hang well upon the trees, while they are fine looking oranges and keep well. It is just four years since work at Ville Veron a began and next winter we ought to have considerable fruit.

A Splendid Outlook.—Biggs *Argus*: A drive westward from Biggs, eight miles to Butte creek through the adobe section, than which no finer body of wheat land can be found in the world, shows as fine a crop of growing wheat as Butte county, at this season of the year, has ever produced. The adobe farmers have made good use of their time this year and very little land has escaped their foot tread.

Manuring Orange Trees.—*Register*: Joe Gardella, who has had much experience in rearing all kinds of fruit trees, tells us that a friend applied too great quantities of ashes to two of his orange trees and nearly killed them. "At one time I put a large quantity of potato parings, cabbage stalks and other refuse vegetable matter in a hole near an orange tree, thinking the same would prove valuable manure. After a time I saw that the tree looked sickly, and I dug around it to ascertain the cause. I noticed that where I had placed the vegetable refuse the roots of the tree were dead. I at once dug all the stuff away from the roots and put some old iron, leather and good manure about the roots, and in a short time the tree looked as bright and healthy as any of my others."

Profit in Hens.—Oroville *Register:* Joel Garst figures out that his 30 hens have laid 3600 eggs in a little over four months. He sold these eggs for 30 cents a dozen or $36, which gives $1.20 each for his hens, or more than double the value of each fowl.

How and Where to Plant Olives.—Oroville *Register:* Superior Judge Gray says: "I have planted one hundred acres of olives for myself, and have set out trees all the way from four inches high and six or eight months old to trees from three to five feet high and three years old. The blunders which I have made have cost me many thousand dollars. Were I to set out another olive grove, I would not select a tree less than three years old nor less than three feet high, and I would endeavor to get the tree as near as possible to the land intended to be planted. By planting young and very small trees, one loses two or three years' time and not over 50 per cent of them can be saved. Planting box cuttings is sheer foolishness. I would select only good, strong, healthy trees taken from nurseries where but little water had been used. I would recommend the low foothills of Butte county, where the soil is of a red, gravelly character. If the ground had previously been covered with small trees and brush, so much the better. Clean off the ground well, plow and harrow till the soil is thoroughly mellow, and then plant your trees 22 feet apart, and without irrigation, you will be surprised after the first two years at the rapidity with which they will grow. The ground must be well cultivated each spring, the trees staked up and all the little twigs taken off. If you plant three-year-old trees, you will get a small crop the third year after planting, and the fourth year you will get nearly enough returns to pay for taking care of them. After that, you and your children's children may safely look for paying returns each year."

Humboldt.

Reclaiming Marsh Land.—Arcata *Union:* Thos. Bair is the owner of a half section of land about two miles west of Arcata, of which 200 acres is marsh. A contract has been let to build over 500 rods of dike, which will reclaim pretty much all the marsh land, and convert the entire 320 acres into one farm, all of which can be cultivated. The dike, as it is being built, is ten feet wide at the bottom, five feet at the top, with an average height of five feet, both sides being laid with cuts of marsh sod, which will grow as in its natural state, and make the dike impervious to the seepage or perforation by rodents. Another enterprise of the same kind is in course of preparation at this end of the bay, which will have a dike of the same dimensions, of which more will be said later. The Arcata bottom creamery is being built near where Mr. Bair is reclaiming his marsh land. No better clover land lies out doors than this marsh land when once redeemed from the effects of salt water, and as all our farmers are beginning to see that they have been working on an up grade by not putting their land in clover years ago, it is more than probable that one creamery will not meet the demands of our farmers in one or two years from now. Reclaiming our fine tillable land is a move in the right direction, and one that will add much to the wealth of this end of the bay.

Lake.

Crops.—Lower Lake *Bulletin*: Crops of all kinds in this vicinity are in a most flourishing state. They could not be otherwise under the life-giving and exhilarating conditions that have attended their growth the past three or four weeks. The acreage for cereals is much larger than common, a large area of new and hitherto unbroken lands being put to such growth this year. Much orchard planting has also been done this season, and the increase of that industry is something that cannot fail to attract business toward our isolated county and invite other improvements of a similar character.

Los Angeles.

Successful Hatching.—Covina *Argus*: Mrs. W. P. Watts has been very successful with chickens this winter. She has just turned out 200 downy little fellows, the result of one hatching, and has another lot ready to come out this week.

Orange Crop.—L. A. *Times*: It is estimated that the output from Riverside this season will amount to 600 cars, and that the total shipments to the East from Southern California will be about 1800 cars.

Monterey.

Crop Prospects at Paraiso Springs.—Cor. Salinas City *Democrat*: Farming operations are suspended and the prospects were never known to be better. Nearly an inch of rain fell during the recent storm. It is said the grain this year will be free from wild oats and foul stuff, and a large crop is measurably assured, with timely rains later on.

Mendocino.

To the Editor:—Seeding is finished and grain is looking finely. Feed on the ranges is abundant, and have never known better prospect for a big wool and lamb crop than at present. Loss of stock during winter has been smaller than usual. Rawles Bros., with their pack of trained dogs, are doing good work, having killed 11 bears, 10 panthers, and many smaller varmints during the past fall and winter. Tree-planting is progressing, and although prices for fruit the past season have been low, yet all feel confident of success, as we have raised as fine apples, pears and prunes in Mendocino Co. as in any part of the State. Weather warm and pleasant. Almonds and apricots in bloom.—L. Hoag, *Booneville.*

Napa.

The First Carload of Dried Fruit Shipped East.—Napa *Register*: A. L. Bryan, finding himself the possessor of some 12,000 pounds of dried fruit the other day, commenced a canvass among other orchardists and advised those having fruit on hand to join him in a shipment to St. Louis. In this way a car was loaded, and Wednesday it was started by the Central route eastward. The shippers are A. L. Bryan, E. A. Bernard, P. J. Siepel, J. A. McClelland and Dr. M. B. Pond. The consignees are J. W. Teasdale & Co.; shipment, 22,000 pounds. Peaches and prunes are the principal varieties of dried fruit forwarded. For them the ruling prices in Chicago run from 8½ to 9½ cents. The freight rate from here in carload lots is $1.40 per hundred.

San Luis Obispo.

Black Scale.—San Luis Obispo *Tribune:* Mr. G. Shinn, orchardist of Arroyo Grande, was in town Monday, and in the course of his remarks asserted that he had demonstrated to his entire satisfaction that the "black apricot scale" could be utterly conquered and wiped out of existence in any orchard by a wash which he had adopted, which is prepared as follows: Take 20 pounds of resin, 10 pounds sal soda and 5 pounds of whale-oil soap and boil for two hours in 20 gallons of water, then add 30 more gallons water. This, he has found, will clean the trees perfectly, without injury to the foliage or even the blossoms.

Santa Clara.

The Strawberry Industry.—Cor. S. J. *Mercury:* For the last 20 years the western portion of this county has been the chief reliance of the San Francisco market for strawberries. As early as 1860 A. L. Gould began growing this delicious fruit upon the property now owned by A. Block. At that period the berries readily retailed at from 50 cents to $1.50 per pound. J. P. Pierce, W. W. Montague and Corey Peoples also commenced strawberry culture at an early date. Other persons began to take an interest in this pursuit, and with the introduction of Chinese labor the profits became such as to warrant extensive berry-growing. About five years ago this industry had reached a stage when, during season, an average of 1100 chests a day were shipped to San Francisco. At this time W. O. Watson was perhaps the largest grower in the county, having almost 75 acres in small fruits. During the last few years less land has been devoted to this industry. There are several reasons for this. The extensive growing of other fruits has in a great measure affected the demand for strawberries. Land which a few years ago raised excellent berries, now will produce indifferent fruit. The condition of the labor market is also in a measure responsible for this. The Chinese are becoming more independent and unmanagable each year. In spite of these drawbacks, however, strawberry culture continues to be one of the main industries, and it is probable that the northwest part of this county will continue to furnish the choicest berries in the market. Growers in this vicinity report the prospects as favorable to a magnificent crop this year.

Santa Cruz.

Acreage in Sugar Beets.—Watsonville *Rustler:* Contracts for growing sugar beets are coming in daily at the Western Beet Sugar Company's factory in this city. At the present writing, 1600 acres have been contracted for beets in this valley at a straight price of $5 per ton, delivered at the factory, and the indications are that the acreage will be increased to 2000 acres. The company will put in 1200 acres on the Moro Cojo plantation, and an additional 1000 acres will be cultivated in Salinas valley. The prospects for an excellent beet crop were never brighter, and the factory will handle more beets this year than ever before.

Sonoma.

The Next Poultry Show.—Petaluma *Courier:* The Sonoma County Poultry and Pet Stock Association are starting in early to make their next exposition, to be held in this city in January of next year, the greatest exhibit of the kind ever held in the world. Geo. P. McNear has given a purse of $100 gold coin as a premium, to be known as the "Geo. P. McNear Special Premium." Hale Bros. have also put up $100, and the Petaluma Incubator Co. comes to the front with a like amount. It is expected that from $1200 to $1500 will be offered in prizes.

Bright Outlook.—Healdsburg *Enterprise:* At no time in the history of this town has there been more solid signs of prosperity than at the present time. There have been planted this season over 700 acres of new land to various crops, and the work of clearing land is going on in all directions. At least 200 acres of vineyard growing on bottom lands have been cleared of the vines, and the land planted to hay, grain, etc. This means that 1000 tons of grapes, at a low estimate, will be taken out of the market. The grape business looks more hopeful than it has for several years, and if the prices of grapes take a raise, the result would be marvelous in this district. The outlook for a good year in the fruit business is reasonably bright. Nearly all the canned goods of our local canneries have been sold, and but little dried fruit remains in the market. For the past two years our farmers have made money, and many have not only paid off their indebtedness, but now have nice bank accounts. From now on, their lot will be easier, and they will make more improvements.

Large Poultry Raiser.—Petaluma *Courier:* C. Nisson of Two Rock has a mammoth incubator of 2680 eggs capacity. He expects to market 10,000 broilers and other poultry this year.

Stanislaus.

Orange-Raising at Oakdale.—*Leader:* A. V. Stuart showed us a number of young orange trees, the branches of which showed a growth of more than two inches, reached in less than a week's time. Mr. Stuart is now more thoroughly convinced than ever that the Stanislaus valley is as good as any county for orange-raising. He says that the north winds are the only danger that need be feared here. Protect them from these winds and they will prosper.

Fine Stallions.—Modesto *Herald:* During the last year or two the raising of fine stock has been given much more attention than formerly in Stanislaus county. This county can now boast of some of the finest bred stallions in the State, including thoroughbreds, trotters, carriage and draft horses.

Sutter.

Steam-Cooking Outfit for Spraying.—Yuba City *Farmer:* A new steam-cooking outfit for preparing spraying material, etc., has been erected at Rancho Sutter orchard, and is a very complete arrangement for such purposes. A 12-horse boiler 14 feet long is set up on brickwork with good furnace, from which the steam pipes lead to two tanks of 300 gallons capacity, in which the spraying material is mixed and heated within a few minutes by the steam from the pipes. Another tank containing water is heated in the same way. The boiler is operated at 60 to 70 pounds pressure. Everything is convenient and requires but little labor to operate the same. The outfit will also be used during the prune-drying season for dipping and otherwise preparing the fruit.

Tulare.

Historical Tree-Planting.—Tulare City *Citizen:* In Frazier valley, at a place now owned by Mrs. L. L. Gill, a lady by the name of Mrs. H. M. White planted the seeds of a very fine orange which she got at the Fourth of July celebration in 1863, at Camp Babbit, near Visalia. From the seeds which she planted she raised a tree, which is known all over the county and over the State as the oldest orange tree in Frazier valley, and one of the oldest in the country. It stands near the house and is a very beautiful tree. And from this tree has expanded an orchard of about 40 trees. So you can see what, with a little care, the planting of the seeds of one orange comes to, in a few years. Another example is the story of the oldest orange tree in Plano. In 1863, Miss Gibbons proposed the planting of the seeds of a fine orange as an experiment as an ornamental tree, if it should prove too frosty for the fruit. Accordingly, a place near the house was prepared with much care, and the seeds planted. Mrs. Gibbons covered the young plants on frosty nights until learning, two or three years after planting, that orange trees were successfully raised north of there, the trees were left uncovered in frost as well as in sunshine. In eight years, two very fine well-flavored oranges were produced, the seeds of which were planted. After this, Mr. Gibbons planted 74 trees for the purpose of raising oranges. He also planted a number of lemon and lime trees, but the frost was too hard for them, killing trees an inch and a half in diameter. However, one lemon tree 20 feet high is a prolific bearer. The experiment of sending to Los Angeles for trees had been tried twice without success, the frost killing them, while seedling trees raised there were uninjured. In 1881 he took the first and second premiums at the Los Angeles Citrus Fair, in March, a large number being on exhibition. The oldest tree stands in front of the house and is now 29 years old. It has been bearing about 21 years and is known as one of the oldest orange trees in Tulare county. Near it stands an acre orchard of its prolific and profitable descendants.

Growing Crops.—Hanford *Journal:* Samuel Page says he never saw grain and alfalfa crops grow as fast at this season as they are growing this year. He sowed a piece of his land on Thursday, and by the following Monday the young alfalfa was growing nicely and evenly all over the tract. He says his barley crop, recently sown, is showing the same marvelous growth.

Ventura.

Growing Corn.—Cor. *Free Press:* In raising corn, my plan is first to begin with the best. If the ears are short, take the "eight-rowed" yellow corn (long-eared kind) and mix with the sweet. In the fall, pick out some of the longest ears of yellow corn having kernels of the sweet on them. Pick off these and plant them next season, and you will find that the length of your ear is much improved. The above rule always holds good, provided you have selected the long-eared kind to start with. To increase the number of rows on the cob, cross with any kind of corn having a large number of rows. If the corn used for "crossing" is later than the sweet corn, then plant it a week or two before you do the sweet, according to the difference in time of ripening, putting the sweet corn in every hill afterward. To make the corn earlier, pick off the ears as soon, or just before, they begin to "glaze," and strip up the husks and hang in the shade. A handful of wood ashes in each hill is of great benefit.

Success of the Starch Works.—Ventura *Free Press:* The Hueneme Starch Works have closed down for the season after making about 25 tons of fine potato starch. The company still has most of this product on hand yet, although several orders have come in for 10 to 20 barrel lots, the price being about 4½ cents a pound. Next year a portion of the plant will have to be enlarged in order to handle the potatoes with a profit. The facilities for drying are inadequate.

Yolo.

Crops at Clarksburg.—Woodland *Mail:* D. G. Webber says the people of Clarksburg and vicinity now feel comparatively safe against the ravages of the Sacramento. They have put up by their own exertions, "and no thanks to nobody," a levee that will withstand 31 feet of water in the river. Nearly all the land that was drowned out last year has been replanted, most of it to alfalfa. So large was the amount sowed that the stock of seed here became exhausted and much of it was ordered from Salt Lake City. Mr. Webber reports the crops to be in a most flourishing condition.

Yuba.

Grain Crop Prospects Never Brighter.—Marysville *Appeal:* The prospects for a plentiful harvest at this early date never looked brighter in Yuba and Sutter counties. Grain-growing in these counties has been advanced to a most prosperous condition, and from the soil and climate no other but a profitable result could be expected. They were the two first counties to engage in grain-growing in the higher plains, and they attained a prominence that they have never lost. It was in these two counties that the system of summer-fallowing the soil for grain was first employed. From all parts of both counties come most flattering reports. The summer-fallowed grain is in the finest condition, the cool weather having caused it to stool and root deeply. A large yield is also expected from the winter-sown grain. In a few weeks nothing will be seen in Yuba and Sutter counties but waving fields of golden grain, and orchards heavily laden with fruit. The ranchers have not much difficulty in sending their grain to the market. The farmers on the western border of Sutter county have the Sacramento river with its line of steamers; Yuba county and eastern Sutter have the Feather river and the railroad, the new Knight's Landing extension being a great benefit to many residents of that county.

NEVADA.

Arbor Day.—Reno *Gazette:* Governor R. K. Colcord has issued a proclamation setting apart Friday, the 8th day of April, now current, as Arbor Day. The Governor recommends that it be observed throughout the State by the planting of trees, shrubs and vines, in the promotion of forest growth and culture and in the adornment of public and private grounds. He suggests that the schools observe the day by suitable and appropriate exercises, but adds that nothing in his proclamation shall be so construed as to make the day a legal holiday, so far as courts and civil contracts are concerned.

THE HOME CIRCLE.

The Farm at Sunset.

There's a delightful rustling in the poplar trees;
The flowers that languished all the afternoon
Are lifting up their heads, and, half revived,
They answer back the kisses of the breeze.

Deep-nestling in yonder darkling fir
A linnet trills her plaintive roundelay—
Low notes, created like a psalm of grief
As if the warbler mourned the dying day.

Slowly around yon sloping hillside green,
The lowing cows come on their homeward trail;
And blithely t'ward the kral with will serene
The dairy maid trips with her milking pail.

Within the vine-clad porch, after the evening meal,
The ploughman rests him in his low armchair;
Between his lips a pipe, with fire gone out,
And eyes fast-closed beneath his glasses, there.

He dreams of fresh-turned furrows, amply sown;
He dreams of new-pruned vines with tender shoots;
And burden-bloom on peach and apple tree
Hinting at what the summer's crop will be.

And as he lingers in that calm repose,
His head droops low upon his sun-browned breast;
And once his kind lips smile; they seem to say,
"The farmer's is a goodly life and blest."

Enchantment round the farm at sunset dwells,
With soft winds sighing midst the poplar leaves;
With linnet's roulade in the fir tree eaves;
With music of the cows' low-clanging bells;
With fragrant flower-elixir in the air,
And peace and sweet contentment everywhere.

—ADA L. HALSTEAD.

San Francisco, March 1892.

Women in 1950.

NATIONAL CITY, SAN DIEGO CO.

TO THE EDITOR:—Having been invited to prepare a paper to be read before our local literary society on what I believed the position of women would be in the year 1950, I submitted the following, which if you consider of sufficient interest, you may give it to your readers:

FLORA M. KIMBALL.

As the wheels of progress never run backward, and we have no way of judging the future but by the past, we will cast a hasty glance at the dying century, note the position of women during that time, take a hurried look at their present, and, on the advancement made, base our opinions for the future.

In the world's dark ages, the unwritten law of humankind was "might makes right." Woman having less physical strength than man, was dominated by him, the finer elements of womanhood playing no part in her recognition, except to her disadvantage. As spiritual and mental forces came to be recognized as an essential part of the human being, and to predominate over animal and brute force, woman began to rise in her own estimation and that of the most refined of the other sex. From slaves, toys, drudges, harem, home and society ornaments, she has risen to be the leader of thought and counsellor of statesmen. The goal for which her nature and abilities qualify her is by no means reached, neither will the year 1950 find her occupying that exalted height. It will require ages to perfect nature's wise designs. Nor will woman's place in the distant future be far removed from man's. He will be by her side, advancing as she advances, and the saying of John Stuart Mill that "the majority of the male sex cannot tolerate the idea of living with an equal" will be set down to the discredit of that distinguished philosopher.

With no voice in making laws, woman has never been exempt from the penalty of their infringement. An expression of her convictions, if contrary to the party in political power, has cost her her liberty or life. Less than one hundred years ago, Madam Roland, for daring to express opinions conflicting with the popular ones, met her death at the guillotine, with the now famous words on her lips, "Oh, liberty! What crimes are committed in thy name."

For several years after 1825, Frances Wright, at the risk of her life, which was often imperiled, maintained advanced ideas on religion, slavery and the social position of her sex—views now held by men of high social and political rank.

In education, as well as politics, the lines for women were carefully drawn, and any venturing beyond their boundaries were ostracized and looked upon as dangerous to the community.

In 1819, Mrs. Emma Willard established a school in Troy, N. Y., it being the first girls' school in which the higher mathematics formed part of the course. Because of a public examination of a girl in geometry in her school in 1829, a storm of ridicule arose and raged with great fury. Mrs. Willard and her school were denounced unsparingly. So general and severe were the criticisms upon Mrs. Willard for allowing such an impropriety that Gov. Clinton, in his annual message to the State legislature, felt called upon to defend the injured lady and her school. He said: "I trust you will not be deterred by commonplace ridicule from extending your munificence to this meritorious institution." Woman's rapid advance is here conspicuously apparent. At the beginning of a half century, the Governor of the great State of New York was forced to use his executive influence to allay the excitement of the people because a girl had publicly passed an examination in geometry, and at its close, girls in all the colleges of the world, where admitted, won medals and honors for outdoing in the higher mathematics the young men with whom they competed.

Women as professors of mathematics in colleges, professors of astronomy, architecture and all branches requiring keen mathematical perceptions and skill, are no longer a novelty. My own mother, in her girlhood desiring to learn arithmetic, was punished for being found studying one, surreptitiously holding the book under her desk. Her granddaughters may with impunity attempt anything for which their attainments have fitted them.

In the practice of medicine, women in the distant past were carefully ignored. Prior to 1848, there was not a regular female medical practitioner in the United States. In that year, Elizabeth Blackwell graduated at Geneva, N. Y., having been denied admission to a college in Philadelphia. The Directors of the College of Maternity had her application under advisement ten days before they could decide as to the propriety of admitting her to that institution.

In reform movements, women were not wanted further than their influence at the fireside extended, but with a keen sense of justice and pity for the black slave, they were early enlisted in his behalf. The first book ever written denouncing the practice of buying and selling human beings was written by a woman—Lydia Maria Child. Others followed in her wake, but were denounced in the pulpit, where the clergy of that day attempted to prove by bible arguments that negro slavery was ordained by God and that women had no right to speak in public. Abby Kelly, an early anti-slavery advocate, could not obtain a public building in which to speak, more on account of her sex than the principles she proclaimed, and was fortunate in being able to secure a barn or to remain unmolested in the open air. Men and women were expelled from churches for listening to her.

In 1840, an anti-slavery convention was held in London, and Lucretia Mott, the intelligent Quaker preacher, was sent as a delegate. After the long and then perilous journey across the Atlantic, armed with credentials, she was confronted with expressions of horror at the indecency of Americans in sending her, and was refused admission to the convention. The occasion was a memorable one.

The clergy, although by no means alone, were foremost in denouncing the sacreligious innovation. Rev. Henry Grew of Philadelphia said: "The reception of women as a part of this convention would, in the view of many, be not only a violation of the customs of England, but of the ordinance of Almighty God," and Rev. A. Harvey of Glasgow remarked: "If I were to vote in favor of females sitting and deliberating in such an assembly as this, I should be acting in opposition to the plain teachings of the word of God." Rev. Dr. Morrison pathetically added: "I tremble at the thought of discussing this question in the presence of ladies." After a whole day spent in bitter discussion, the vote was overwhelmingly against the admission of women delegates. Neither were they allowed to sit as spectators. So, the refined, delightful Lucretia Mott was fenced off behind a railing and curtain to screen her from the gaze of men.

Previous to 1848 a married woman could not legally hold property separate from her husband, in most of the States at least. Judge Fine, fearing that his own estate might be squandered by a profligate son-in-law, introduced a bill into the New York Legislature, allowing married women the right to hold property. After a long and severe struggle, the bill became a law. Previous to this, in 1837, Ernestine L. Rose sent a petition to the New York Legislature, asking for the same right. She could obtain but five names to the petition and no attention from that honorable body.

About this time, when women began to feel the need of organization to carry on works of morality and benevolence, the Female Moral Reform Society of Philadelphia applied for the use of a church in that city in which to hold a meeting, and were refused the body of the church, but permitted the use of the basement, only on condition that no woman should be allowed to speak at the meeting. Imagine a woman's society of to-day with only gentlemen speakers.

Miss Antoinette L. Brown, who for many years has had charge of a church as its pastor, was appointed delegate to the World's Temperance Convention in Ohio, but, like Lucretia Mott, was refused a seat in the convention on account of her sex.

Less than 40 years ago, the same Miss Brown was appointed delegate to the World's Temperance Convention in New York, accompanied by Mrs. C. M. Severance, now of Los Angeles, and was not only refused a seat in the convention, but when she attempted to speak was hissed, and from all parts of the house was heard, "She shant speak;" "She shant be heard." Pious men were excited to the pitch of using oaths, and her friends urged her to leave the hall, fearing personal injury.

Sixty years ago, there was but one college in the world open to women, and that was in Brazil. Oberlin College, Ohio, was the second, and was founded in 1834. The heroism of girls, who at that time braved public opinion and overcame obstacles to acquire a college education, is interesting history, showing the great contrast to the popular methods of to-day. Lucy Stone, editor of the *Woman's Journal*, when a young girl, learned from her father that her brother was to be sent to college, and begged for herself the privilege of going to Oberlin. Her father was alarmed, fearing that his daughter had lost her mind. But having in her nature the stuff that martyrs are made of, she resolved to carry out her wishes by her own efforts. She picked wild berries and gathered chestnuts, and sold them to buy books. She taught district schools for very small pay until, by the strictest economy, she had saved money enough to make her college venture. Not wishing to invest her money in a stateroom when crossing the lake from Buffalo to Cleveland, the brave girl made her bed on a pile of grain sacks, among horses and freight of all kinds.

At the college she did housework for three cents an hour, and cooked her own food, her board costing her less than 50 cents a week. At the end of four years, in 1847, she graduated with honors, and in all that time she had but one new dress, a cheap calico. Look at our young ladies to-day as they receive the coveted parchment, radiant in graduating dresses, expenses paid by kind and proud friends, and see if but one conclusion can be reached, that woman's day has dawned.

In Boston, in 1852, there was not a college or professional school above the public high school where girls were admitted. Dr. Harriot K. Hunt of that city, after practicing medicine 12 years, was refused admission to the lectures before Harvard Medical College.

Less than 25 years ago, Mrs. Lucinda Stone met on the Mediterranean a company of missionary ladies returning to their work, after a visit to America, where they had learned of the opening of Vassar College to young women. They were greatly surprised at such a state of things, one of them remarking with much warmth, "The very idea of calling it a college for women is enough to condemn it. I am sure of one thing, that no refined Christian woman will ever send her daughter to Vassar." Already, 1000 girls, daughters of refined Christian mothers, have graduated there, and 700 at Wellesley.

Not so very many years ago Mr. Comer of Boston announced his intention of admitting women as pupils to his school of bookkeeping, and was met on every hand with ridicule and sneers, yet in 1885 there were in the State of Massachusetts 2370 women employed as bookkeepers, and the number has been greatly increased.

It was not until 1840 that women were seen at political meetings, and that was during Gen. Harrison's presidential campaign. For a woman to speak at a political meeting was so far beyond the bounds of feminine propriety that it scarcely entered the heads of the most daring.

In 1853, only 38 years ago, a State Teachers' Convention was held in New York, at which were present 1000 lady and 200 male teachers. Miss Susan B. Anthony, then engaged in teaching, having a thought she wished to express on the subject under discussion, arose and addressed the President, Prof. Davies, author of the algebra and arithmetic bearing his name.

"What will the lady have?" he asked, looking inquiringly at Miss Anthony, never dreaming that she could be so presumptuous as to address the convention.

"I would like to say a word on the subject under discussion," was her modest reply.

President Davies was shocked. He appealed to the convention, and for half an hour Miss Anthony was kept on her feet awaiting its decision whether she should be permitted to go on. The Professor violently opposed it, but finally she was permitted to make a few remarks that occupied about two minutes.

Fifty years ago, the only employments open to women were housework, sewing, factory work and teaching. At the present day every avenue to honorable independence is open to them, and the world is in a temper to applaud instead of scorn when unusual industries are adopted by them.

In educational circles, perhaps more than anywhere else, woman has shown her progress. Two ladies are on the Board of Regents of the State University of Wyoming, a lady is Secretary, and also the Professor of History. The State Librarian, a lady of culture, aceeptably earns her $2000 salary. Every County School Superintendent in Wyoming, except one, are women. Women enjoy full suffrage, and as the result the per cent of illiteracy is less than that of any other State in the Union.

Ladies have places in the faculty of Nebraska University; the Analytical Chemist, Professor of Art and History, instructors in modeling and wood carving are all ladies.

Women have served and are serving as trustees and professors in Smith, Vassar, Wellesley and Oberlin Colleges, and in the Northwestern University, Boston University and Woman's College of Baltimore. Many of the State Universities have women on their Boards of Trustees and filling chairs in this country, while foreign nations keep pace with ours, and in some instances run ahead. The women of Germany, Austria and Turkey are the only ones in all Europe excluded from university study. Australia and Japan have opened their college doors to women, and Canada gives them equal advantages with men in most of her educatjonal institutions. The chair of oratory in the University of Honolulu has been tendered Miss Crawford, a Pennsylvania lady.

Mrs. Howell of Indiana has originated a plan to secure a fund for the educational display at the World's Fair, which is indorsed by State authorities.

The struggles of the first women for admission to medical colleges opened the way for the 2432 female physicians who were practicing medicine in the United States in 1880.

For the ministry, women have worked as hard and have been rewarded with equal success. Nearly all religious denominations number among their clergy ordained women.

The struggle for the bar came later, the first woman in the United States admitted to practice law in the courts being Arabella A. Mansfield of Mt. Pleasant, Iowa, in 1869. Seven women have been admitted by statute to practice before the U. S. Supreme Court, and in 1880 the whole number practicing in all the courts was 75. The number has since been largely increased.

The world has ceased to laugh or weep over new departures made by women in the work of the world. Police matrons, prison and factory inspectors, are a necessity. Railroad contractors, railroad presidents, mail contractors, engineers, architects, lighthouse keepers, pilots, bank presidents and directors, and women on city advisory boards are no longer novelties. Nearly every postoffice has lady clerks, and a large number serve as postmistresses. In Ohio women have been appointed by the Supreme Court as referees in railroad and insurance matters. Many and many a woman is at the head of large manufacturing establishments, publishing houses, etc. The Indiana World's Fair Committee unanimously indorsed Mrs. Virginia Merideth as Chief of the Live Stock Department of the World's Fair, and she is admitted to be the best judge of live stock of any person in the State.

In science, art, literature, oratory and the higher branches of learning, women are constantly earning and wearing laurels. Instead of being toys, slaves or merely social queens, they are recording heroic deeds on the nation's history. By force of their own moral and intellectual natures, they are fast coming to the front as politicians and statesmen. Already they have full suffrage in one State, school and municipal suffrage in more than half the States, and, allowing that there will be no adverse check to woman's advancement, before the year 1900, will have equal

political rights with men in every State of the Union. Before 1950 dawns, a grand, large brained, noble hearted woman will occupy the Presidential chair. The dresses, parties and receptions of "the first lady of the land" will be lost sight of in the absorbing topic of her administration of public affairs. The froth of fashionable life will be dissipated, and philanthrophy, politics, and every branch of education having a bearing on the well-being of the race, will take the place of the superficial veneer of society.

The women of the next half century will be mothers of a superior race of men, because, being patriots and statesmen, they will teach their children patriotism and statesmanship. In consequence of woman's enlarged sphere, her children will inherit greater intellectual power, finer physiques and moral tendencies. The wife will cease to be the property of her husband, and, where freedom is, there will be harmony, sobriety, purity and peace.

"The woman's cause is man's, they sink or rise
Together—dwarfed or godlike."

Looking into the future with eyes unblinded by prejudice, who cannot discern the sequel of woman's awakening in this the nineteenth century?

The Exiled Eugenie.

Upon her first visit to Paris Eugenie's beauty was ravishing. She was likened to a snow-flake on a July day; like the fairy-like mist that hangs over Niagara; like all that is purest, freshest, loveliest in nature was the impression that she produced upon people. Once at a great ball she was clad entirely in white, of the fleeciest, gauziest, mistiest description, and with a very simple parure of emeralds and diamonds glistening in her blonde hair, looping up her transparent sleeve, and shining on her lovely neck, she was as completely a vision of delight as eye ever rested on.

The remainder of the story is known, and her marriage, her reckless extravagance, the war, her downfall and escape are tales of history told again and again. She encouraged frivolity and spent money more recklessly, perhaps, than any other woman ever did. She was conceded to be the best dressed woman in the world. Her wardrobe cost $1,000,000, and her jewels were of fabulous value. She spent $10,000 a day for household expenses. It was the age of gold. She undoubtedly was the cause of her own downfall, but she did many kindly deeds. She was one of the first to recognize the merits of Rosa Bonheur, and it was by her wish that the talented artist was decorated. Her legacy of woe is unmatched by any woman in history. She is all alone. Her jewels have been scattered to the corners of the earth; her crown is torn asunder, and the precious stones are now used to decorate women she never saw. Her steps are dogged by spies when she steals like a house-breaker into beloved Paris. Her beauty and strength have faded. She has long waited for the end—Ada Chester Bond in the March Ladies Home Journal.

Spice of Life.

An Appeal to the Magazine Editors.—

Dear Mr. Editors, I pray, do let up on our feelin's,
An' with a happier set o' folks jist cultivate some dealin's.

The heroes an' the heroines 'at wunst used to delight us,
I 'clar' to gracious, now air naught but bugaboos to fright us.

Ye drown 'em, freeze em, burn 'em up, ye separate an' blight 'em,
Till it jist fairly makes me mad there's nobody to right 'em.

It's come to readin' magazines is sort'o' sinful folly;
If a body 'scapes the 'sylum, why, they catch the melancholy.

What have we done that we should thus each month be set to weepin'?
Sure, many a bit o' happiness from life's real page is peepin'.

So, Mister Editors, I say, do let up on our feelin's,
An' with a happier set o' folks jist cultivate some dealin's.

Anna Pierpont Siviter, in Puck.

He (a poet)—Poets are born, not made. She—Don't say that; you will discourage matrimony.

Young Folks' Column.

A Big, Big Pie.

[Written for the Pacific Rural Press by Augusta E. Towner.]

"A story, eh!" and Uncle Robert pokes the coke in the fireplace vigorously. "Why, I'm most run out on stories seems to me."

"O, but it's such a cold night, and so cuddy here by the fire," pleads his pet niece, holding her little hands out to the blaze. "I just must have a story, Uncle; something to make it seem nicer and cuddier——"

"Ho!" chips in her wayward brother, "You think stories really'll make the lamp brighter and the fire warmer. Shucks!"

"I suppose you California children call this weather cold?" interposes Uncle Robert.

"Bet yer—awful!" cries the boy. "Why, we've had frosts nights and nights! Ice, even, two or three times. Whew! winter of '91 and '92'll be remembered. Old Mrs. Green's been here 20 years; says she never saw it so cold. Why it don't snow I can't see."

"Well, my little 'native son,' I wonder what you would say to a winter in Vermont, up north, where one has to dig their way out to the barn, and out their doorways, and where one is snowed in weeks together; thermometer down to zero, and way below. What do you know about cold cold weather?"

"O Uncle, were you ever there? Does it really feel colder?"

"Vermont," muses pretty Ruth. "It seems so far away—off in a corner. I never thought about life there; do tell us about it."

"The corners of the world are pretty well filled up, and Vermont was well known and settled long before California. It's been a grand State, and sent out fine people—sturdy, whole-souled, high-principled. I don't know as a nice easy place to live in as California can produce such characters as have come from Vermont. Adversity develops—though you youngsters won't understand that—but I might tell you something about a family I know of that lived there once——"

"O do!"

"——Who prospered, turned out fine men and women, spite of sorrows and hardships you children cannot conceive of, petted and favored as you are in a country where the poor and destitute cannot possibly suffer as they do where there are long cold winters."

"O Uncle, begin!" cries Ruth. "'Once on a time,' you know."

"Well, once on a time a poor farmer in Vermont lost his life by an accident. It was winter. He was out in the woods chopping trees, and one fell on him. He died before his companions could get him home. He had a large family—seven children, I believe, and a wee baby. It was terrible for the whole family to lose the head, the mainstay of the home. More terrible for the poor widow. They had to work hard, and contrive every way that winter, after the funeral. But they managed very comfortably. You wouldn't call it so. They did, for they kept warm the rest of that long, cold winter, their cow gave them milk, they had plenty of corn meal, and they were together."

"But not just mush and milk to eat?" exclaimed Ruth.

"Yes, 'just mush and milk.' But they were together, I tell you, the bereaved widow and her children. And such good, uncomplaining, industrious children. The next summer they raised vegetables in their garden as a change in their diet. One of the older boys got a chance to dig potatoes on shares, so the second winter they had potatoes besides mush and milk. Their chickens and eggs had all to go to the village store, or be sold to wealthier neighbors, that they might have clothes and other things money alone could get. But the second summer the mother died. Kind neighbors helped at the funeral—O well, I must skip all this, it is too sad for you children, and tell you of a funny, big pie that grew, as you might say, out of all this trouble."

"A pie! O my!" cries Freddy.

"Those poor orphans," murmured Ruth. "How many were they, did you say?"

"Seven, besides the little baby, and the oldest girl was sixteen." Of course they were talked about by the neighbors, after they lost their mother. What could that family do off on that lonely, rocky farm. There could be no other way. They must be divided. One neighbor take one, another one, to adopt or as help till they were old enough to shift for themselves. And those no one would take, the town must care for—in short they must go to the poorhouse. O you cannot dream how horrible such a thought as that was to these children, who, young as they were, were proud, self-reliant, independent. The oldest boy and girl found out in some way what was said about them, and had long consultations together—consultations that left them looking very determined.

One day a wagon came up the road, and two town officials dismounted therefrom and knocked at the front door of the little white house where these children lived. No one was in sight. All the doors and windows and blinds were shut. They looked at each other curiously. Then they knocked again, louder. There was a silence, then the door opened suddenly, only a little ways though. The oldest boy stepped out quickly on the porch, and they caught a glimpse of the oldest girl as the door was shut and locked. Then they noticed that the boy had a gun in his hand. He was pale, and looked strangely older and taller than usual. Before they could open their mouths to say anything, he pointed down the road, looking straight at them, and said:

"Go right straight back to town, you're not wanted here."

Then he cocked his gun.

"But—but—" one of the officials stammered, "we—"

"*Go right straight back to town, you're not wanted here.*"

"Why—we only—you see—" began the other official.

"Go right away I say, I'll shoot the first man that interferes with us. *Yes, I will.* You shan't have any of us. Sis' and I are going to take care of the children, and run this farm. We promised ma. She said she'd pray for us over there, and she taught us to pray for ourselves over here—and to work for ourselves, too. I tell you we won't be interfered with—divided up—sent to the poorhouse. I'll *shoot* it you don't leave us alone. Sis' and I'll run things. You'll see."

"There was no use trying to argue with this pale, determined boy. The grit of all his sturdy ancestors was aroused in him. The officials, perplexed, awed, touched, had to go, promising they would leave them alone, as far as breaking up the family was concerned. After this, all the town tried to help them, all that their self-respect would allow them to accept."

"But what about that pie?" impatient Freddy asks.

"Why, the pie comes in this way. The baby was always the pet of the family, petted as much as their straightened circumstances would allow. He was a nice boy, but smaller of his age and more delicate than the rest of the children. His oldest sister was always very tender of him, and by and by, when she married, had him come and visit her often, for she then could afford to indulge him as she never had at home. On one of these visits, the first, I guess, after her marriage, she said to him:

"'Now, bubby, tell me just what you would like best for me to get for you to eat while you are here?'

"'O sister,' cried the boy, 'a custard pie all to myself—big enough so I can have all I want for once!'

"'You shall have it. Go and play, and I'll call you when it's ready.'

"So the boy ran off to play, and his sister went into her pantry to make him a pie. She made a big batch of pie-crust. Then she took her biggest dripping-pan and lined it with the pastry. Then she took eggs and milk, sugar of course, enough to make a custard that would fill the dripping-pan. She saw that her oven was all right, and baked it. All the time she was doing this she was thinking, with a smile almost sad on her face, of those long years of poverty, when she and her brothers and sisters had such hard-working, self-denying lives, and she recalled how 'the baby' would come to her when the eggs had been gathered and say:

"'Any kakked eggs, tista? Me want a tustaard pie.'

"Custard pie was always his ideal of luxury—something he had never had enough of all his life. Now he was going to have one of a size beyond all his imaginings. When the pie was baked she set it in water to cool. Then she spread a newspaper on the floor, placed the pie on it, and laid a spoon by the pie. Then, going to the door, rang the bell.

"With a jump and hurrah, the boy came to the kitchen, flung his arms around his sister, giving her a hearty hug and pressing his cheek against hers as he was wont when very little, saying:

"'What a good sister!'

"Then he spied the pie. How he stared!

"'Whoopee! What a pie!'

"'It's all yours.

"'O——— my!'

"He sat right down on the floor, and ate, and ate. When he was ready to go to play again, his sister sat the pie on a chair, with the spoon in it, ready for him. That pie was his and he should have it all—if he wanted it. I have heard that it lasted him three days, and he didn't eat anything else."

"Could he ever eat any again?" asked Ruth.

"Yes, it didn't make him sick of pie. He always declared that the last mouthful tasted as good as the first, and custard pie was his favorite all his life."

"My, but that was a whopper," exclaimed Freddy.

Domestic Economy.

Tested Recipes.

[Written for the Rural Press by Ada E. Taylor.]

Pound Cake.—A good three-fourths cup of butter, creamed; one cup white sugar; two cups flour; three eggs, beaten separately; two teaspoons baking powder; one-half cup milk; flavor to taste.

Ice Cream Cake.—Two cups sugar, three cups flour, one scant cup butter, one small cup milk, whites of six eggs, two teaspoons yeast powder, two teaspoons vanilla. This makes five layers. Color enough to make two layers with carmine, dissolved in a little water. Put frosting between the layers, or make a cream of the six yolks, small cup milk, half cup sugar, teaspoon of vanilla. Set in a tin of hot water till thickened.

Frosting.—Three cups granulated sugar, one cup boiling water. Boil until it ropes. Stir the syrup gradually into the whites of three eggs. Flavor with vanilla. Before putting in the syrup, add one-quarter teaspoon of pulverized citric acid to the beaten whites.

Cream Puffs.—Two cups water, one cup butter, two cups flour. Boil the butter and water together, and stir in the flour while boiling. When cool, add six eggs, not beaten, and stir well. Drop in pans the size of an egg. Have a quick oven, and bake 25 minutes. Avoid opening the oven while baking.

Cream Filling for Above.—Two cups milk, one cup sugar, three-fourths cup of flour, two eggs beaten and mixed with the sugar. Then add the flour and stir all into the milk while boiling. Flavor to taste.

Snow Drops.—One cup butter, two cups sugar, whites of five eggs, one-half cup milk, three cups flour, two teaspoons yeast powder. Bake in small, round tins and frost.

Sunshine Cake.—Yolks of 11 eggs, one cup butter, one cup milk, two cups sugar, three cups flour, two teaspoons yeast powder. Flavor with lemon.

Chocolate Marble Cake.—Two cups sugar, one-half cup butter, one cup sweet milk, two and one-half cups flour, two eggs, three teaspoons baking powder. Dissolve two blocks chocolate in a little boiling water, and add one-half cup sugar, one teaspoon vanilla, and mix it into one-half of the batter.

Company Cake.—Sift two teaspoons yeast powder into hree cups sifted flour, beat four eggs, add two cups fine sugar. Now, stir gradually into the eggs and sugar a half cup of cold water. Next, add lightly the prepared flour. Last, stir in one-half cup melted butter. Melt over the tea-kettle, but do not allow it to get hot.

Frosting for Above Cake.—Take a teaspoonful of gelatine. Cover with hot water and set in another pan of hot water, upon the stove, until dissolved. Let it cool, and then stir in a cupful of powdered sugar. Flavor to taste.

Harlem Jumbles.—Three-quarters of a pound of butter, one pound of white sugar, one pound and a half of flour, three eggs.

Oranges for Lunch.—Soak half a box of gelatine in a cup of cold water. When soft, add two teacups boiling water. When entirely dissolved, add one teacup of sugar, the juice of six oranges and two lemons. Strain this. Have ready oranges, prepared by cutting the part next to the stem, about one-third from the top of the oranges. Carefully remove the inside, which may be used in making the jelly. Fill with the jelly. Replace the upper part and tie with a narrow ribbon.

A Delicious Dessert.—Bake a sponge cake in a shallow tin, so that the cake will be about two inches thick when done. Over this, pour some boiled custard. Just before serving, slice some peaches and put a layer over the cake. Then beat the whites of the eggs to a stiff froth. Add a little sugar and put over the top. Use only the yolks of the eggs for the custard. If peaches are not of season, oranges may be used. Bananas or strawberries are also very fine.

Lemon Tarts.—One lemon, juice squeezed and rind grated; three eggs, one teacup sugar, two tablespoons melted butter. Mix well and bake in small tins that have been lined with rich pastry. Orange juice may be used instead of lemon.

Corn Cakes.—One egg, one-half cup sugar, one cup of sour cream, one of cornmeal, one of flour, one-half teaspoon of soda.

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ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 12, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Baker & Hamilton.
Stump Puller—Geo. Harvey.
Cultivator—MacLeod & Denham, Los Angeles, Cal.
Poultry—E. H. Schaeffle, Murphys, Cal.
Lumber—Dickins-Hobart Lumber Co.
Hotel—American Exchange.
Garden Tools—J. A. Everett Seed Co., Indianapolis, Ind.
Poultry, etc.—J. R. Catlett, St. Helena, Cal.
Nursery Stock—Schwarz Bros., Sacramento, Cal.
Meeting Notice—Grangers' Business Association.
Drain Tile—James J. Searle.
Barb Wire—A. J. Robinson.
Assessment Notice—Grangers' Bank of California.
Windmills—Aermotor Co., Chicago, Ill.
See Advertising Columns.

The Week.

The Citrus Fair at Los Angeles, which is closing as we go to press, is unquestionably one of the greatest displays of the kind ever held in the State, and possibly the best ever held. Judged by the profusion of good fruit in variety, it has certainly never been surpassed, and to one who has seen the development of these displays, it was unquestionable evidence of the advancement which has been attained in the culture of citrus fruits in this State. The fruit shows the wide popularity of the improved varieties, both of local and foreign origin, and the masses of poor fruit which used to be relied upon to produce effects are now conspicuous by their absence.

It has come to a fortunate condition in which even for decorative purposes thoroughly good fruit is used. Another lesson from the fair is the great resources which we are now securing in semitropical fruits outside of the citrus family. Evidently, the uttermost parts of the earth are being ransacked to yield their best offerings to California horticulture. Upon another page of this issue, an esteemed RURAL contributor begins a descriptive account of the fair and of the deeds of those who ministered to its success.

The week has been marked by a hot wave, which has given us in San Francisco a degree higher than March ever reached before. North winds have been blowing and have licked up a part of the moisture given by preceding storms. It is, however, still early, and showers and heat may bring forward the growth which at most interior places still shows the effects of cold weather and short moisture.

DELAWARE'S PEACH CROP.—Private advices received in this city within the past few days are to the effect that the prospects for the Delaware peach crop are far from encouraging. The cold weather of the past winter, it is stated, played havoc in the orchards, and very few live buds are to be found. This "ill wind" can but "blow good" to the California orchardist, and our Eastern friends who wish to grow fruit may some time learn that to do so successfully they should seek a really good and reliable fruit country.

ENGLISH and German capitalists are seeking to form a trust in the American leather trade.

The Uses of Water.

When we write the uses of water, the reader may scent another exhortation to irrigation, but this is farthest from our purpose, for, strange as it may appear in the affairs of an arid State, there are uses of water in California which are perhaps of even greater general importance than its irrigation value. One of these is water as a means of transportation, water as a safeguard against railway extortion and as a friend of the producer of crops which afford but a narrow margin of profit.

Never before has the improvement of California streams and the development of unused waterways into avenues of traffic occupied a more prominent place in the public mind than at present. Such prominence is due to the important movement in which miners and farmers are now apparently in accord, and which aims to secure an adequate sum of money from the General Government for public works in California streams. Another issue which is making the subject of rivers and their tributaries prominent in the public mind arises from the need of freights upon valley products to tide water at lower rates than can be had from the railway.

A very strong report has just been presented to the State Board of Trade by General N. P. Chipman upon the necessity of comprehensive river work in this State. It is shown that California has had only three and one-half millions out of 184½ millions expended by the general Government for river and harbor improvements. This amount is much less than the share of the State by a simple question of division, and vastly less than we should receive in view of area and length of rivers which can easily be made navigable to twice the distances through which they now sustain traffic. It seems clear then that we should easily secure more generous consideration from the general Government if our claims and natural conditions be clearly set forth.

There is abundant evidence to show how the development of our waterways would stimulate production and trade beyond all extent which we can attain under existing conditions. Take for example a few points which Mr. Morrissey of Stockton furnished to the report, to which allusion has been made.

"No matter how complete may be the facilities for moving freights by rail, whenever a railroad parallels a line of water transportation, it cannot compete for the local traffic of the country easily accessible to the water route. * * * The amount of freights of all kinds carried between Stockton and San Francisco will aggregate 400,000 tons annually. Charges for moving wheat by rail from Stockton to Port Costa are $1.50 a ton, while by steamer 75 cents a ton. It is noticeable that the freight rate upon the railroad between Stockton and San Francisco is considerably less than is charged for the same service on portions of the line where there is no competition. For example, the charge for transporting wheat from Stockton to San Francisco by rail is $2 for a distance of 103 miles, while from Borden to Stockton it is $2.75 for the same distance. A careful comparison of the freight charges from different interior points to San Francisco or Oakland wharf by rail will invariably show that the rates per mile are less from such points as are accessible to water communication than from points where such competition does not exist."

What has been enjoyed by the Stockton region in the way of low freights, through competition between rail and water, can be extended to even remote regions of both the Sacramento and San Joaquin valleys, providing the people bestir themselves and secure public attention to their needs and the largess of the Government in meeting them. We believe there is no enterprise of greater industrial moment to our great valley than that which will secure water transportation, with all its direct benefits, from the remotest possible points. To accomplish it, agitation is needed, and every region should take steps to promote discussion and publication of facts and advantages.

EGYPTIAN CORN FOR PORK.—It is a matter of no little importance that E. C. Swift, a large pork-packer of Chicago, who recently visited California, has announced favorable conclusions on several points. He had understood that hogs for the best grade of pork could not be raised in California, except at a very few points where good Indian corn is raised. He has seen some splendid looking pork in the San Francisco markets, and in reply to questions he was told that the hogs were fattened on Egyptian corn. Further inquiry has led him to believe that this species of corn is nearly, if not fully, equal to the standard Indian corn of the East for food. If this be true, the raising of hogs by California farmers ought to prove exceedingly remunerative, as Egyptian corn grows well in most portions of the interior of the State, especially in the Sacramento and San Joaquin valleys.

A NEW BOOK FOR FARMERS.—Readers of the RURAL PRESS who desire to inform themselves of the modern machinery adapted to farm work, should write to Baker and Hamilton, San Francisco, for a copy of their latest catalogue. It is a handsomely illustrated book of 216 pages, and describes every implement used by the farmer. It will be sent free to any person sending for it. In writing, state that the catalogue mentioned in the RURAL PRESS is desired.

BLAINE'S FRIENDS STILL HOPEFUL.—When Mr. Blaine's letter announcing that he would not be a candidate for the presidency was given to the public a few weeks ago, the RURAL expressed the opinion that if Mr. Blaine should be in a fair state of health at the time of the convention, he would be nominated for the presidency in spite of all; that his enthusiastic admirers in the party would force him into the race whether he wished it or not. It was noted that he did not say, with the frankness of a man speaking absolutely without reserve, that he would not take the nomination under any circumstances, but simply that he was not a candidate, and that his name would not go before the convention. This view of the matter finds some confirmation in the fact that the immediate friends of Mr. Blaine are already taking steps to put the nomination upon him. Something like an organization looking to this end has been effected in New York and Washington, and its managers are now engaged actively in corresponding with Mr. Blaine's friends in the several States of the Union. It certainly appears to us that nothing can prevent Mr. Blaine's nomination if at the time the convention meets he shall be in a fair state of health. However, if it shall be demonstrated that Mr. Blaine was entirely sincere in his letter, and if after all he shall positively decline the nomination, it would take something like a miracle to defeat Mr. Harrison. The talk about Alger, Cullom, Lincoln and others, has no significance whatever. It grows out of the desire of newspaper correspondents at Washington to treat the public with a daily grist of more or less interesting gossip.

THE DEMOCRATIC QUARREL IN NEW YORK.—Senator Hill's convention assembled according to programme on Washington's birthday and selected delegates four months in advance from New York to the National Democratic Convention—all of course avowed partisans of Hill and his political schemes. But within a few days thereafter another convention of Democrats was held, protesting against the domination of Hill, declaring his convention to be out of keeping with all precedent and a violation of the rights of the members of the party at large, and naming another set of delegates to the national convention. It is not expected of course, even by those who were chosen by this second convention, that they will be accorded seats at the convention at Chicago. Every claim of party regularity and of party authority belongs to the Hill delegates, and they will unquestionably be admitted, while the protestants will be left out in the cold. On the other hand, the presence at Chicago of a considerable delegation backed by a large and respectable element of the New York Democracy, will bear evidence to the fact that Hill cannot carry the united strength of his party in the presidential contest, and it is as morally certain as anything in the future can be that it will result in the defeat of his presidential aspirations. It looks now as if Hill and Cleveland had succeeded in cutting each other's throats, for each has made it evident that the other cannot command the solid support of the Democrats of the Empire State.

TO EXPERIMENT WITH COFFEE.—James Dietrick of Tulare county has made arrangements for a novel experiment in the way of a twenty-acre coffee plantation in the county named. He has given the subject considerable study and practical investigation, and is convinced that there are many localities in California where this prized berry may be produced successfully. The experiment will be watched with great interest, and if Mr. Dietrick's theories be found correct, it will not be long ere another new and important industry will be inaugurated in our fruitful State. It must be borne in mind, however, that experiments with the coffee tree are not at all new in California, and that it has been pretty definitely settled that there are very few localities in which the plant will survive the winter frosts. We hope Mr. Dietrick has found a thermal belt to try his coffee plants upon. They are more tender than citrus fruits, and no commercial plantations should be made without careful investigation.

"HEALTH HINTS."—One of our Eastern exchanges devotes nearly a column of carefully prepared matter by way of advice to its readers on proper precautions during "the dangerous March weather." The ground might have been much better covered, whether applying to March or any other month, in a single line, thus: "Go to California to live."

THE CANAL AND THE FRUIT.—W. L. Merry suggests that inasmuch as fruit is successfully transported from the Cape of Good Hope for use in London, as recently reported, the opening of the Nicaragua Canal will open up to California in Europe a market sufficient to absorb a large share of the fruit grown here.

RINDERPEST is spreading in Germany.

The State Press.

Perris *New Era:* "It is clearly apparent that a change should be made in the Wright irrigation law by the next legislature regarding the manner of assessing property and the collection of irrigation taxes. At present this is done by local officers independent of the county officials, and results in great confusion, annoyance and delay."

Pomona *Progress:* "The Mongolian can never be Americanized; can never be enthused with the elevating patriotism that pervades this liberty-loving and progressive people; can never be made to regard with appreciation the laws and institutions of this country, only so far as they enable him to gather in the shekels, for which he will work early and late and live like a rat."

Kern County *Echo:* "In a general way, the whole State will gain by having the State and municipal elections in San Francisco separate as they are under the new law, We are not certain but it would be an improvement to have them separated in all counties. Constables and roadmasters have, in the past, exercised an undue influence over the elections of Governors and even the President."

Oroville *Register:* "We conjure every man who has any love of beauty in his heart to preserve the magnificent trees of our beloved State. Spare them as you would the bright stream, the green field, the noble mountain, the sheltered valley. Lay not the ax to their trunks, but let them stand as noble monuments, marks of grace and beauty, and emblems of something higher than the love of gain or greed of riches.

Salinas *Democrat:* "The rapacity of the Southern Pacific Co. has been so patent to persons shipping on their lines, that the company's motto of "charging all the traffic will bear" is now taken as a matter of course. This rule of robbery on the part of the Railroad Co. has had its blighting effect upon industrial development all over the State, but more especially at non-competitive points such as those in the upper part of the San Joaquin valley."

Dixon *Tribune:* "C. P. Huntington is proving himself a true philanthropist in purchasing large land tracts and by subdivision making it possible for the man of small means to build for himself a home. His frank confession that it pays him fivefold detracts nothing from his credit, for what need it matter to the community if Mr. Huntington multiplies his income a hundred-fold, if while doing so he places the people in a position to earn it."

San Jose *Herald:* "The time is fast approaching when the insolence and the lawlessness of the liquor traffic will be effectually suppressed. A public sentiment in that direction is rapidly developing, and nothing has done more to quicken it than the lower class of saloon keepers themselves. Their disregard of law; their interference in caucuses and conventions; their attempts to dictate to all public officials, have done more than all else to create a sentiment against the liquor traffic that will either control it or suppress it altogether. And such a sentiment is all-powerful when it once gets into action."

Hanford *Journal:* "There is certain information that the public is entitled to get in the most expeditious manner possible. There ought to be a law or custom making it compulsory on R. R. station agents to post up information about arrival and departure of trains in a manner intelligible to the ordinary public. Similarly, postmasters should be required to post up time-tables of the arrival and departure of mails, corrected to date, and any other information the public is entitled to. This would save lots of time in asking and answering questions, guard against uncivil answers, and facilitate business generally."

Gonzales *Tribune:* "Judge Dorn has earned the everlasting gratitude of the settlers of this county by handing down a decision in their favor which gives them the right to enter upon the so-called railroad land recently forfeited by Act of Congress. The learned Judge takes the view of the matter, that under the provisions of the Forfeiture Act of Sept. 29, 1890, the unearned portion of the grant to the Southern Pacific Railroad Company reverted to the Government, and that settlers should not be deprived of their rights through the neglect or refusal of the Secretary of the Interior to perform his duty by declaring the land open for entry."

San Jose *Phœnix:* "The Constitution of the United States should be a text-book in all our schools, public and private. Ask every man and woman you meet if they have ever read it, and how many could answer in the affirmative? Not one in a hundred. Few, indeed, have a fair comprehension of the theory of our Government. Thousands of people think that Congress created the States. They do not know that the States made the General Government, and that it has no powers except those granted to it by the States. No study can be so important as that which teaches pupils our plan of Government, the powers belonging to the United States, and the powers reserved to the States and the people. Everbody would be a better citizen by having this knowledge."

Bakersfield *Echo:* "The complaint that the wealthy do not pay a just proportion of taxes is undoubtedly well-founded. How can this be remedied? The *Echo* suggests a plan. It is known to be law that while the Supervisors sit as a Board of Equalization, any taxpayer may go before the Board and complain that a neighbor's assessment is too low. Now, if a dozen or more men will club together for the purpose of examining the assessment roll after it is made up, and if things are not found to be up to the scratch, go before the Board and have them corrected, this cause of complaint may be remedied to a great extent. We would suggest, however, that these dozen men look well to their own figures before starting in on this work."

Farmers and the Stanford University.

CARMEL VALLEY, March 7, 1892.

TO THE EDITOR:—In my last letter, I had hardly time to speak of more than the externals of L. S. J. U. I want now to add a few lines as to its teachers, teachings and taught.

And to put the last first, of the 500 students enrolled in its catalogue, there is *only one agricultural student.* Oh, what *is* the matter with the farmer? Or shall we say, what is the matter with a college course in agriculture? This one student was *not* a Californian, but an enthusiastic young German, and was making up his solitary course as best he could, now busying himself with chemical experiment, then rushing to a lecture on geology, or coming to hear Prof. Comstock expatiate on the bug question. I don't know how often he walks over to the breeding farms and training establishments of Senator Stanford, but there could be no better place in the world for the study of horse flesh, running or trotting, and the Senator permits free access to visitors except on Sundays. So, at present, as there is no set agricultural curriculum, perhaps our farmers are justified in thinking the best school of farm technology is on the farm. But I am writing this especially to impress on all readers one thing—that L. S. J. U. is really a new departure in educational life. No one need fear that L. S. J. U. is not an institution for the people.

"We will teach," said President Jordan, "anything to anybody" that really wants to learn, provided the applicant is over 20 years of age, and that without regard to any regular graduate course. Boys or girls under 20 must follow some recognized routine as laid down in the various bulletins. We find, therefore, students of very various ages and attainments. I even met one friend, who has been a university professor, sitting happily at the feet of Dr. Gilbert studying advanced zoology. So every farmer's daughter or son who is anxious to learn, may enjoy the privilege of studying not only classics and mathematics, but the whole range of natural sciences, physics, chemistry, botany, zoology, geology and any other ology her or his heart aches after; or any one with a mechanical bias will find a spacious workshop fitted with the neatest of carpenter's benches and provided with all needful tools, lathes, drills and needed machines, and power laid on from adjacent boiler house, where he can learn to adapt means to ends after the most approved methods. He will find more; he will find, as teachers, many kindly, earnest young men whose whole time is devoted to assisting him to gain the very knowledge he thirsts for, and he can't be too thirsty—the thirstier he is, the better the professors like it! And these professors, though men of foremost ability in their respective chairs, are quite willing to "condescend to men of low estate." and put their pupils in the way of making the most of their faculties, of using their lives—that is, to the best advantage. For L. S. J. U. is run on the principle that if Charity or Love is the greatest thing in the world, the next greatest are Faith and Hope—hope for the future development of a happy and enlightened humanity; faith that the dispersion of ignorance and the attainment of knowlege is the only way to that much-desired development. "Original research" is the watchword of L. S. J. U. In other words, *think—think for yourself.* Eat of the tree of knowledge of good and evil and digest it thoroughly, as the Lord God meant you to when he gave you a brain with reasoning powers Happy is the student thus privileged at the close of this nineteenth century when he realizes that even in the '50s and '60s we were taught that to think and reason for one's self were certain damnation; that a *freethinker* was synonymous for all that was dangerous and devilish. And this grand opportunity for California's young folks is to be had by all for the mere asking. "Bubbles," said Lowell, "we seek with a whole soul's tasking.

"'Tis only God who is given away;
'Tis only Heaven may be had for the asking."

But *here* is a *heaven on earth* to the knowledge seeker, and offered without money and without price!

Students are of course expected to maintain themselves, and two large establishments have been erected—Encina Hall for male and Roble Hall for female students—where bed and board and washing can be had for $5 a week. The dormitories are spacious. Each contains, I believe, two beds. The dining hall is in charge of a caterer of great experience—Mr. Addison—who takes much pride in showing his department to visitors that they may be convinced that students are well cared for physically. In the store-room were large quantities of dried fruits from Senator Stanford's Vina ranch, pitted plums, peaches, apricots and prunes of excellent quality. We fruit growers had experience of the table set for the students, as we took several meals in the Hall and found them as good as any one could reasonably desire.

I have written these few lines that those who have had no opportunity of seeing L. S. J. U. may realize something of the boon Senator Stanford has conferred on young California. However much we may growl at high rates and freights, the Senator has offered, in L. S. J. U., to furnish young California with the highest educational freight possible at less than the lowest living rates, and I feel pleased to append my signature as one grateful therefor. EDWARD BERWICK.

An Irrigation Bill Favored.

WASHINGTON, March 6th.

The House Committee on Irrigation and Reclamation of Arid Lands has decided to report favorably on Representative Lanham's irrigation bill. It provides that, subject to all rights inchoate or perfected thereto, and all lands of whatever nature or description and rights thereto, including water rights now belonging or appertaining to the United States lying and being situated in the States of Nebraska, Nevada, South Dakota, North Dakota, Montana, Washington, Oregon, Wyoming, Idaho, Colorado, Kansas and California, and in the Territories of New Mexico, Arizona, Oklahoma and Utah severally, with full and complete jurisdiction thereover, be and are hereby granted, ceded and confirmed to said several States and Territories, the grant to each of said States and Territories to be of lands contained within its present boundaries and territorial limits, and the President of the United States shall issue letters patent for the same to said several States and Territories in this section designated wherever and as any of said States and Territories shall, by an act of its Legislature, accept the disposition of lands as herein provided within the time hereinafter specified.

This act shall in no manner affect any of the lands held by the United States for parks, naval, military or other public purposes, nor any Indian lands or lands held in trust for or for use by Indians, nor mineral lands, nor shall it apply in any manner to the Territory of Alaska.

Section 2 provides that the Governors of the Territories of Utah, Arizona, Oklahoma and New Mexico shall, within a reasonable time after the passage of this act, call special sessions if need be of their several Legislatures to take into consideration and pass upon the provisions of this act and the question herein submitted to them, and they may from time to time call such other sessions of their respective Legislatures as may be deemed necessary. The benefits of this act shall not accrue to any State or Territory which shall not have accepted the provisions thereof within four years from its approval.

Section 3 provides that as soon as practicable after the issuance of letters patent to any State or Territory herein mentioned for lands therein situated, and from time to time thereafter, as occasion may require, it shall be the duty of the Secretary of the Interior, at the expense of the United States, to cause to be delivered to the proper authorities of such State or Territory all maps, records, books and papers, or certified copies thereof, in case it may be necessary to retain originals in the general land office, which may be necessary to such State or Territory for proper control, administration and disposition of such lands.

Section 4 provides that no State or Territory accepting the cession of lands as therein provided shall in any case sell, lease or dispose of said lands in greater quantity than 160 acres to any one person, corporation or association; nor shall any such State or Territory impair or abridge the homestead privileges now granted to soldiers and sailors under the land laws of the United States.

Rain-Making.

SANDERS, Fresno County.

TO THE EDITOR:—I am a rain maker. I can speak of what I have done in the past tense, as something fully accomplished. When I awoke before daylight this morning and heard the patter of the rain on the roof, I asked my son, "How long has it been raining?" He answered, "'Tis only your make of rain; it's been rattling away ever since I woke up." What he meant by referring to it as my rain can be understood by a brief description. My house is shaded and completely covered by a grove of blue gum trees 140 feet in height. After a frost, or during foggy weather, there is such an amount of precipitation from their foliage that I kept two rain gauges during the winter of '90 and '91, one at my office, a hundred feet from the nearest blue gum, and one under the blue gum trees. In the open air we had a total of 8½ inches of rain; under the blue gums, less than a hundred yards away, there was a precipitation, including rain and melted frost and condensed fog, of 12 3-10 inches, showing that 3 8-10 inches of precipitation was from the foliage of the trees.

OTHER RAIN MAKERS.

I have to brag of the above while I can, as 'twill soon be so far surpassed by man's skill in causing the air to yield up its treasure wherever and whenever he wills, that the world will finally wonder how agriculture ever succeeded without the aid of this wondrous power. In the hottest, clearest summer weather more than a foot of water could at any time be precipitated from the atmosphere, if, we were only master of the means to do it. The water is there, we've only to precipitate it, and that we will do in the future as surely as in the past. We have corraled the all-pervading electricity and made it do our bidding. When in the world's infancy of knowledge about electricity, Dr. Franklin, by his experiments, added to the knowledge of that subject, he remarked, when criticised, "'Tis only of such use as a helpless, new-born babe; it may grow to be a man." We see something to-day of the younger manhood of electricity, the babe of a century ago. A greater work than Franklin's bringing lightning from the clouds—the producing of clouds and bringing rain from them—is now being attempted near here in our valley. Whether the present effort will attain perfect success or not, we cannot yet determine; but this much is already positively known, the water is at all times in the atmosphere and it can be precipitated by artificial means. This is the babe; its manhood in the future is assured.

W. A. SANDERS.

A Great Irrigation Enterprise.

In October, 1889, A. H. Koebig, a civil engineer, and C. J. Perkins, an attorney-at-law, both of San Bernardino, commenced the preliminary surveys of four large reservoir sites on the north side of the San Bernardino range of mountains, about 12 miles from the city of San Bernardino. After completing the surveys and ascertaining the necessary expenditure, together with the probable capacity of the reservoirs, these gentlemen induced a number of Cincinnati capitalists to undertake the work of development.

In 1891 the Arrowhead Reservoir Company was incorporated, backed by some of the leading capitalists of Cincinnati. The company immediately took possession of the property in question, under its manager, Col. Adolph Wood, and has just recently let contracts for the construction of three tunnels—one 5700, another 3300, and the third 2070 feet in length.

Creighton & Duer, of San Francisco, have been awarded the contracts for the construction of these tunnels. They are now moving their plant into position, and expect to have four Burley drills at work within a week. Under the contract, the time allowed for the completion of this work is nine months from the 1st inst.

These tunnels involve an expenditure of over $250,000, and the first dam to be built, the contract for which will be let within a couple of months, will cost $200,000.

The company has already sold a large quantity of water, among other sales being one of 2000 inches to an irrigation district near Pomona. The water will be conveyed from reservoirs down the great Waterman canyon, where a fall will be obtained whereby over 4000-horse power will be developed on turbine wheels for electrical power purposes, and the water from these wheels conveyed through large steel pipes 33 miles west of San Bernardino over a tract containing 75,000 acres of the finest citrus fruit lands in Southern California.

This vast enterprise will bring under irrigation over 80,000 acres of land immediately surrounding San Bernardino on the north and west. The company will expend over $700,000 in its operations before obtaining any revenue whatever. It has already completed a mountain road at an expenditure of $43,000, and has at work a small army of men in the different branches of labor. There is no gainsaying the fact that this enterprise is bound to play a very important part in the development of the rich lands in the San Bernardino Valley.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

THE DAIRY.

Some Dairy Notes.

CAMPBELL, SANTA CLARA CO., Feb. 27.

TO THE EDITOR:—There seems to be an awakening in the dairy interest of California, and I am sure that those farmers who go into the business intelligently will not regret it. That there is money in butter and cheese-making in this State there does not seem to be any question; the great requisite to success is an intelligent understanding of the business in its various details. There are many advantages here that Eastern dairymen do not have, and it would seem, all things considered, that in California the business would pay a handsome profit. There need be no fear of overproduction for some years to come, as the coast has to import Eastern butter and cheese to supply the deficiency in the home make, and if more butter and cheese is made here, there may be hope of driving that rank fraud oleomargarine out of the market. Only a few days ago I saw on one of the streets of San Francisco a wagon covered with canvas signs inviting "economical housekeepers to call at No. —, and try oleomargarine." In its palmy days in the East this fraud never made such a wanton exhibition of itself, and it seems strange that California, with its large and steadily growing dairy interest, does not enact a more stringent law against the sale of this product. But some may say it is a legitimate article and should be tolerated. On the ground of economics, it should be prohibited, for it comes into direct competition with pure butter, and the stuff bears little or no share of the taxation necessary to support the State Government, while the dairy cows and the land upon which they graze, together with the apparatus used in making butter and cheese, are taxed and do help pay for the maintenance of the State Government. As California will elect a new legislature this fall, let those who are engaged in the dairy industry see to it that they elect such men as will give them a law that will protect them. Oleomargarine is not always sold under its true name, and I venture the assertion that much of the so-called Eastern creamery butter sold through this State is oleomargarine. When Eastern creamery was quoted in Chicago at 31@32c per pound in December last, it was being sold here at 30 cts. per pound. It may be possible to explain that difference, but it looks suspicious.

LOOKS AS THOUGH IT PAID.

From the Hollister *Advance* I take the following, which is an extract from the annual report of the operation of E. Vile's cheese factory at San Filipe, San Benito county, for 1891: "Total number pounds of milk received, 457,998; total number pounds of cheese made, 50,625; highest price received per pound, 15½ cents; lowest, 10 cents; average gross price per 100 pounds, $12.29; average number pounds of milk to one pound of cheese, 9.04; average net price to producer per 100 pounds of milk, $1.13 4-5; cost of making per 100 pounds of cheese, $1.80; number of cows milked, 85; average net income per cow, $63.50."

It would be interesting to know what the cows were fed, of what breed, and what proportion of them came in in the spring, or whether all came in in the fall. I have, in former articles in the PRESS, alluded to the fact that it takes much less milk in California to make a pound of cheese than is required in the Eastern States, and that is a decided advantage to the dairymen of this State.

A WORD OF CAUTION.

Dairymen who contemplate building creameries are cautioned against high-priced buildings—that is to say, that parties have tried in several instances to rope in dairymen by erecting buildings at a greater cost than is necessary. That good buildings and good machinery are necessary, no one questions, but when a plant exceeds $6000, in complete order for operation, some one is making a pretty good stake out of somebody. So, if dairymen do not know for themselves as to what a plant should cost, they should inquire of some reputable person who does know. Some years ago parties in some of the Central Western States contracted to put up creameries ready for operation at a cost of $10,000, and as evidence that they believed the plant would prove a good investment, they accepted as part pay $2000 in stock in each plant they put up. They rarely ever called for any dividends on their stock, and it was shown in a year or two that $5000 would have amply paid for the building and machinery. By their operations they pocketed $3000 on each plant, and they erected scores of them in Kansas, Nebraska, Missouri and Iowa, and probably in other States. The scheme paid the builders but did not pay the owners.

R. P. MCGLINCY.

TEXTILE INDUSTRIES.

Ramie and Its Culture.

SAN FRANCISCO, Feb. 26, 1892.

TO THE EDITOR:—In writing this article on the very important subject of ramie for this country, and the great State of California in particular, at your request, please pardon me if I confine myself, in a homely way, very closely to the important information on the subject closest to the people's interest. I shall endeavor to give the most important facts in the fewest and plainest words possible to make it understood, interesting and most useful.

Ramie is a species of nettle, but thornless. There are three different varieties all suitable for this climate; but they vary in excellence in the market from two to four cents a pound, the best, which I recommend, being worth six cents a pound here in the rough as it comes from the decorticators, dried and baled.

Decortication of itself is of a very simple nature, being to strip or peel the bark from the wood, to knock out the inner wood, which must be done as fast as leafed and cut, or on the same day of cutting. It can be done to pay by flail, treading with horses, or flax break, and shaken out; or more properly in these days, with a machine run by horse or steam power, and with four to six men working two acres a day, easily. One machine will run through 120 acres in two months, and keep a gang of men busy all the summer through. Ramie will grow in about that time if well supplied with water, irrigation or natural moisture.

Ramie should be cut green when about four or five feet high, and when it first begins to brown at the bottom of the stalks. Ramie will not ret like flax or hemp, and thus must be broken green before the gum or glue sets to the stalks. It should be run from the decorticator on an endless wire carrier through a drier and baled at the exit for shipping to the factory, where it is, by a process, ungummed and prepared for carding and spinning. It is excellent to knit or weave into goods of superior quality, pure or mixed with wool for cassimeres, woolen and worsted fabrics.

Ramie fiber is of a very firm texture and of uneven lengths, from two to six inches. It is a flat, hollow ribbon, and thus takes dyes in all shades of the brightest colors, as well as for black silk. It is not of such a glossy nature as common silk, but partakes more of what is called dead silk in black, which all ladies know is most desired in expensive goods. Silk is wound off the cocoons from 800 to 1000 yards long, and doubled in the winding seven strands, while ramie, being short, must be carded and spun like raw silk, or broken silk, and therefore is not mixed with line silk in the way sometimes spoken of, but often made into thread, is used to mix in the body, the strongest parts needed, for the warp or filling, and sometimes for the body of the goods when silk may be used for the raised glossy figures or flowers, giving a beautiful contrast and exquisite shading. In wool mixtures, it can be cut or graded to the even lengths and carded and spun as a complete mixture, benefiting the wool by its superior strength, gloss and finish, the wool making the nap and warmth, the ramie alone being porous and cool for summer wear.

Ramie is not adapted to be worked on linen, hemp cotton or jute machinery. It is estimated that some 30 million dollars' worth of worsted alone, and of wool and woolen good many more million dollars worth is imporported into the United States annually. Ramie fiber that can be grown in this country can take the place of this and excel in durability and finish, besides for all other purposes in ramie goods pure, mixed silk and other ways, I have no doubt, to amount to much more. There is no end or limit to the possibilities, apparently to the uses, to which it can be put. Why should we not hasten to reap the direct benefit, as well as the incidental impetus it would give to all other enterprises, employments and home market?

Ramie is now grown in China, Japan, India, Mexico, Cuba, Hawaii, Samoa, West Indies, Guatamala, Columbia and Brazil, and, in the United States, in Alabama, Louisiana, Texas, California, Washington and Oregon in small quantities. It is also grown in South France, Italy and Hungary, and is worth in China $100 to $200 per ton cleaned by hand. This is done there by scraping the pellicle off the outside of the stalk, cut green, then peeling the bark, and with a bamboo stick rubbing out the mucilaginous gummy matter over a log, and repeated washing and drying on scaffolds or roofs of their houses. For export, it is only partially ungummed. For their hand-weaving they strip this partially ungummed fiber into threads as long as possible, containing, of course, thousands of fibers, which they fasten, stick or tie together end to end, making long threads in imitation of silk, which they weave into goods, then boil and bleach out and color in the piece. This primitive way of working, which can only be done with the cheapest of labor, has deceived most of our experimenters into the belief that the fiber was long as the stalk, like flax and hemp, and of course prevented success in our working it to manufacture by machinery. But now that we have scientifically investigated the fibers before we undertook to build machinery, and found out just what was wanted, it was easy enough to solve the difficulty, which, of course, "was in a decorticator" (if a decorticator was to do, or could do, the whole business), which never has or never will be done economically by one. But when only decortication was wanted by a decorticator (see Webster), and we had a simple way to treat or finish it afterward, success was attained. The farmer is not bothered with the ungumming, which is the difficult part of the work.

AS TO PLANTING.

It can be done in various ways, but I have had early and extended experience in nursery and farming, as well as machinery and manufacturing, so looking to the end, that the greatest success and efficiency might be attained, I will suggest this plan: After properly moistening, plow and pulverize your ground well and deep, roll smooth, mark out as for corn, but make the rows six feet apart, plant in the furrows from one to three feet apart, dropped like potatoes, and cover like corn—or you can stick the roots, butt down, slanting sideways, two or three inches deep and cover the top about one inch, or let it come almost or quite to the surface if the ground is not mellow and sandy and is moist to the surface, or is liable to bake. Cultivate well between the rows until the sprouts are up two or three feet high, when layer out to cover the ground in a bed four feet wide, leaving a space two feet wide between the beds to cultivate, from which you can procure roots that spread out into these spaces to replant or sell without disturbing the beds. You will find it will pay you for some years to come to raise roots to sell, as a little demand will absorb all now on hand, and I have no doubt the price will double or treble before the rush is supplied.

The first crop after layering can be cut with a sickle by hand and all the poor or branchy shoots can be layered to fill up any vacancies or cut into cuttings and planted like grapevine cuttings.

Now these two-feet paths can be kept open and used for cultivation, or, after the four-foot beds have become solid, can be allowed to spread full.

I advise this plan as a four-foot bed can be grown solid thick sooner than six feet, and after that can be easily extended. When roots become plentiful and cheap you can plant thickly all over the ground at first planting, if you choose, but with roots $3.00 a piece, as at first in New Orleans, it could not be afforded. Although one planting lasts for a life-time it is supposed that 5 cents would be high, but two or three cents is reasonable, and $21.63 per thousand is very reasonable, delivered in good order, the purchaser running no risk in shipping at all. 2,500, 6 feet by 3 apart, or 7,500, 6 feet by 1 apart, makes the first cost enough on a large scale, and with layering and cuttings will so soon cover the beds. If planted this spring a scattering crop can be cut in the fall from the layers, and the next season three or four fair crops can be expected, and the next year your most sanguine hopes ought to be realized. Any one purchasing larger amounts, or where possible, can have my personal attention as to soil, preparation and care, and I will contract to buy all you will raise from roots purchased of me, for five or ten years at 6 cents a pound in bales delivered in San Francisco, Los Angeles, San Bernardino, Sacramento, Tulare or Bakersfield, California; El Paso, Dallas or Galveston, Texas; New Orleans, La..; or Mobile, Alabama; Atlanta, Ga.; or Jacksonville, Florida; Salem, Oregon; or Seattle, Washington. I will also agree to furnish decorticators at a reasonable cost; now 700 to 800 dollars for two acres a day, and give freely all necessary information and assistance possible personally; deposit a forfeit of $50,000 for every 2,000 acres planted from roots purchased from me and paid for, or leave that amount approved, due on the same at 8 per cent interest and accept notes payable in fibre; build manufactory and buy your crop for five or ten years at 6 cents a pound, paying cash 90 days for the same, each crop delivered as above.

Ramie is not a noxious weed, does not spread over the country by seed, is not hard to eradicate, dies with drought, flood, or plowing out to sell the roots or replant. As to its injury or drain on the soil, I must say that has been overestimated, as the comparisons have been made with grain and fruit that grow and ripen grain, wood, fruit, seed or pits, which makes the greater drain and from the surface. The ripening of seed or pits, hardening of stem or wood, is much more exhaustive of the soil than the first or green part of the growth. Ramie should be compared with alfalfa more properly, but has some very important advantages over that also. While alfalfa roots deep and draws its substance not mainly from the surface, but deep down in the subsoil, and far into subterranean depths for moisture, it does not materially exhaust the surface, though in cutting green it is all removed, stalk, leaves and all, sold or used, hardly, if ever, returned even in manure if fed on the place; yet, if ripened for seed, it exhausts the soil much more, while with ramie the roots also go down deep, not only one tap root, but many, each stalk supplying its own, every joint or piece supplying them if detached from the mother roots. Ramie is always properly cut green, all the leaves, about two-fifths of the whole weight, being stripped and left on the field; the wood and juice is separated and burned in dryers, and the ashes can be returned with little trouble, so that nothing but the pure fiber need be taken permanently away.

Now if an old overgrown stalk should be cut, weighed and burned to estimate the loss, the result multiplied by the number supposed to be on an acre, it might be that "50 tons per acre" might be estimated, which would give a very erroneous impression from the real facts. I think the leaves and wood being returned might add to the soil, together with irrigation, and the air all, or nearly all, removed in the fiber, and possibly more, in some cases at least. Something is taken from the air and water, and more brought up from the subsoil, or below. At any rate, I have seen as fine stalks on 10, 15 and 20 year old grown patches of ramie (that I have been told had not been fertilized and not much watered) as I could wish to raise. About five tons green stalks can be expected off an acre cutting, each making a thousand or more pounds of fiber, or three to four thousand pounds in a season of three or four cuts.

Ramie fiber must not be bleached before used in the factory, as it needs different treatment for different uses, and you must not be deceived by long, fine bleached or unbleached samples, as there is no practicability in them. Ramie is not ungummed if long, and cannot be used in that condition except by hand, and then must be prepared while green and fresh, by hand. We want no hand work, and cannot compete with foreign labor in that way. So do not be deceived by gaudy showings.

Bales of it have been made and shipped from the south, 12 to 20 years ago, and found unsalable for profit to this country, and spoiled for their uses in Europe, by hand or otherwise. We want plain, practical working material. It must be thoroughly and economically ungummed, and then it is as free and pure as wool, camels' hair or alpaca, and cut to even lengths, or separated into two, four and six inch lengths, will card and spin as readily by machinery, and if properly done is of full strength and gloss. The farmer, except for curiosity or satisfaction, does not need to be a manufacturing expert to pass on the machinery or fiber. He simply, necessarily wants to be satisfied that he can put into bales and sell the raw material, and roots maybe, enough for several years to pay him for planting, raising and marketing, as well or better than anything else he can raise, and that he will get a better market for his other products, and be able to buy a superior article of goods for less money than is possible without it. If he can make $180 to $240 per acre on a large number of acres for several or many years, and never less than $50 clear and double or quadruple his market, and that at home, instead of the chances abroad; get his goods for less than half or one-fourth of the price he now pays; get a genuine, durable article that will wear four times the length of time the adulterated article he now pays a big price for, builds up his country, makes his property valuable, I think it is worth a little effort and faith, even if there is a good deal of work, and maybe some few mishaps to start with.

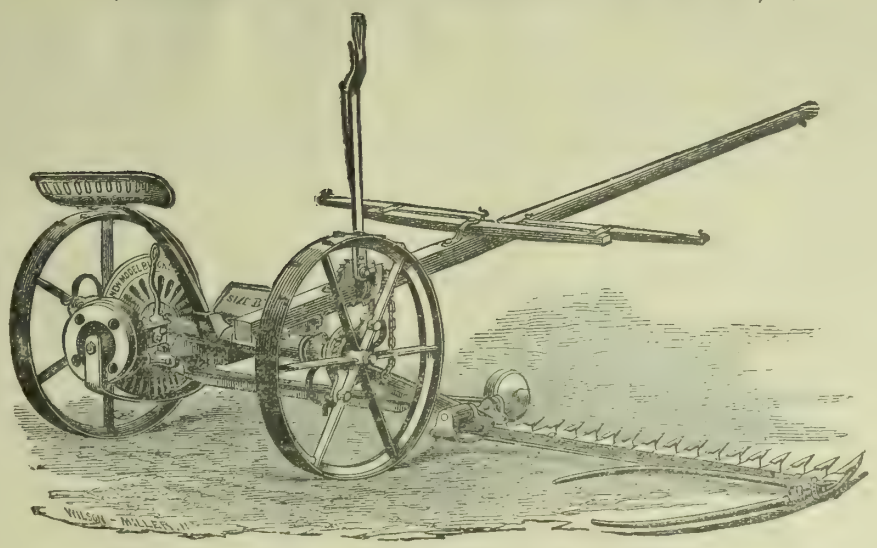
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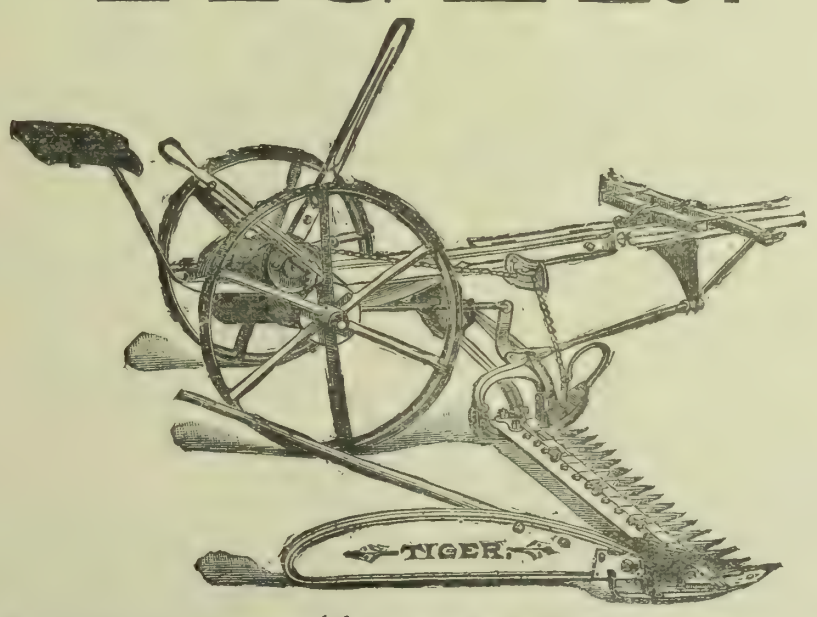
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ENTOMOLOGICAL.

The Smyrna Fig Insect.

The Reason Why All Attempts to Introduce It into California Have Failed.

SAN FRANCISCO, Feb. 20, 1892.

TO THE EDITOR:—Since the experiments conducted by George Roeding in Fresno have shown that the fecundation of the pistillate flowers is sufficient to produce an article equal to the Smyrna fig, several attempts have been made to introduce the insect, which in Smyrna is used to perform this office. This insect, already mentioned by Theophrastus, and for more than 3000 years known by the name Psen, belongs to the genus *Blastophaga*, one of the gallwasp family.

This insect carries the pollen of the staminate flowers to the stigma of the pistillate ones, of course unintentionally, because its real object in entering the fig is a very different one.

Before pointing out the cause of failure in the introduction of this insect, it will be necessary to discuss some generalities in the biology of the gallwasps, so that the nature of the mistakes may be discovered and in further experiments avoided.

All gallwasps known, produce but one generation a year; this statement refers only to gallwasps, not to gallflies (*Cecidomyia*), which develop several, and Aphidian gallbuilders (*Eriosoma, Pemphigus*), etc., which develop many generations.

The gallwasp begins its career as a maggot, in spring. This maggot comes from an egg laid by a wasp, hybernated and also impregnated for considerable time. The wasp is at all times ready to lay the egg, and the moment of laying it depends entirely on the development of those vegetable organs on which the gall, the future habitation of the maggot, has to be formed.

The gall, or the swelling which is formed by the sting of the wasp inserting the egg, is of different shapes and sizes, according to the species of the insect; and as the celebrated entomologist, Baron von Osten-Sacken, has observed, in some North American species, differs even in regard to the two sexes.

How the infinitesimal quantity of liquid inserted by the sting of the mother wasp is able to produce such a variety of forms, distinct according to species, and always the same in the same species, is one of the mys teries connected with the biology of this interesting group of insects.

We abstain here from all speculation about cause and effect, and state only the facts of practical importance.

The life of the gallwasp, in its maggot stage, is not a long one. Those of the Northern Temperate zone are, without exception, found in their winged state at the end of August. The tropical species are little studied, and the Southern hemisphere, although abounding in gallbuilders of other classes, exhibits but the few Australian gallwasps described by Schrader.

It is another curious instance in the life of the gallwasps that although winged, and otherwise perfectly qualified for out-door life, it does not quit its habitation, but remains inside the gall without food, and the monothalamous species, viz., *Cynips quercus folii L.*, even without mate.

Another element of mystery that enters the biology of these little beings is their propagation. We know the females of every species, but there is a considerable number whose males never have been found. The males of some species are wingless. Now the reverse, *i. e.*, winged males having wingless females, is of frequent occurrence in the insect kingdom, but a wingless male belonging to a winged female is of rather rare occurrence, and may under these circumstances be explained by the necessity of planting the eggs for the next generation on the exact spot and under the conditions which are indispensable for their development. A great many tropical relations of the *Blastophaga* possess such imperfect males. It is possible also that males exist even more imperfect than the wingless ones, never developing beyond the maggot form, although sexually perfect. We notice analogous phenomena in the history of the life of parasitical wasps, viz., *Microgaster* and other relations of *Ichneumon* and *Ophion*, etc., amongst whom in many cases males have not been observed. But there still remains the mystery of the monothalamous females, like *Cynips Agamos*, because it is difficult to imagine how the single inhabitant of a gall can be impregnated, and I incline very much to the theory that these instances of mateless females rest on imperfect observations. In these instances of mateless females the males exist perhaps even in the winged form of their mates but are very short lived and disappear before autumn, several months before we find the impregnated females crawling on the bark of oak trees and waiting for the budding of leaves into which to insert their offspring.

But this has little to do with our present object. We want to state—

I. That like the rest of the gallwasps the fig insects, *Blastophaga*, exist in their perfect state early in the fall;

II. That like the rest of the gallwasps it hybernates in the gall without food;

III. That this condition extends up to the time when the fig tree produces its buttons.

Now arises a complication. The *Blastophaga* partakes of the peculiarity of many organisms. It is capable of a limited degree of adaptation to abnormal circumstances under whose influences it develops an abnormal generation.

Caprification, practiced from time immemorial, rests on this peculiarity.

Let us now trace the history of the *Blastophaga* from the moment when the young brood in spring is planted by the impregnated female.

The female dies like a majority of insects does after this biological process, and old Theophrastus, who observed 3000 years ago the *Blastophaga*, states this phenomenon in his matter-of-fact style by saying: "They disappear from the fig, some leaving a wing, others a leg inside as a proof of their former presence."

The little insects die, but their offspring survives, and if left alone, develops about August, but remains in the wild fig in which it hybernates and shares its fate to repeat the cyclus of its own biology by entering, in spring, a budding wild fig and implanting into it its progeny.

That is the regular course, but if interfered with by caprification, viz., by the wild fig containing its offspring, the *Blastophaga* in its maggot state being removed from the tree and hung up on the domesticated fig, then, an abnormal development will succeed the interruption of the vegetable process on which the existence of the insect depended.

We ought to have stated before that the gallwasp maggot depends as much on the gall which it inhabits as the gall itself depends on the plant on which it grows. If the gall is separated from the plant, the gall begins to shrink in most instances. Its inhabitant, the maggot of the gallwasp, then dies, and this circumstance is the most serious obstacle in studying the life history of these insects as any practical entomologist has experienced; but there are a few species which, under such circumstances when already developed to a certain degree, are able to hasten their transformations in the same way as caterpillars when suffering from want of food, although not yet fully prepared, will undergo their transformation and yield a moth somewhat depauperated and generally sexually immature.

The same phenomenon takes place in regard to *Blastophaga* when used for caprification; the withering fruit of the wild fig tree, inhabited by the *Blastophaga* maggot, accelerates its transformation, the wasp emerges from the wild fig, and, following its instinct, enters the domesticated variety, where, by its movements, it carries the pollen to the pistils and fecundates the seeds. It serves to propagate the plant, but is not able to propagate its own species. We will leave here all speculation as to the causes of such a series of interesting biological phenomena, and will draw only our conclusions in regard to practical horticulture.

I. The generation accelerated for the purpose of caprification perishes, *i. e.*, it is useful for caprification but not for the reproduction of its own species.

II. If we do not want to go to the trouble of introducing the *Blastophaga* every year, we have to introduce the normal generation and colonize it on the wild fig, from which we may then draw our annual supply.

III. The normal generation can only be introduced during its hybernation, because that is the only time when the gall being ripe serves merely for protection, not for food.

As to the introduction of *Blastophaga*, we need not go to Smyrna. Lower California and New Mexico possess at least one species of *Blastophaga*. The keeping of the introduced insect during the first winter requires merely a cool place and some simple precaution to prevent escape, so that the insect may not get to wrong places, where it would perish without having left an offspring for the next year. H. H. BEHR.

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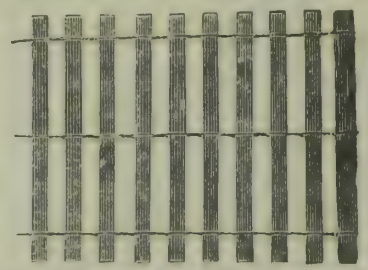
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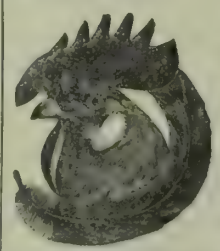
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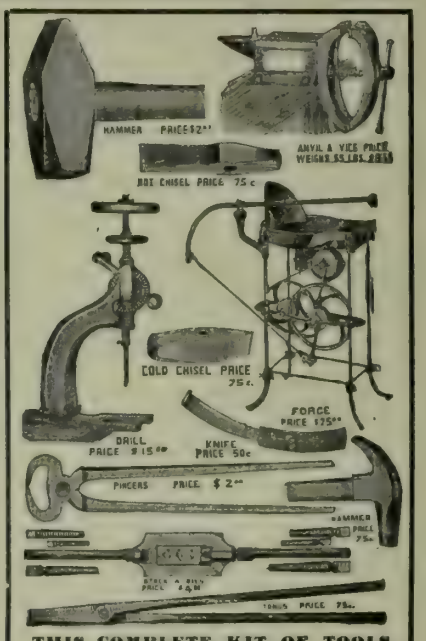


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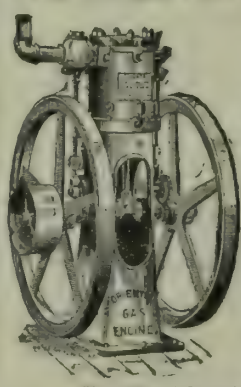
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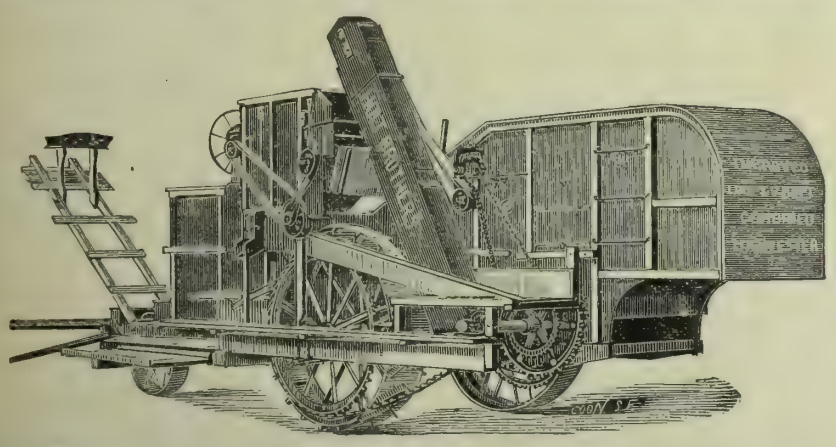
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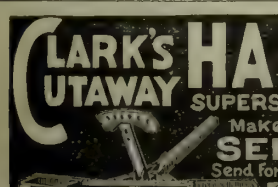
For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

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CLARK'S CUTAWAY HARROW
SUPERSEDES THE PLOW
Makes a PERFECT SEED BED
Send for SPECIAL CIRCULAR.



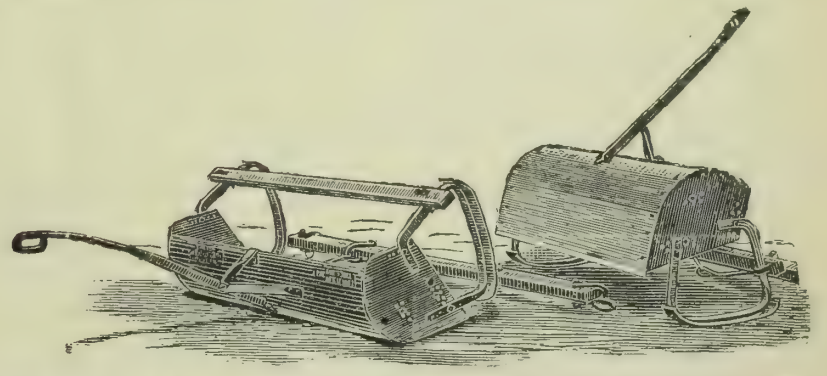
CLARK'S CUTAWAY REVOLVING PLOW



THE GREATEST IMPROVEMENT OF THE AGE.
A Complete Revolution in Plowing
Requires less than half the Power of any other Gang Plow.
STRONG AND DURABLE—MAKES A PERFECT SEED BED

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New York Office 18 Cliff St. NEW YORK

DEWEY & CO. {220 MARKET ST., S. F. Elevator, 12 Front.} PATENT AGENTS.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.
MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,
J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

FRESNO AGRICULTURAL WORKS
FRESNO, CAL.

CARBOLINEUM AVENARIUS.

PRESERVATIVE AGAINST ROTTING, DECAY, FUNGUS, ETC., OF WOOD AND STONE.

REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:
1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.
All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

CARBOLINEUM WOOD-PRESERVING CO.,
MUECKE & CO., Pacific Coast Agents, 319 California St., San Francisco, Cal.

The Nicaragua Canal.

The entire country is becoming more and more awake to the great importance of the Nicaragua Canal, and to the fact that it is absolutely necessary to our commercial progress that it should become essentially a Government work. It would be most suicidal to allow any other country to secure a pecuniary control over it, and scarcely less so to allow its control to pass into the hands of the money kings of even our own country.

The canal, instead of being a competitor with our overland railroads, would, if rightly managed and in the interest of the people, be beneficial to them in building up the country and creating a vast business for them, which it could not itself conduct—and indeed, which it would not need.

Recent experience has shown that waterways, instead of being competitors to railroads, are a benefit to them. Warner Miller, the President of the Nicaragua Canal Company, in a recent address, while speaking of the benefits to arise from the canal, said its construction might easily double the output of the Pacific Coast States in agricultural productions and find a ready and profitable market for them in Europe, because the cost of transportation would be reduced by the reduction in distance. Furthermore, it had been estimated that the increased value of the timber now standing around Puget Sound would pay for the construction of the canal. The great forests in the central part of the country are becoming rapidly depleted and new timber fields are best found on the Pacific Coast. It goes without saying that the building of the canal will rapidly increase the population of all the Pacific States. Their soil and climate are the best in the world, and the Coast is capable of supporting a population of 100,000,000 if all the lands are taken up and cultivated.

Senator Dolph gives three excellent reasons why the Government should extend financial aid to the Nicaragua Canal Company. First, because he desired to have the canal speedily constructed; second, because he desired that when constructed it should be under the control of the United States, and third, because he desired the canal to be capitalized only at its actual cost.

In the event of war between naval powers, the control of the canal would be so decided an advantage that no one can predict what might happen. But if the United States furnishes the money to build it, there will be no question as to the right of the American Government to control it. The $100,000,000 the canal will cost is hardly a matter for consideration in view of the importance attached to the possession of the canal.

The simple and easy way to construct the canal is for the United States Government to endorse the canal company's bonds under conditions similar to those provided in the bill introduced into the last Congress, which placed, at least, the temporary management of the canal, especially the rates of toll to be collected, in the hands of the General Government. That bill furthermore gives to the Government the power to purchase and hold perpetually in its own right a majority of the stock of said company, in the proportion of 70 to 100 shares, if it shall decide it may be for the public interest that such purchase be made.

Under that bill the nation will thus acquire the right of control whenever it sees fit to assert its right. We do not want foreign capitalists to build it, nor transcontinental railroad men. The canal should be maintained as a competing route between the two American coasts, with tolls as light as the nature of the service will permit. The Nicaragua Canal is practically the only competitor to a transcontinental railroad. The Canadian road is always for sale to the highest bidder and consequently no competitor at all. The key to the value of the Nicaragua Canal as a competing route lies in the power to fix the rate of toll. The canal will always be open to vessels of all nations, but an excessive rate of toll would impair its usefulness as a competing route.

SIDE-WHEEL STEAMERS DISAPPEARING. It is probable that the magnificent side-wheel passenger vessels plying on the Long Island Sound will be succeeded by screw boats. One of the lines is having two propellers built, and if they prove successful it is believed that no more side-wheelers will be erected for this service.

Breeze From Iowa.

W. H. Johnson, Prominent Merchant, Cedar Rapids, writes, "I consider Quinn's Ointment the greatest remedy in the world. Has given great satisfaction." For Curbs, Splints, Spavins, Windpuffs, Bunches, use it." Trial box, 25 cents, silver or stamps. Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y

FIRST INSTALLATION AT THE WORLD'S FAIR.—To the Department of Horticulture belongs the distinction of installing the first exhibit for the World's Columbian Exposition. P. S. Peterson, a nurseryman of Rose Hill, Chicago, has during the past week planted six trees on the grounds near the horticultural building as a permanent exhibit, and as a practical illustration of the successful methods of transplanting large ornamental trees. They are an elm, 50 feet high and 2 feet in diameter, commemorative of General Sherman, brought from the woods in 1876, then 50 years old, and planted on the nursery grounds at Rose Hill; a hackberry, 40 feet high and 2 feet in diameter, commemorative of General Grant, also transplanted from the woods in 1876; a linden, 40 feet high and 18 inches bole; a willow 30 feet high and 30 feet spread; a sugar maple, 40 feet high and 10-foot stem; an ash, 35 feet high and 14-foot stem. It required a force of 22 men and 12 horses to transplant the trees, and the cost of the work was about $700.

CYPRESS OIL FOR WHOOPING COUGH.—A correspondent of the St. Louis *Medical Journal* recommends cypress oil, distilled from the needles of the cypress tree (*cupressus sempervirens*), for whooping cough. Drop a little oil on the collar or pillow of the child at night, so that the fumes may be gently inhaled. The writer sums up his experience as follows: Cypress oil is the most promptly successful remedy for whooping cough; it is perfectly free from the disadvantages of many of the other known remedies, such as Belladonna, various balsams, etc. It is very easy of application, and has a strong, but not disagreeable, odor, to which the children do not object, and which after a short time they even enjoy.

Dressing Well on a Small Sum.

Some women have the knack of always being well-dressed, yet their dry goods bills are very small. How is this done?

Simply by dyeing over their dresses, cloaks, ribbons, etc., with Diamond Dyes. In this way they use their goods until worn out, yet by use of some fashionable color of dye, their clothes look like new, and no one would suspect that they were dyed over.

These pure and simple Diamond Dyes are the original package dyes, and they are to-day the only practical and reliable means of home-dyeing. A ten-cent package dyes from one to ten pounds of goods, and so easily that even a child can use them with success. The sole proprietors, Wells, Richardson & Co., Burlington, Vt., will send, for a stamp, a book of full instructions for home-dyeing and 40 samples of colored cloth.

"Carbolineum Avenarius."

Messrs. Muecke & Co. are the general agents for the Pacific Coast of this important Wood Preserver.

Carbolineum is a foreign invention. It is manufactured in Germany, and has stood practical trials for more than 15 years. Carbolineum is a decided antiseptic oil, and therefore of great service in preserving wood from decay and the attack of insects. Its power in this direction is considerably enhanced, owing to its oily nature, enabling it to penetrate well into the substance of wood and thereby thoroughly preserves it against atmospheric influences.

It comes recommended by the most formidable list of authorities, both public and private, civil and military: and since its introduction on this coast has gained public favor and confidence rapidly. An important point in favor of Carbolineum is also that it removes the necessity for any inconvenient and costly appliances for subjecting the wood under pressure to the action of the composition, and, being very thin and liquid, readily soaks into the wood. Insects avoid wood treated with Carbolineum, and it is also a good remedy against louse, fungus, and therefore to be recommended for buildings in damp situations and humid climates. Lastly, as it costs less than other liquids in its application, it has thus the additional advantage of economy, as well as that of superior efficiency as a preservative, besides giving the wood a nice stain, showing the grain of wood favorably.

Any orders and correspondence will be promptly attended to by the general agents, Messrs. Muecke & Co., 319 California St., S. F.

The Aspinwall Potato Planter.

In the whole science of farming, invention has produced no more radical or beneficial change than in the method of planting potatoes. The old way was for the farmer to load himself down with a heavy bag of seed potatoes and amble laboriously through the furrowed field. That way is being supplanted by the machine method. The Aspinwall Manufacturing Company of Three Rivers, Mich., has put a machine on the market that has well been designated as one of the triumphs of modern invention. This potato planter does the entire work of marking, furrowing, dropping and covering at a single operation, and at the rate of from five to eight acres a day. The crop is much superior to that planted by hand, and the cost of raising potatoes is greatly reduced.

THE FIRST SUSPENSION BRIDGE in England was erected in 1741 across the Tees at Middleton. It was 70 feet span, and was erected for the use of miners. It consisted of two common chains stretched across the river and fixed into the rock at each side.

Tiresome

To read long advertisements about things you do not want. We will only speak of one or two items which nearly everybody uses every day and we think you will appreciate the offer.

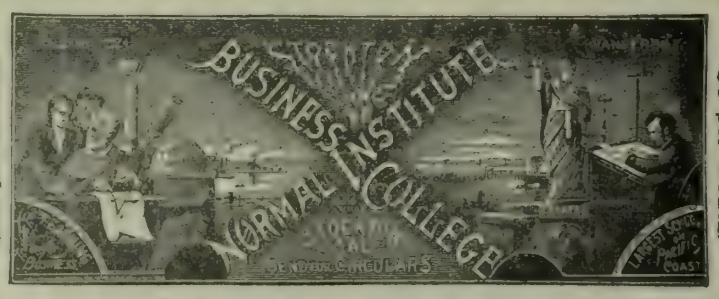
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Misses' Fine Oxfords, Tipped or Plain, $1.00.
Misses' Neat Sandals, 11 to 2, 50c.

Shoo! Shew! Shoe!

Infant's shoes, 1 to 3, 25c up; Infants' 2½ to 6, at 50c up; Child's 5 to 7½, at 75c up; 8 to 10½, at 75c up; Boys' or Girls' 11 to 2, $1 up; 2½ to 6, at $1.25 up; Men's Sunday or every day shoes, $1-50 up. Every day boots, kip, at $1.75 up. Ask for full list, free, and save 50 per cent on Shoes at SMITH'S CASH STORE, 416 & 418 Front St., S. F., Cal.

Stockton-Fresno Business College.

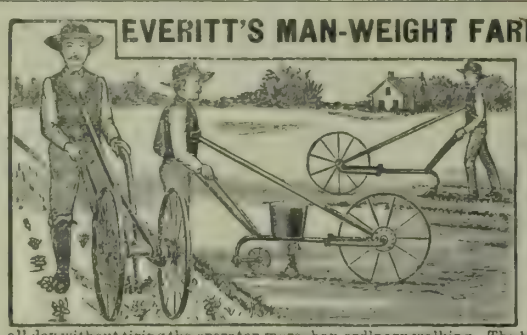
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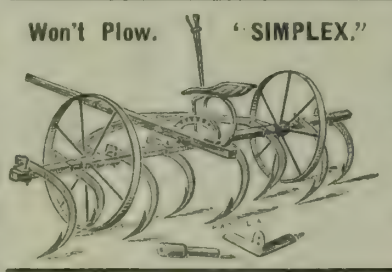


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For Orchard, Field and Vineyard.

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Saves $10 cost, 200 pounds weight, one horse draught, half man's labor. 5 foot extends to 6, 7 or 8 feet. Send for testimonials and prices.

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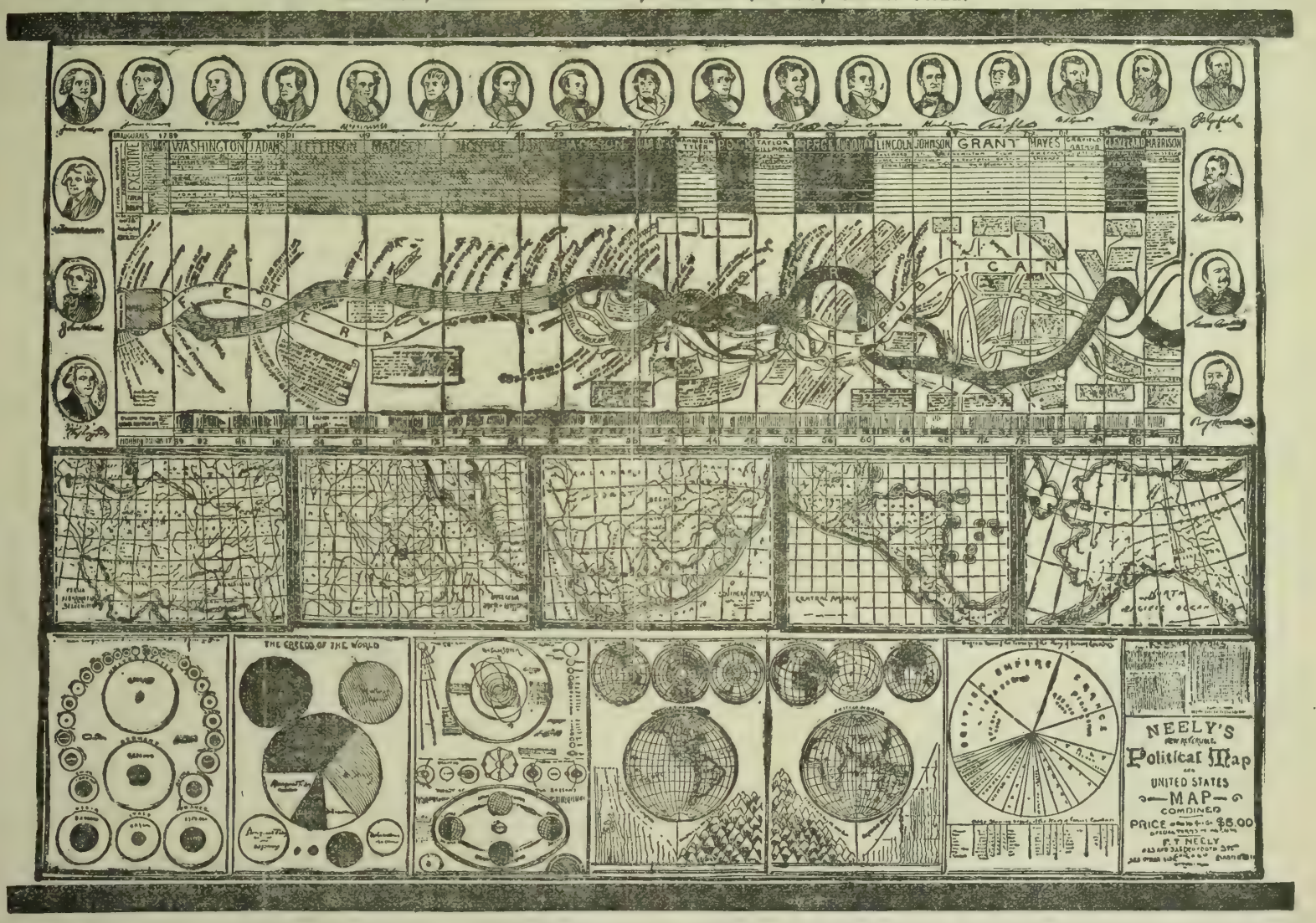
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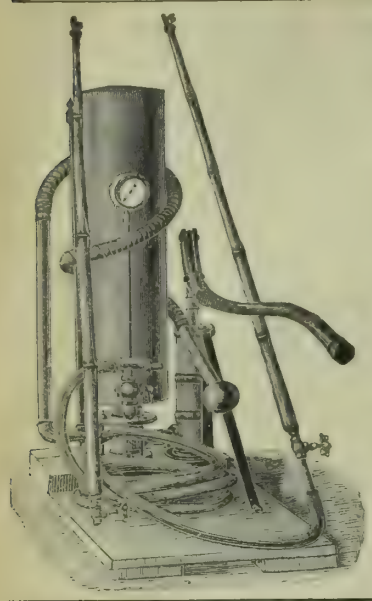
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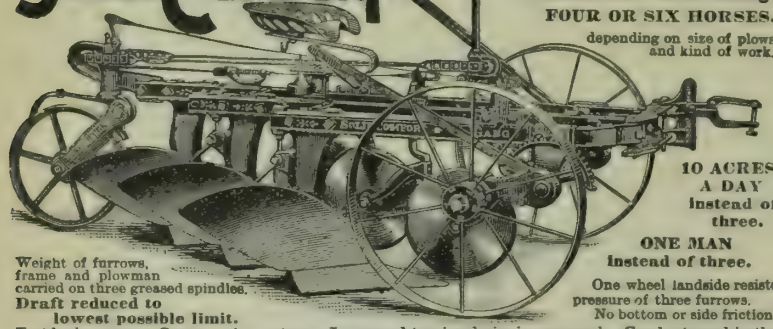
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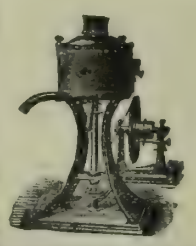


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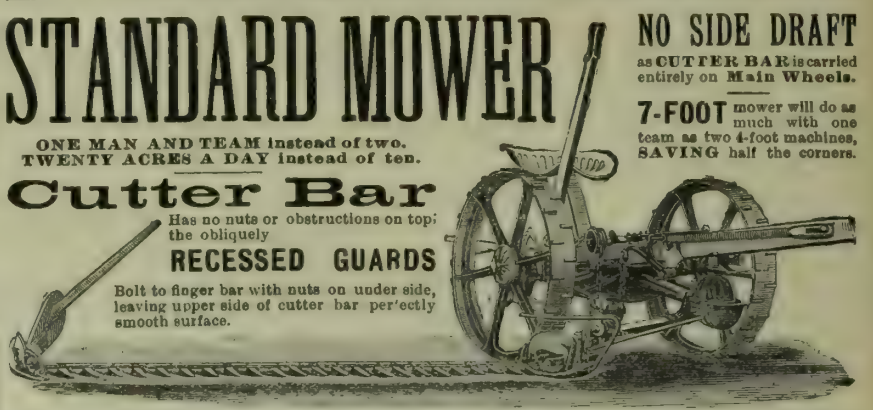
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Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED.

THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

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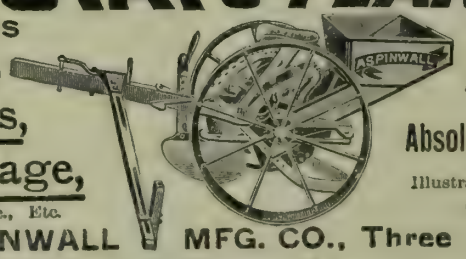
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KNAPP, BURRELL & CO., GENERAL AGENTS. PORTLAND, OREGON.

The Southern Citrus Fair.

[Written for the RURAL PRESS by CLARA S. BROWN.]

The third annual Citrus Fair of Southern California impresses an observer of them all as the best one of the series. It avoids both the monotonous arrangement of the fruit in the first exhibit and the ornate questionably artistic designs that characterized the second fair and diverted attention from the main object of such shows — quality of fruit.

The decorations of the pavilion, which have been described in the RURAL PRESS, are more elaborate and appropriate than ever before, while the displays from localities are in designs not only beautiful but calculated to exhibit the orange and lemon to the best advantage. Eastern visitors confess that the result exceeds even the reports which have gone abroad regarding the unique exhibitions that belong to California alone.

There are more counties represented than last year, and Riverside has not absented herself as she did at that time. All demands for space had to be curtailed in order to make room for the 700 entries from over twenty localities. Even a brief report of everything that is in the building would take up far more space than a weekly publication has available; so I hope to be forgiven if, through inadvertency or mistaken judgment, any of my omissions are unfair.

SANTA BARBARA.

Entering the main room of the pavilion, one's view of the interior is intercepted by a semicircular row of tropical trees, over which is an arch bearing the letters of Santa Barbara.

The trees are from the nursery of John Spence, a rare and varied collection. Beyond them, in a conspicuous position, is a long table covered with a wonderful variety of tropical and semitropical fruits produced in Santa Barbara county, nearly all without irrigation. Citrus fruits do not predominate in this exhibit, but the wisdom of admitting it is manifest by the crowds of interested people surrounding the table. Among the curiosities are the seeds of *chamærops excelsor*, in large dark-blue clusters; Samoa fruit, or *lecheum;* Chinese lemons, and the alligator pear of Brazil, the latter shown by E. Sawyer of Montecito.

J. S. Bell of Santa Barbara exhibits large clusters of dates, which delight the eyes of tourists. Charles Hales of Goleta has Mediterranean sweet and Washington navel oranges and a basket of yellow New York pippins. The Misses Hixon of Montecito show olives dried in the Italian style. Olives in process of pickling are from the Rancho de los Olivos. Ellwood Cooper's famous olive oil is decked with blue ribbon. C. F. Eaton of Montecito displays a row of large palm trees in boxes of his design that will be taken to the World's Fair; also two bunches of bananas, Eureka lemons, French kid-glove mandarin oranges, tree tomatoes and *passiflora edulis* fruit. Joseph Sexton has pampas plumes, accompanied by a set of illustrations of the pampas industry, of which he claims to be the founder in this State; also green dates, Japanese persimmons, loquats, lemon guavas, cherimoyas or custard apples and improved soft-shell walnuts.

Kinton Stevens shows a curiosity to many visitors in the shape of a pineapple plant bearing fruit, also cherimoyas.

"Santa Barbara Sweets" is the brand of jellies and marmalades made at Montecito. In the orange marmalade is a mixture of a small and bitter variety called the West India marmalade orange. It is said that this is used in the celebrated Dundee marmalade to give the bitter flavor thought to be essential, and that the Santa Barbara compound cannot be detected from the renowned Scotch brand. It is proposed to cultivate the West India orange for marmalade purposes.

C. F. Eaton and Goodrich & Johnston show orange wine; J. S. Johnston, orange vinegar. Eureka lemons are shown from trees only two years old. A lemon orchard of 300 acres has lately been planted on the Los Fuentes ranch, and an immense drying house has been built of stone, with tile roof, in the same style as the proposed California building at the World's Fair. The Bergamotte or Chinese lemon has an aromatic rind which is used in the manufacture of perfume in Italy, and as the experiments with it at Santa Barbara have been successful, it is hoped a new industry may be carried on there. Villafranca and Lisbon lemons are also shown and limes of several varieties. The above can give but a faint idea of the 300 exhibits entered by this county.

SAN BERNARDINO.

San Bernardino county has a large amount of space on the right of the hall and wins many premiums. Riverside's design of a gigantic lemon resting on a pedestal of oranges and lemons, which in turn rise from a large table of fruit, is a striking one. H. A. Puls has a generous exhibit of Mediterranean Sweet, seedling oranges, Australian and Washington Navels, and lemons. G. W. Garcelon makes a big showing of sweet rind, Lisbon and Eureka lemons. George Duncan and S. LaRue display St. Michael, Australian and Washington Navel, Ruby blood, Mediterranean Sweet, seedling, Majorca and Sanford oranges, also lemons.

Over this table is a blue silk banner inscribed thus: "Riverside, 1st Prem. Locality, 1st Prem. Lemons, 2d Prem. Display." Another wide table under the gallery belongs to Riverside, and on it J. S. Castleman shows 19 varieties of budded oranges, besides Washington Navels and seedlings and budded lemons.

W. H. Backus has a table upstairs all to himself, where he makes a beautiful display of Washington Navel oranges and blue-ribbon raisins, some of the latter being nearly as large as damsons.

Redlands comes next to Riverside with a structure representing the Union Depot of the C. S. R. R. The evergreen roof has cornices of oranges, and is supported by columns covered with oranges and lemons. The ceiling is of yellow cloth, and decorations of flowers and clustering olives have a pleasing effect. On the table underneath the building are great piles of choice citrus fruit rising from an evergreen ground. The exhibitors are F. P. Morrison, E. B. Cutts, C. H. Lathrop, Mr. Pears, J. E. Diffenbacher, Jacob & Waite, J. LeRoy Brown, Frank H. Edwards, John W. Roberts, J. D. Love, T. E. N. Eaton, E. J. Waite, C. E. Spencer, Geo. E. Otis, Mr. Gay, G. H. Lea and I. Mitchell. Among the varieties shown are Navel, Mediterranean Sweet, seedling, Mandarin, Ruby blood, Hall's Tardiff, St. Michael and other budded oranges, budded lemons and raisins. The Navel oranges are especially fine, and won a number of premiums among many competitors. Redlands has an annex to her exhibit under the gallery, with a booth of evergreen and oranges. Mr. I. N. Hoag is in charge.

Ontario has two large tables downstairs and one in the gallery, and displays a choice lot of fruit. A companion lemon to that of Riverside, but differently mounted, adorns one of the tables, and around it are placed about 75 boxes of lemons, comprising the Genoa, Lisbon, Eureka and Villafranca varieties. Washington and Australian navel, Mediterranean sweet, Malta blood, St. Michaels, Rio and seedling oranges complete the exhibit, which is made by E. M. Hatch, I. C. Wood, W. Friend, Mrs. A. Oakley, Mrs. B. Fisher and Chas. Buffington.

The Highlands table has a representation of the "kite-shaped track" of the Santa Fe railway company, worked out in lemons on a background of oranges. The stations are all marked out and the new route is studied by many people. Here are Mediterranean Sweet, Washington navel and seedling oranges, Lisbon and sweet lemons, pomelos and citrons, shown by W. H. Randall, W. R. Ingham, W. W. Godbold and E. F. Pierce.

"Rialto, Aged 3," does well for a competitor of such tender years, sending a lot of budded oranges, almonds, raisins, peanuts and walnuts. Her space was cramped or a still larger display could easily have been made. The growers represented are Perley King, A. A. Cox, A. W. Bemis, I. Van Nest, J. W. Tibbet and G. N. Turner.

Colton covers herself with credit by an exhibit of about 90 boxes of fruit, arranged in terrace form to show the lay of the land on which her oranges are produced, most of them having come from Colton Terrace. At the top, on a mound of oranges, is a colt in minature, further illustrating the name of the locality. A pagoda at one end of the table is covered with navel oranges. Other varieties shown are the paper-rind St. Michael, Malta blood, Konah, Seedling, Mediterranean Sweet, St. Michael and Australian navel oranges, grapes, fruit and raisins. The exhibitors are C. H. Hubbard, E. F. Van Luven, Jas. Barnhill, Samuel B. Fox, Wm. C. Fuller and Melville Archibald.

A beautiful exhibit of marble and onyx from the quarries near Colton is made by W. L. Hubbard. The specimens are divers in coloring and kind, but all of the first quality, and the supply is immense, coming from a mountain 500 feet high and four miles in circumference.

Colton takes pride in the fact that the output of her cannery last year was 1,500,000 cans.

SAN DIEGO.

San Diego county this year has a good location on the ground floor and has made the most of it. At the left of the stage stands a fort covered with oranges and lemons, which is one of the principal designs in the pavilion. Five tables are so well covered with exhibits that they go a long way to convince skeptics that there is something besides "bay and climate" to induce people to settle in that region. One man, E. P. Fowler, of National City, entered 50 boxes of oranges, which were used on the fort, also Washington Navel and Malta Blood oranges. Other exhibitors are F. A. Salmon of Pala, Mediterranean Sweet and Seedling oranges; Agua Tibia Ranch, limes; H. M. Higgins, Bonnie Brae lemons; Geo. Hanna, Sicily lemons; Frank Hyatt, National City, limes and Mediterranean Sweet oranges; W. O. Bowens, National City, limes; Sweetwater Fruit Co., Washington Navel oranges; Wm. D. Wooldredge, Escondido, same; T. J. Swayne, same; S. M. Marshall, El Cajon, raisins and Eureka lemons from trees three years old in orchard, pineapple and Hart's Tardiff oranges and Villafranca lemons. The La Vida Ranch, at Helix, shows a plateful of lemons picked April 15, 1891, in a fair state of preservation. Frank A. Kimball has a fine lot of olive oil and pickled olives. The latter are uncommonly large and of even color, as fine in flavor as in appearance—a fact I learned by the best of methods. Mrs. M. L. Webb of San Diego, wins first premium for her orange marmalade, and J. H. Ferry of El Cajon carries off the honors in dried figs, a premium of which San Diegans are especially proud. The L. E. Allen Co. shows guava jelly and jam, orange marmalade and preserved figs; D. P. Hale, Escondido, Tangerines and Villafranca lemons. Four varieties of the famous Julian apples were exhibited by J. E. Hamilton. A. F. Dimock, National City, shows Parson Brown oranges. The Orcutt Seed Co., a choice collection of cacti; J. S. Harbison, Dancy Tangerine oranges; Keen and Son, Tangerines, and Clark Bros., of Helix, Blood oranges.

VENTURA.

Ventura county has space in the left gallery. Along the center of the table is a row of large tropical plants from the nursery of Mrs. Theodosia B. Shepperd, who also exhibits a variety of cacti. There is a large display of Eureka and Lisbon lemons, noble in size and fine and solid to the touch, grown by N. W. Blanchard of Santa Paula. He also exhibits a lot of Washington Navel and Seedling oranges. There is a good showing of raisins from Sespe. Mrs. Robt. Lyon, Ventura, shows Wolfskill Seedling oranges and Sicily lemons. Del Valle Bros., of Camulos, exhibit 100 pounds of extra choice almonds. Navel and Seedling oranges. C. H. Sheldon, Ventura, Navels, Mediterranean Sweet and Seedling oranges; W. I. Reice, Ventura, Washington Navel and Parson Brown oranges; E. S. Thacher, Nordhoff, Valencia Late oranges; Knox & Burke, Ojai Valley, Ruby Blood oranges, attracting much attention with their crimson rinds and still more crimson pulp.

[Mention of the displays of other counties and the official list of premiums awarded will appear in next week's RURAL.—Ed. Press.]

Stump Pulling Extraordinary.

A correspondent of the Napa *Register* in describing what is being done on Dr. M. B. Pond's Monta Verda farm west of Napa City says: The clearing of land and the planting out of more vines and trees is the work now on hand on Green Mountain. To facilitate matters the Doctor some months ago bought one of Geo. Harvey's California Stump Pullers, and now the pulling of stumps, green or dry, large or small, topped or untopped, is but play. A system of English 5-8 inch plow steel cables with draught hooks, chains, and a sweep that guarantees a pressure of 72 tons for every horse attached to it, with three men to operate the outfit, do the business. In 18 minutes, recently, 18 stumps were pulled, every root, however long, coming clear out of the ground with each stump. With one setting of the machine five acres can be cleared. The timber, in stove wood and cord wood lengths, with stumps and roots, finds a ready market in town—a haul of ten miles—and the proceeds more than pay the expense of clearing and the preparing of the soil for trees and vines.

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Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

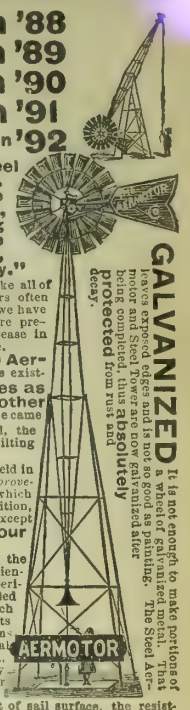
Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?

1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in a gearless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one ($100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the AERMOTOR CO., 12th and Rockwell Sts., Chicago, or 12 Main St., San Francisco.



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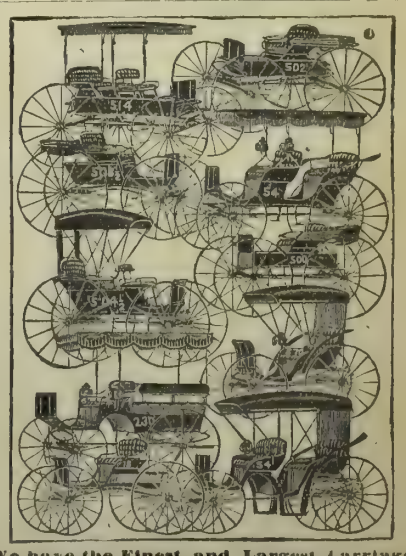
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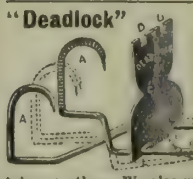
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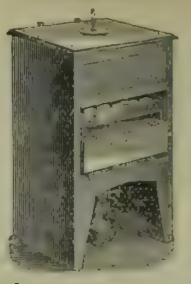
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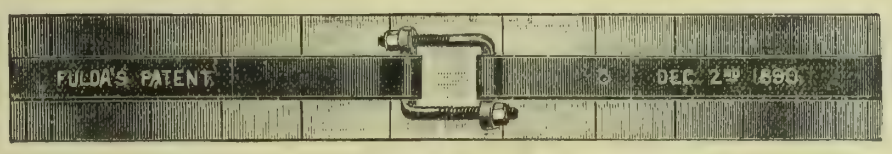
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 9, 1892.

Trade in farm products continues slow. Warm growing weather has caused garden truck and berry vines to make rapid growth. The market promises to be well supplied and at an early day, with both spring vegetables and strawberries. Hot weather in the interior causes fears that grain crops on adobe soil have been considerably injured.

British Grain Market.

LONDON, March 7.—The *Mark Lane Express* says: English Wheats are steady; foreign made, a fractional advance; California is 6d dearer and American Red Winter 3d dearer. Flour is weak, provincial markets quoting American 6d lower. Barley firm, rising 9d. Corn is up 3d; new American on passage is quoted at 20s 9d, and American Oats at 18s 6d. At to-day's market American Flour was 9d cheaper.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June.	July.
Thursday	8s 3 d	8s 0 d	8s 2 d	7s 11½d	.....
Friday	8s 3⅜d	8-01 d	8-01 d	7s 11 d	.....
Saturday	8s 03/4d	8s 00 d	8s 0 d	7s 10⅜d	7s 11⅜d
Monday	8s 3 d	8s 0 2d	7s 11½d	8 0 d	7s 10 d
Tuesday	.....	8s 01 d	7s 10½d	7s 07½d	7s 10⅜d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s 0d	40s 0 d	40s d	Improving.
Friday	40s 3d	40s 3d	40s 6d	Firm.—Frost.
Saturday	40s 3d	40s 3d	40s 6d	Quiet.
Monday	39s 9d	39s 9d	40s	Steady.—Very cold.
Tuesday	39s 9d	39s 3d	39s 6d	Firm.

To-day's cablegram is as follows:

LIVERPOOL, March 9.—Wheat quiet; California spot lots, 8s 1d; off coast, 39s 6d; just shipped, 39s 3d; nearly due, 39s 6d; cargoes off coast, nothing offering; on passage, slightly better; Mark Lane Wheat, quiet; weather in England, milder

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	172⅞	173¼	170	166⅝	164⅜
Friday	172⅞	173¼	170⅝	167	165
Saturday	172⅞	171⅝	168⅜	165⅜	163½
Monday	167⅝	168⅜	165¾	163⅜	161⅛
Tuesday	168⅜	168⅜	166	163⅛	161⅛

The following is to-day's telegram:

NEW YORK, March 9.—Wheat, $1 01⅞ for March, $1 02⅛ for April, $1 00⅞ for May, 97⅞c for June and 97⅛c for July.

CHICAGO, March 9.—Wheat, 89¼c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	169¾	169	150	149	146	145
Friday	171½	169½	....	....	146½	146
Saturday	168¾	168¼	. .	....	145	145
Monday	168¾	167¾	. .	. .	145⅜	145
Tuesday	168½	168	....	....	145⅛	144⅞

The following are to-day's recorded sales on Call:

Informal Session.—Buyer season—200 tons, $1.69½; 100, $1.69¼; 100, $1.69⅜; 300, $1.69½; 1200, $1.70. Seller 1892—200 tons, $1.46½. August—200 tons, $1.47½ per ctl. Regular session.—Buyer season—500 tons, $1.69½; 100, $1.69⅜; 200, $1.69½; 100, $1.69½; 100, $1.69 per ctl. Afternoon session.—Buyer season—100 tons, $1.69. Buyer August—100, $1.50 per ctl.

BARLEY.

	Buyer Season. H.	L.	*Buyer Season. H.	L.	Seller 1892 H.	L.
Thursday	.....	104¾	....	....	....	....
Friday	.....102½	102¾	....	....	.	....
Saturday	101	101	....	....	....	....
Monday	.....102½	102	....	....	....	....
Tuesday	.....101½	101½	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

Regular Session—Buyer season — 800 tons, $1 01½; 600, $1 01¼.

Seller 1892, new—100 tons, 89c; 100, 89½c ℔ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, March 6.—Unpeeled peaches are well out of first hands, and are quoted at 6½@7½c, the lower price for coarse.

Prices for prunes do not improve, but the demand is of a hopeful and stock-reducing form; 100 to 120 5¾c; four sizes—bags, 7@7¾c; boxes, 8@8½c. Large sizes extremely scarce. Both local and outside trade have deserted the raisin market. Buyers are fairly supplied and the bad condition of the roads interfere with many out-of-town orders. The top rate for best three-crown sacks is 5c. Apricots are down to prices that should move them faster; bags, 6½@7c; boxes, 7½@8c; fancy, 8½@9c. This fruit was never before in such quantity that permitted cheap peaches and prime sliced evaporated apples, the latter at 5@5½c, to make competitions.

CHICAGO, March 8.—Dried Fruits are quite steady all around. The trade in Raisins, however, has become quiet. Prunes are selling well, and since the larger sizes have been pretty well closed out, buyers are obliged to take to those not usually considered so desirable. There is quoted a good healthy market for Peaches, while Apricots are quiet, but the supply of these is rather small.

Eastern Hop Market.

NEW YORK, March 6.—Hops had another spiritless week; holders were firm for fine export grades at 25c; brewers piece out their wants from lower-priced '91s and best '90s; the latter are quoted at 17@18c; the feeling is listless in options, closing at 24c for May California.

Miscellaneous.

NEW YORK, March 6.—Honey—Easy; 7@7¼c for light amber.

Lima beans—Spot prime, $1.65; to arrive, $1.45 for wholesale parcels.

Eastern Wool Markets.

NEW YORK, March 6.—With a general disposition on the part of sellers to meet manufacturers, the large volumes of wool sold at the seaboards, and with the heavy offerings and numerous urgent orders to realize upon commission lots, the market has had no chance to harden. Manufacturers at current prices for goods were decidedly favored in the cost for material. The redeeming feature of the situation is that many remnant blocks below standard quality have gone out of sight, while general stocks are favorably relieved for the new clip and its attendant more attractive staples. The sales in New York were 622,000 pounds, half of which was foreign. The sales at Boston were 1 859,403 domestic. Philadelphia reports a weak market with the movement proportionate to the supply.

NEW YORK, March 4.—*Bradstreet's* says: The decline in wool values still continues. A number of causes are assigned and each, no doubt, has had some influence upon the market. As the falling off in price includes not only domestic but foreign wools, the predominating influence which has caused this depression must be found to exist abroad as well as in the United States. The large increase in the production of wool and particularly of fine fleece all over the world together with general depression in trade have produced accumulations in stocks, which could not be worked off at former prices before arrival of new wools. Sales of Ohio and Michigan wools have been fairly large, but dealers have been forced to lower the prices from 1c to 2c ℔ lb in order to dispose of their stock. Concessions have been made in both Texas and California wools and manufacturers have bought more freely. There is active movement in Territories, but prices are being made to suit buyers. Pulled wools are not firm, especially choice lots. The supply is so small that holders are able to maintain quotations. Australian wools are accumulating in American and European markets, sales being made as low as 61c for scoured ℔ lb, and dealers cannot obtain over 75c for wool which sold a year ago for 82c. The decline in price of these wools is even greater than in domestic fleeces. Carpet wools are dull and quotations are unchanged.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 8 days ending March 9, '92, were as follows:

Flour, qr. sks	155,465	Bran, sks	14,540
Wheat, ctls	369,847	Buckwheat "	
Barley, "	61,853	Middlings "	5,213
Rye, "	469	Chicory, bbls	63
Oats, "	....	Hops, "	....
Corn, "	762	Wool, "	26
*Butter, "	900	Hay, ton	1,115
do bxs	422	Straw, "	30
do bbls	....	Wine, gals	171,260
do kegs	....	Brandy, "	2,260
do tubs	....	Raisins, bxs	1,644
do ½ bxs	582	Honey, cs	....
†Cheese, ctls	495	Peanuts, sks	18
do bxs	32	Walnuts "	89
Eggs, doz	53,760	Almonds "	30
do " Eastern	....	Mustard "	....
Beans, ctls	7,003	Flax "	....
Potatoes, sks	15,079	Popcorn "	....
Onions, "	1,086	Broom corn, bbls	350

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to March 5, '91.	July 1, '91 to March 5, '92.
Flour, ½ sks	214,285	354,226
Wheat, ctls	1,052,229	1,128,362
Barley, "	247,436	29,099
Oats, "	279,036	344,905
Wool, bales	5,798	5,978
Hops, "	392	431
Rye, sks	....	3,352
Potatoes, sks	53,351	94,084

Cereals.

The Adelaide Milling Co. estimates the total surplus of wheat of South Australia this year at 5,360,000 bushels, against 9,920,000 bushels last year.

Reports from the Argentine are that although the area of wheat sown was larger than that of last year, the production will be practically no larger, and the export surplus will be about 11,500,000 bushels instead 20,000,000 bushels, as at first estimated.

The British Board of Agriculture reports the decrease in the area of wheat for the past season as follows: Scotland, 14 per cent; Wales, 10 per cent; Southwestern England, 9¼ per cent, and the rest of England 2 per cent. The decrease occurred in countries where wheat-growing was the least profitable.

The official report of the Hungarian crops says that the damage from frost has not been serious. The actual outturn of the Hungarian corn crop the past year was 126,000,000 bushels against 85,600,000 bushels in 1890 and 97,520 000 bushels in 1889.

The latest reports from Roumania state that warm, foggy weather has been followed by a severe cold snap, damaging the growing wheat plant.

A dispatch to Reuter's Agency from St. Petersburg, the middle of February, states that the grain crops have suffered severely from the cold weather and damage from vermin. The London *Daily News* says that the prospects of wheat in Southern Russia are very discouraging.

Beerbohm, of Feb. 12th, says: Crop conditions at this date are as follows: New Zealand, unfavorable; South Australia, bad; Victoria, fair; Chili, short acreage; Argentine, less favorable; India, unfavorable, especially in the Bombay districts; United States, much below average; Russia and Roumania, discouraging; Austro-Hungary, fair; France, good as a whole, although the north is doubtful; England, short acreage; Germany, Italy, Spain and Portugal, good.

The Russian Department of Agriculture estimated the crop of wheat at 176,000,000 bushels. Added to this the crop of the Caucasus is now reported at 72,000,000 bushels more, much larger than expected, making a total of 248,000,000 bushels. The Liverpool *Corn and Trade News* says of this that inquiries of the various Zemstovs indicate that the next agricultural census will show a total production of wheat in European Russia, including Poland, of probably 400,000,000 bushels instead of about 200,000,000. Of the crop of the Caucasus, 16,000,000 bushels have been shipped to the famine districts, leaving about 20,000,000 bushels more for shipment. If this is true Russia becomes the second wheat-producing country in the world.

The *Daily Market Record* of Minneapolis says that its investigations as to the prospects of the winter wheat crop show that it will be only about 75 per cent of last year's crop. As far as the spring wheat is concerned there is, of course, no change. The *Farmers' Review* says the outlook for the growing wheat crop in Illinois is encouraging. In Indiana the condition is somewhat better than in Illinois. In Ohio it is below that of Indiana, but good. In Michigan it is good; In Kentucky good. In Missouri 42 per cent is reported as poor. In Kansas 40 per cent poor. Iowa fair. The *Milling World* says that its special investigations show that large areas of wheat the past year yielded from 61 to 65 pounds to the measured bushel, and over a thousand replies from country correspondents report that a yield below 60 pounds to the bushel was rare. The impression was steadily gaining ground that the wheat crop of the United States, instead of being 612,000,000 bushels, was close to 650,000,000 bushels.

Exporters and large operators in wheat are watching with unusual interest the proceedings of Congress on the bill providing for the free coinage of silver. The interest taken in the measure is based on the well-established fact that the price of silver is a large controller of the price of wheat. This is well illustrated by the following excerpt from an editorial in *Money*, a leading financial paper of London, England: "As soon as it became certain that there would be famine in Russia, and that the crops all over Europe were short, a wild speculation sprang up last summer in wheat, culminating at the beginning of September last. In the first week of September the average price of English wheat in the principal markets of England and Wales was as high as 41s 8d ℔ qr; since then the price has fallen almost continuously, until last week the average price of English wheat was as low as 32s 3d ℔ qr, a fall of 9s 5d ℔ qr, or about 22½ per cent. Of course the price of English wheat is not quite the same thing as the price of foreign imported wheat; but the figures show clearly enough the movement of the market, which is all we are concerned with just now. Now, it is obvious that in all gold-using countries the fall in wheat must check exports. Everyone was in a hurry to send wheat to market in August and September, and even for some considerable time afterward; but now, when the price is only about on a level with what it was 12 months ago, the inducement is to hold back, in the reasonable confidence that there must be a very considerable recovery before the next harvest is reaped. On the other hand, the case is very different with India. The value of the rupee in English money at the beginning of September was 1s 6½d; last week it was as low as 1s 3¾d. The value of the rupee had thus fallen 1¾d, or 10 per cent, while wheat fell over 22 per cent. But the Indian merchants exporting to Europe sell for gold, and the gold exchanges for 10 per cent more rupees than it did in September. Practically, therefore, the fall in the rupee has offset the fall in wheat to the extent of 10 per cent; in other words, while the American exporter of wheat now gets 22½ per cent less than at the beginning of September, the Indian exporter of wheat in reality only gets 12½ per cent less. Thus the Indian exporter has an enormous advantage over all his competitors."

The local wheat market ruled strong up to Monday, when an easier tone is said to have set in, but so far as the writer can learn the easier tone was one-sided for holders, did not relax in their strong views, and now that assessment day has passed, it is not likely that they will shade prices. The large disengaged list of vessels in port creates a weak feeling in charters, while the promising condition of the growing wheat crop will cause a steady increase in vessels on the way, which will be available for new crop loading. Hot weather, with more or less hot north winds, the past week, creates fears that the growing plant on adobe soil has been considerably damaged, but so far as we are able to learn the fears are not well grounded, but they would be with a continuance of hot weather for at least a week longer. Our advices state that the ground is well shaded by the plant, and therefore the moisture does not evaporate rapidly. On other soils the plant is making rapid growth, most too fast if anything. The market for barley has a strong tone, at a slight advance. The stock in the State is being depleted at a rapid rate, while the hot weather is against late sown grain. The consumption for feed does not show any marked falling off.

Oats are strong, with an advance obtainable. As usual in the spring months, there is a steady increase in the demand for feed. This call comes chiefly from breeders of fine horses, who have them mostly in training for spring races. The stock of oats in this State is light, as is the supply up north to draw from.

Rye is slow at unchanged figures.

Corn is steadier. Holders do not appear disposed to press the market. The demand for both home and shipping is fair.

Feedstuff.

There is a decided falling off in the demand for bran and middlings, and as receipts are full, concessions have been in order so as to place consignments. It is said that several flouring mills will shut down soon, which if proven correct will lessen receipts.

Ground barley and feedmeal are essentially unchanged. The demand does not show any marked falling off, for where one locally calls for less, another increases its demand.

The hay market continues strong. Receipts are falling off. The crop is expected to mature at an early date this year, yet with a change in the weather to cool and moist this will be radically changed and a late season obtain. So far, the growing crop promises to be quite large and generally of good quality.

Dairy Produce.

The butter market is demoralized and correct quotations difficult to give. It is claimed that cutting in prices has been done chiefly by a new firm or corporation seeking an outlet for its consignments, which necessitated their offerings to sell at lower figures than other firms had placed the same grades of butter. The hot weather is against holding supplies long. Firm, hard-pressed butter is wanted for shipment up north. In this connection, the following statistics are an interesting study:

Week ending	Boxes of butter received.	Price ℔ lb.
March 6, 1886	3,216	18c
March 5, 1887	2,182	19@20c
March 10, 1888	2,884	28c
March 9, 1889	2,893	17½@19c
March 8, 1890	2,982	17@18½c
March 7, 1891	2 618	19@23c
March 5, 1892	2,253	20@24c

Cheese is firm under moderate receipts. No material change in prices is looked for until new begins to come forward freely, which will be toward the close of this month.

Eggs have held steady. The consumption is larger than in March of last year.

The following shows the receipts of butter, cheese and eggs at this port in February:

Sources.	Butter, lbs.	Cheese. lbs	Eggs, doz.
California	590,300	201,700	247.735
Oregon	11,550	600	3,030
Eastern	20,700	111,200	.....
Totals	622,550	313,500	250,765
January	502,200	476.900	420,345
Since Jan. 1st	1,124,750	790,400	671,110

The receipts according to sources during the past two months were as follows:

Sources.	Butter, lbs.	Cheese, lbs.	Eggs, doz.
California	1,004,000	373,800	424 810
Oregon	32,750	3,500	3,060
Eastern	88,000	413,100	243,240
Totals	1,124,750	790,400	671,110

Live Stock.

The market is quiet and slightly easier for Bullocks and mutton Sheep. The consumption is lighter, which promises further falling off as the supply of garden truck increases and prices become reasonable. Hogs are unchanged. Dairy Cows range around $25.

Fruit.

Apples begin to show the effect of a more liberal supply of Rhubarb on the market; for, with lower prices for the latter, the former, except for eating purposes, are more or less neglected. Choice to extra choice Apples continue scarce.

The market continues to be overstocked with trashy oranges, for which quotations are altogether nominal. Consumers are disgusted with the poor quality of the Oranges received and do not buy freely. Choice Oranges are still scarce.

It is claimed that fresh Strawberries will be in market by the last of the current month.

Bananas are in heavy supply. Consumers are attracted to them by their generally good quality and cheap prices.

Limes and Lemons are moving off more freely.

For dried Fruits the market shows more strength in Peaches and Apricots. While the more attractive samples can be placed at a slight advance on last week's quotations, yet the general run remains unchanged. Receipts consist of odds and ends, which is accepted as confirming previous statements that stocks are cleaning up.

Raisins continue to drag. The supply here consists largely if not entirely of poor grades.

Vegetables.

The prices for both asparagus and rhubarb continue to fall off. Receipts are increasing as the supply sources enlarge. It is claimed that string beans, peas, etc., will come into market at an earlier date than usual, owing to the forcing weather.

The market for both potatoes and onions is demoralized and hard to quote. The stock in this city is not only large, but the receipts continue in excess of the demand.

Miscellaneous.

Poultry is higher and strong at the advance.

Beans are generally lower, with Limas showing the most falling off. It looks as if the latter are being bought up at the lower prices.

Honey is scarce and strong.

Hops are firmer. Transactions in next season's crop are being made on a basis of 12@13c. Some have been sold higher and some lower than the above range.

In Wool there is nothing to report. The stock here is said to be smaller than usual even at this season of the year.

The market for Baling Rope has been advanced. The following is revised list: Duplex, 3 yarns and 2 yarns heavy, 10c ℔ lb; Sisal, 3 and 4 yarns, 10½c; Sisal, 2 yarns, light, 11c; Manila mixed, 2 yarns, heavy, 11c; pure Manila, 3 and 4 yarns and 2 yarns, heavy, 12½c.

From reliable advices up to March 8, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	206,306	259,713	*†137,346	94,399
San Diego	19,749	10,905	7,056	.....
San Pedro	5,440	6,046	.....	21,862
Oregon	23,532	24.385	22,195	
Puget Sound	11,955	23,527	.....	
Totals	266,982	324,576	166,597	116,261

*Engaged for wheat, 1892, 32,392; 1891, 85,693 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to Feb. 25th, compiled from the most reliable sources aggregate as follows:

	1891.	1890.
Wheat, ctls	11,247,025	8,223,850
Flour, bbls	743,436	787,313
Barley, ctls	785,340	205,476

Bags are strong at 7⅛@7¾c.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 8, 1892.

BEANS AND PEAS.		**HOPS.**	
Bayo, ctl	1 80 @ 2 10	1891 Choice to Ex.	24 @ —
Butter	2 40 @ 2 80	Fair to Good	20 @ —
Pea	2 50 @ 2 80	**NUTS—JOBBING.**	
Red	1 90 @ 2 20	Walnuts, Cal. lb	4 @ —
Pink	1 75 @ 2 00	Do Choice	6 @ —
Small White	2 40 @ 2 70	Do paper shell	7 @ —
Large White	2 30 @ 2 60	Almonds, sft shl.	10 @ —
Lima	1 60 @ 2 00	Paper shell	12 @ —
Fld Peas, blkeye	1 30 @ 1 50	Hard Shell	6 @ 7½
Do green	1 30 @ 1 50	Brazil,	6½@ 8
Do Nies	1 25 @ 1 40	Pecans small	11 @ 13
Split	3 85 @ 4 15	Do large	14½@ 16
BUTTER.		Peanuts	2 @ 3
Cal. Poor to fair, lb	12½@ 20	Filberts	10½@ 12½
Do good to choice	21 @ —	Hickory	7 @ 8
Do Giltedged	— @ 22½	Chestnuts	11½@ 16
Do Creamery rolls	— @ 22	**ONIONS.**	
Do do Giltedge	— @ 23	Silver Skin, Ch'e	65 @ —
Eastern	— @ —	Fair to Good	50 @ —
CHEESE.		Cut	40 @ —
Cal. choice mild	12½@ 13½	**POTATOES.**	
Do fair to good	10 @ 12	Early Rose, ctl.	25 @ 40
Do glit edged	— @ 14	Burbank Seedling	30 @ 45
Young America	12 @ —	Do do Salinas	— @ —
EGGS.		Do do Oregon	40 @ 80
Cal. ranch, doz.	17 @ —	Do Humboldt	40 @ 75
Do do selected	— @ 19	River Reds	25 @ 40
Do store	16 @ —	Sweets	1 75 @ —
Eastern	— @ —	**POULTRY**	
FEED.		Hens, doz	6 50 @ 8 50
Bran, ton	18 50 @20 00	Roosters, old	6 50 @ —
Feedmeal	27 00 @29 00	Do young	8 00 @ —
Gr'd Barley	22 50 @23 50	Broilers, small	5 00 @ —
Middlings	22 00 @23 —	Do large	7 00 @ —
Oil Cake Meal	— @25 00	Fryers	7 00 @ —
Manhattan Food ℔ cwt.	7 50	Ducks	8 00 @11 00
HAY.		Geese, pair	2 00 @ 2 50
Wheat, per ton	13 00 @ —	Turkeys, Gobl'r.	16 @ 17
Do choice	14 50 @ —	Turkeys, Hens	17 @ 19
Wheat and Oats	12 00 @ —	Do Dressed	17 @ 20
Wild Oats	11 00 @ —	Manhattan Egg Food ℔ cwt	11 50 @ —
Cultivated do	12 00 @ —	**PROVISIONS**	
Barley	11 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Alfalfa	10 00 @ —	Medium	10½ @ —
Clover	11 00 @ —	Light	12 @ —
Straw bale	45 @ 60	Lard	9 @ 11
GRAIN, ETC		Cal. Sm'k'd Beef	11½ @ —
Barley, feed, ctl	93¾ @ 1 03¾	Hams, Cal salt'd	10 @ —
Do Choice	1 05 @ —	do Eastern	12½@ —
Do Brewing	1 07½@ —	**SEEDS.**	
Do do Choice	1 12½@ —	Alfalfa	9 @ 10¼
Do do Giltedge	1 15 @ —	Clover, Red	12 @ 13
Do Chevalier	1 05 @ 1 40	White	20 @ —
Do do Giltedge	1 45 @ 1 50	Flaxseed	2 50 @ 2 80
Buckwheat	1 70 @ —	Hemp	3½@ 4
Corn, White	1 27½ @ 1 32½	Mustard, yellow	3 25 @ 3 75
Yellow, large	1 22½ @ 1 27½	do Brown	3 00 @ 3 25
Do small	1 26½@ 1 30	**WOOL**	
Oats, milling	1 45 @ —	**SPRING, 1891.**	
Feed, Choice	1 40 @ —	Humb't & Men'cino	20 @ —
Do good	1 30 @ —	Sac'to valley	16 @ —
Do fair	1 22½@ —	Free Mountain	19 @ —
Surprise	1 50 @ —	S Joaquin valley	13 @ —
Black Cal	1 10 @ 1 40	do mountain	16 @ —
Do Oregon	1 20 @ 1 27½	Cala'v & N'th'll	16 @ —
Gray	1 20 @ —	Oregon Eastern	14 @ —
Rye	1 60 @ 1 72½	do valley	21 @ —
Wheat, milling, Glit edged	1 72½@ —	So'n Coast, def.	11 @ —
Do Choice	1 70 @ —	So'n Coast, free	13½@ —
Do fair to good	1 68@ —	**FALL, 1891.**	
Shipping, cho'ce	1 65@ —	San Joaquin	9 @ 11
Do good	1 60@ —	Mountain	10 @ 13
Do fair	1 63@ —	Humb't & Men'cino	14 @ 18
Common	1 57½@ —	**HONEY.**	
Sonora	1 57½@ 1 70	WhiteComb, 2-lb	10 @ 12
FLOUR		do do 1-lb frame	12 @ 14
Extra, City Mills	4 90 @ 5 25	White extract'd	6½@ 7
Do Country Mills	4 90 @ 5 25	Amber do	5½@ 6½
Superfine	3 00 @ 3 45	Beeswax, lb	22 @ —

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 8, 1892

Limes, Mex	4 00 @ 5 00	Beets, sk	— @ 1 00
Do Cal	60 @ 75	Carrots, sk	35 @ —
Lemons, box	1 00 @ 3 00	Okra, dry, lb	15 @ —
Do Sicily	5 50 @ 6 50	Parsnips, ctl	— @ 1 25
Oranges—		Peppers, dry, lb	8 @ 12½
Butte County	1 50 @ 2 25	Do green	20 @ 35
Yuba do	1 50 @ 2 25	Turnips, ctl	50 @ —
Do Seedlings	85 @ 1 50	Cabbage, 100 lbs	45 @ —
*Riverside	1 25 @ 1 50	Garlic, lb	2 @ 3
*Los Angeles	65 @ 1 25	Squash, Mrft, tn	3 00 @ 6 00
Do Navels—		Do Summer, lb	20 @ 25
*Los Angeles	50 @ 1 25	Pumpkins, ton	— @ —
*Riverside	1 00 @ 3 00	Tomatoes, box	1 30@ —
*Duarte	1 00 @ 3 00	Asparagus, lb	4 @ —
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.		Do choice to ex.	7½ @ —
		Peas, green, lb	8 @ —
		Rhubarb, lb	5½@ 11
Apples, box	75 @ —	String Beans	15 @ —
Do choice	1 50 @ —	Cucumbers, doz	1 00 @ —
Do extra choice	2 00 @ 2 50		

Live Stock.

BEEF.		MUTTON.	
Stall fed	7 @ —	Wethers	10 @10½
Grass fed, extra	7 @ —	Ewes	9½@10½
First quality	6½@ —	Lamb, yearling	11 @12½
Second quality	6 @ —	Do Fall	15 @ —
Third quality	5½@ —	**HOGS.**	
Bulls and thin Cows	2½@ 3½	Light, ℔ lb, cents	4½@ 5
VEAL.		Heavy	4½@ 4½
Range, heavy	5@ 6½	Feeders	4½@ 4½
Do light	7@ 8	Stock Hogs	3½@ 3½
Dairy	8½@10		

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MARCH 1, 1892.

470,149.—FEED FOR NAIL MACHINES—M. Altmeyer, Oakland, Cal.

470,150.—NAIL-ROLLING MACHINERY—M. Altmeyer, Oakland, Cal.

469,891. — RIVETING MACHINE — M. Arnold, S. F.

469,848.—LAWN FOUNTAIN—W. N. Best, Los Angeles, Cal.

469,962.—MACHINE FOR UPSETTING TIRES—E. Chaquette, S. F.

469,734.—MACHINE FOR SAWING WOOD.—J. P. Currie, Marcus, Wash.

470,104. — WOOD-SPLITTING MACHINE—C. J. Dante. Hillsborough, Or.

469,833.—WASH BENCH AND WRINGER—R. Davis, Modesto, Cal.

469,777.—MANUFACTURE OF ASPHALTUM—H. A. Diehl, S. F.

470,153.—TUBULAR METALLIC POLE—D. Dorward, S. F.

469,896.—CASH AND PACKAGE CARRIER—Julius Finch, S. F.

469,783 —PUNCH—J. W. Graves, Lathrop, Cal.

470,125.—CAR—Heacock & Lovejoy, Portland, Or.

470,052.—BOILER FURNACE — E. W. Jones, Portland, Or.

470,053.—BOILER FURNACE — E. W. Jones, Portland, Or.

470,004.—FILTERING FAUCET — H. H. Luse, S. F.

470,059.—EARTH AUGER—B. Lane, Carlton, Oregon.

470,165. — CAN-LABELING MACHINE — C. E. Newell, S. F.

470,164.—FOUNTAIN FOR PASTING MACHINES—C. E. Newell, S. F.

470,166.—CAN-LABELING MACHINE—C. E. Newell, S. F.

469,900.—MAGAZINE SHOTGUN—W. H. Ostrander, Merced, Cal.

469,947. — RAIL-FASTENING DEVICE—W. S. Phelps, S. F.

469,899.—HOOP OR BAND TIGHTENER—Chas. Sparks Sacramento, Cal.

470,086.—HYDRAULIC STUMP EXTRACTOR—A. Taylor, S. F.

469,847.—PURIFYING GAS—J. Wiesender, S. F.

470,089.—CAR—D. W. B. Williams, Prescott, A. T.

The following brief list by telegraph, for March 1, will appear more complete on receipt of mail advices:

California—Virginia M. Cone, Alameda. heat regulator for cooking stoves; John D. Hooker, Los Angeles, hydrant valve; John Lamburn and R. Rickards, Dixon, wheel plow; Dr. F. Oliver, Oakland, cultivator; Robert F. Phillips, San Diego, dental mouth mirror; Francis A. Potter, San Francisco, fruit jar; Henri Vignoc, San Diego, time valves operating mechanism; William Wedgweed, San Francisco, can-capping machine. Oregon—David W. Freeman, Fishhawk, adjustable clutch or coupling device; Mathias Jensen, Astoria, can-capping and crimping machine. Washington—Frank P. Burkhardt, Spokane Falls, mechanical movement; Isaac N. Henness, Ilmaco, steam excavator; John Redmond, Seattle, electric car brake. Utah—James Hoop, Ogden, beam-holding apparatus.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

OFFICE OF THE

GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892. to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.

FRANK MCMULLEN, Secretary.

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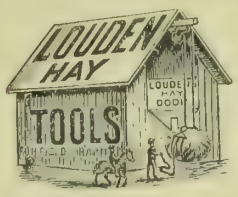
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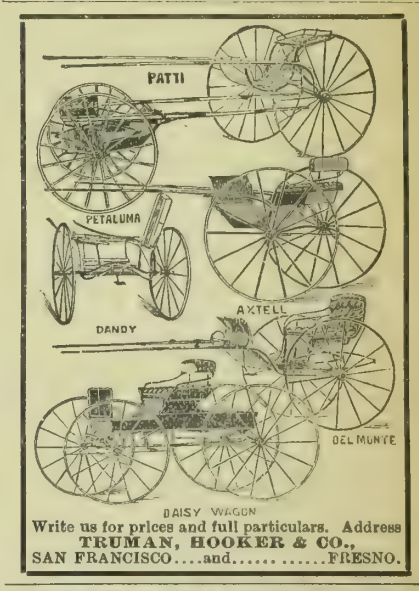
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THE SALTON LAKE.—A dispatch from Salton, San Diego county, says: From present indications the desert lake here will be much larger than last year. At present the lake is about half a mile wide, and after running along the Southern Pacific track for about two miles, extends off out of sight to the south. At this time last year there was not a drop of water visible, although there was a quantity a few inches below the surface of the sink. It was not until several months later that the floods occurred in the Gila and Colorado rivers, caused by melting snows, and it was only in August that the water in the Salton sink began to attract attract attention. The snow in the mountains at present is heavier than for years, and coming, as the water will when it melts, on land already in a large part saturated, a lake of unexampled extent will probably be created. Old residents believe that about 100 miles of the track of the Southern Pacific, which lies in the desert below the sea level, will be overflowed.

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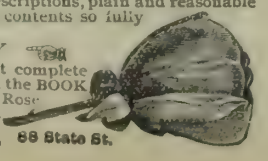
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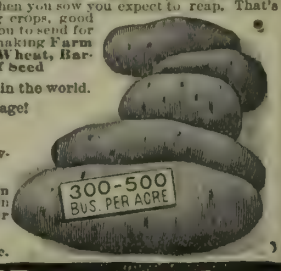
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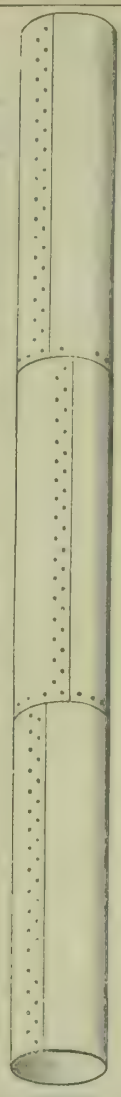
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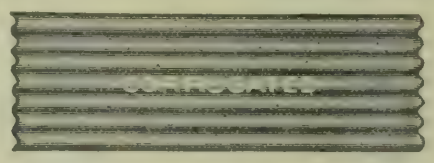
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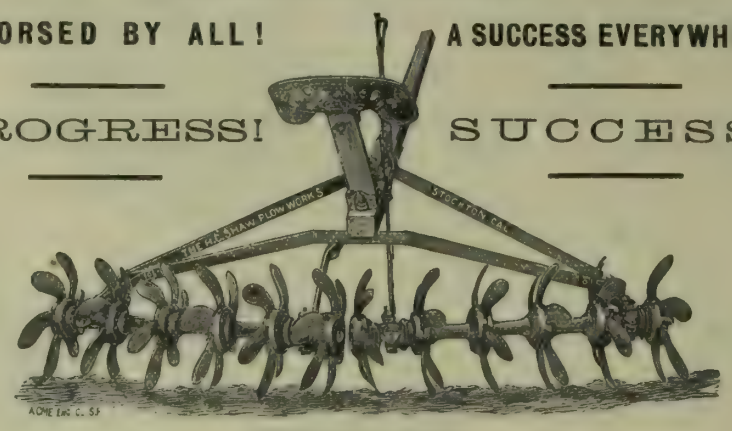
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FROM SECRETARY SMITH.

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

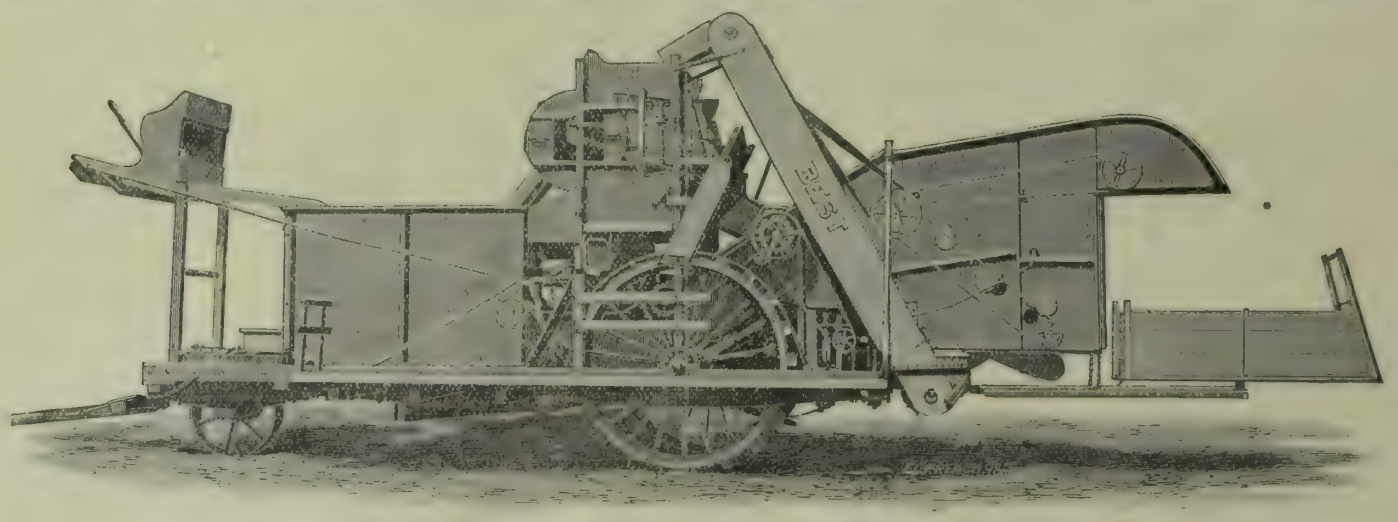
H. C. SHAW PLOW WORKS

361, 363, 365, 367, 370, 389 and 390 El Dorado Street,

STOCKTON, CAL.

AT THE FRONT AND IN THE FIELD FOR 1892.

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DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

PACIFIC RURAL PRESS

Vol. XLIII. No. 12. SAN FRANCISCO, SATURDAY, MARCH 19, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Umbrella Tree.

A RURAL reader asked the other day that we say something about the umbrella tree, which has become so common a feature of the landscape since irrigated growths have arisen to be features, especially in the San Joaquin valley. The suggestion is a good one, for the tree has shown itself to be admirably adapted to produce the dense shade which is so grateful during the hot summer of our interior regions. The engraving shows a number of the trees as now growing in Fresno county. They have been too closely planted to secure the perfect symmetry which isolated specimens attain, but they show signs of the umbrella form, from which the tree takes its common name.

Botanically, the tree is *Melia azedarach* of Linnæus, and the sort we grow is a variety known as *umbraculiformis*. De Candolle distinguished 12 species of *Melia*, their range being from India to Japan and Polynesia. Baron Von Mueller describes the species *azedarach* as a native of Southern Asia, also of Northern and Eastern Australia and thence to far extra-tropical latitudes, ascending the Himalayas to 6000 feet. In height it is seldom over 40 feet, and the branches are very spreading. The variety *umbraculiformis* is particularly shady. Von Mueller remarks also that the tree commends itself for retaining the foliage till very late in the season without shriveling, and for producing early an abundance of very fragrant spring flowers, which may perhaps be worth distilling for essential oil.



THE UMBRELLA TREE AS GROWN IN FRESNO.

The umbrella grows readily from the, seed which is freely produced. It can also be grown from cuttings. The tree assumes its symmetrical umbrella form without pruning, and grows with gratifying rapidity in regions with adequate summer heat. Von Mueller mentions experiments showing that it will grow if furnished with sufficient moisture, twice as fast as the *grevillia robusta* or the *schinus molle*, our common pepper tree. We are not sure that these estimates will suit California conditions. Our own observation is that, though a rapid grower, it does not so far outstrip the other trees mentioned. Around the bay of San Francisco, it certainly does not show such superiority in rapid growth. We would like to have notes on this point from the interior. The tree has marked advantages in resisting drouth and enduring poor soil, though its growth in such cases is much reduced.

All parts of the plant are bitter; the bark, with caution, can be used as a purgative and anthelmintic; the leaves are said to be insecticidal. The wood is comparatively soft, light, and considered of value for cabinet work; also for some kinds of musical instruments.

The umbrella tree was early introduced in the Southern States and from this fact is frequently called the Texas umbrella tree. T. V. Munson, while admitting this introduction, says that scattered specimens are found in forests miles away from any habitation, and of the largest size. He says that the variety *umbraculiformis* was brought to notice about 50 years ago by J. Burke of Houston, Texas, "who found a tree of this form growing on an old place in the woods near Buffalo bayou." This would seem to indicate, by inference at least, that the variety we grow originated in Texas. This is not mentioned by Von Mueller in his notice of the variety *umbraculiformis*, and if the form did appear in Texas without introduction, it may have to be put down as another sport of a character similar to that which appeared in the Asiatic home of the tree, and which was there recognized as a superior form of the tree for ornamental planting.

The umbrella tree does not endure wintry climates, though it is hardy in California valleys. Munson says it fails in Kansas, though quite hardy in Northern Texas and southern Indian Territory.

RESULTS OF THE CITRUS FAIR.—A dispatch from Los Angeles, noting the close of the citrus fair, says the attendance was not as large as at previous fairs, but the expenses were cleared, with possibly a small surplus. It is generally conceded to have been the best exhibit of citrus fruits ever seen in the State.

HOLDING WHEAT.—The Minneapolis *Journal* has collected reports from 60 different points in Minnesota and the Dakotas, showing that there are, on a safe estimate, 32,000,000 bushels of wheat yet for sale in farmers' hands.

A Butter War.

It seems that a dairy conflict other than the old issue of pure butter *vs.* oleomargarine is now being waged. It was to be expected when an association including a large number of producers was formed for the purpose of marketing their own products, that there would come sooner or later an issue with the commission merchants who have hitherto handled the dairy trade of the city. The stronger the association the sooner the conflict might be expected, and if the association gains strength during the conflict, the sooner it will be over. Such is the history of all cooperative efforts, and if the Dairymen's Association is strong, and if its managers are wise and true, the cruel war will soon be over.

The managers of the association have issued a circular to dairymen charging the merchants with forming a combination to get the business at any hazard and at whatever reduction in price might be necessary to do it. The statement is that the merchants control many dairies outside of the association and dropped the price of butter nearly five cents a pound. The association was forced to meet this cut, and the producers suffered on both sides. The merchants deny the impeachment and answer that the reduction was necessary because of the large amount of butter in sight.

There is nothing particularly startling in this experience, although of course it is grievous to producers, and it should not be continued. If the Dairymen's Association can acquire strength enough to control supplies, it can secure better rates than have hitherto been had, no doubt, and will demonstrate its usefulness. If it does not secure such commandery of the situation, it should resist a cut and not drop to it unless the visible supply justifies it. The old line merchants will not be able to carry a long cut, and if they want to sacrifice their shippers it will not do them any good. We do not believe the local make of butter is so largely in excess of the demand that much of it can be hung up by the firm demand of a fair figure for it. If it be so, more attention should be given to working up outside markets, rather than to efforts to increase the product. The Dairymen's Association has a big problem on its hands, but if it is wise and firm it can win. Its success will of course depend upon the success it can attain in enlisting the dairy men in its support.

THE FIELD.

What a Mountain Farm Yields in a Year.

BECKWITH, PLUMAS CO., March, 10, 1892.

TO THE EDITOR:—A good many years ago an excellent editorial in the RURAL suggested that farmers frequently write for its columns, of their yearly successes or failures, that the knowledge of what we are doing might be a source of helpfulness to others. One reason this could not be done in any general way, is, so many farmers do not keep any accounts with their farms.

Mrs. Prentiss has said; "We would smile at an architect who having a noble structure to erect should begin to work in a hap-hazard way, putting in a brick here, and a stone there, weaving in straws or sticks if they came to hand, and when asked on what he was engaged, what manner of building he intended to erect, should reply, he had no plan, but thought something would come of it." But really this is but a few shades worse than some farming. The question presents itself to some people possessed of a little natural thrift and capacity for seeing what is going on about them. Is there any vocation under the sun in which so many people are engaged, who are by nature so unfitted for their work, or who do it so poorly? We feel to our sorrow, how many things are against the farmer, but are not our worst enemies those, not of our own household exactly, but of our lack of adaptability to our work? For there are farmers and farmers who are year after year working on and on as blind as any bat as to whether they are succeeding or failing, or if the latter, as to what the cause may be, or how to go about righting things.

The RURAL PRESS brought this subject again before its readers some few years ago in a good article entitled, "Keeping an Account with the Farm." There are doubtless other sections of the State where the yearly successes of the farmer are better than in this region where a few years ago we were afflicted with a prolonged visit from grasshoppers, and where summer drouths give us frequent seasons of poor crop returns, and our high altitude subjects us to frequent summer frosts. But here, as elsewhere, if we have sufficient pluck (that valuable commodity an ounce of which is worth a ton of luck) intelligent farming may bring satisfactory returns.

Even the poorer portions of our valley land may make a fair showing. Our own farm is less favored in the way of water than the average farms in this section. Our returns for the year 1891 are as follows. We milked 25 cows. Made cheese 153 days, in which time we made 8128 lbs., for which we realized $1112.75 or a trifle over 13 1-2 cts. per lb.; this is above the expense of marketing the cheese. What the exact net profit of the cheese is would be a little difficult to ascertain, as my husband makes the cheese, except from three to four hours spent by an assistant in washing up and in the curing room. The milking is of course done by other hands. But the profits from a cheese factory are materially larger than from butter making. As a rule a little over nine pounds of milk will make a pound of cured cheese. Aside from the 153 days spent in making cheese, the rest of the season, about nine months in all, was spent in making butter, but as the prices were at their lowest during some of the time we were making butter, the amount taken in from butter was proportionally small. We made 1289 lbs. from which we realized $242,87 or 18.8 cts. per pound, the prices being unusually low for the entire season. We sold 22 calves for $7.50 a piece, that is $165 for calves.

We sold from our dairy in cheese, butter and calves $1520.50 which is $60.82 to each cow; aside from the butter, cheese and milk consumed in our family, and 1000 lbs. of pork put by for future use. This we judge from our reading of agricultural and dairy papers compares favorably with other returns in other dairying sections, where the land is from double to ten times in value what this is.

Aside from dairy farming my husband put in 55 acres of barley, which gave us 1795 bushels, over 32 bushels to the acre; we had also some rye put in with disc harrow and seed sower the fall previous, part of which was cut for hay. The 170 bushels of rye thrashed with the barely when sold brought $174. Grain as well as various other farm products were unusually low last fall. We have left of our grain 10 or 12 tons for seed, feed, etc. Only 30 acres of the land in barley and rye received any irrigation.

The accounts kept with our farm show various small ways in which the farm income has been increased $121 from the sale of chickens and eggs, $125.97 from other sales of beef, etc., making $2541 income from the farm.

How much of this $2541 is net profit, I do not know. We paid out $630.50 for wages for hired help. The hired help also put up the hay, attended to repairs, and did something in the way of improvements. The board for our family (eight persons including help) is not a very important matter, when we consider that all the milk, butter, cheese and eggs and much of the meat, vegetables, fruit and honey consumed by the family, were provided by the farm.

We do not claim that what we have done is any unusual thing to do. We have had better years, when grain brought a higher price, and our income was considerably increased by the sale of several horses, as the raising of horses has been an important feature in our farming. But our income for 1891 represents what may be done on any ranch in this section where general farming is engaged in, and fair attention is given to business. All years do not of necessity make as good a showing as that given, as last year the grain crop was good and the yield of milk during most of the cheese making season was unusually fine.

No doubt there are other sections of the State where the income would be materially larger than in this region. But the price of land in such localities would be so much higher than here, that the advantages are not all on the side of the largest incomes. Still, the exceeding healthfulness of this mountain region is a very strong argument in its favor. In few places could manual labor be performed with such ease, for few places have so inviting a summer climate. M. P. A.

[This account is very interesting. Will other readers send us similar contributions and exercise similar care to make exact statements?—EDS. PRESS.]

THE ORNITHOLOGIST.

The Game Birds of Lassen County.

(Concluded from last week.)

Ducks.

There are found in California some 22 species of ducks, and of these, eight or ten visit the lakes, streams and ponds of Lassen each year. In size, beauty, and graceful attitude when swimming, the mallard duck stands at the head of the list. He is not so fine a table bird as the canvasback, but these are seldom seen here. The mallard is 24 inches long and weighs from four to four and a half pounds. The drake is handsomely marked with green, chestnut and white. The female is brown and destitute of the bright colors of the drake. The female makes her nest upon the ground amid rushes or weeds, or sometimes in a hollow log. The eggs vary from eight to fourteen in number and the ducklings are very active and alert from the moment they are hatched. The nests are often found fully half a mile from a stream or lake, yet the day the little ducks are hatched the old bird manages to escort all to the water, upon which they launch themselves with fearlessness. While the female is sitting the male bird remains near by, as if to watch for danger. The mallards are shy and cautious, and they fly in a circle several times around the spot where they intend to alight. If there is the slightest thing that looks suspicious, they will seek another spot. They have sentinels posted while feeding, and by old hunters it is said some of the flock are awake at all times during sleeping hours. They feed mostly at night and seek the waters of the creeks and streams during the day. A peculiarity of this duck is that the drake sits on the eggs during the absence of the duck while she is feeding.

A few mallards rear their young in our valleys, but the greater number go much farther north. They pass through our county in March and April going north and return in October or November.

The canvasback is 20 inches long and weighs about three pounds. It feeds upon wild celery and dives to get its food. It is a strong and rapid flyer, and we have seen this bird in the Sacramento valley rise some distance behind a railroad train in motion, follow and overtake the train and then pass ahead of it very rapidly. It is one of the most expert divers known, and remaining under water longer than a mud hen, our boys will understand that few birds can beat it diving. It goes as far as Alaska to breed during the summer.

The redhead is often sold for the canvasback and few can tell any difference in the taste. The redhead has a blue bill and is a smaller duck than the canvasback.

The duck most frequently seen is known as the Widgeon or "bally." This duck has a white patch on its head and in many localities is known as the Baldpate. It is 18 or 19 inches long and weighs about two and a half pounds. The head and neck is a reddish yellow, the forepart of the body a brownish red, and the under parts are white. The tail is brown and contains 14 feathers, while its bill is blue and has a black tip. The natural histories assert that this bird is a day feeder, but old hunters say that it feeds both during the day and at night. It gives a clear whistle that may be heard some distance. They can neither dive as quickly nor fly as swiftly as the mallards or other ducks we have named. About one-fourth of the ducks that are killed here are Widgeons.

The Teal is not so large as the other ducks already named but it is a fine table bird. There are two species, the green winged and the blue winged Teal. They are 14 or 15 inches long and weigh one and a half pounds. It has a narrow bill as long as its head and pointed wings. The head and shoulders are chestnut colored with a green stripe on the neck, while the under parts of the bird are white. It is one of the first birds to return from their northern migrations. Johnson's Natural History, one of newest and most complete ever published, says that the blue winged Teal is not found on this coast, but this is evidently taken from a very early report upon the birds of this coast, where such a statement is made. It is not a fact, for there are thousands of blue winged Teal ducks found all over California. It is a less shy and suspicious bird than the green winged duck and more easily shot. About 25 per cent of the ducks killed in Lassen are Teal ducks. The female duck lays from 11 to 17 eggs but as high as nineteen have been taken from a single nest.

The summer or wood duck is the most beautiful of the duck family found here. It receives its name of summer duck because the duck remains here during the summer, while it gets its name of wood duck from its habit of making its nest in trees or stumps. Dr. Brewer says that it is conspicuous for the swiftness, ease and elegance of its flight. It can pass through woods and among the branches of the trees with as much facility as the wild pigeon. Its splendid plumage shows a great variety of rich colors. Instead of congregating in flocks, like the Teals and Widgeons, the wood ducks are usually seen in little flocks of three or four; often they go in pairs and occasionally they are seen alone.

They live mostly upon acorns and will eat so greedily that they cannot swallow another one, yet will hold one in their mouths. They seek the deep pools along the creeks, where they are hidden by the dense bushes of the banks, and are shy and difficult to approach. They build their nests in hollow trees or stumps, and when the young are hatched the mother bird carries the little ones down to the ground by holding them by the back or wing with her bill. Hunters assert that the ducklings will ride to the ground on the back of the mother. The old bird lays from 12 to 20 eggs in a nest and some nests have been found with as many as 23 eggs in them.

Another duck found here is the Spoonbill, which derives its name from its large, flat bill. This duck is 20 inches long and weighs nearly two pounds. The head and neck are green, the back brown and the tail black. This duck feeds largely upon worms, frogs, etc. It makes its nest on the ground, lays from 10 to 12 eggs and rears its young in the marshes of the far north. It is a shy, suspicious, intelligent bird, with great powers of flight. But few of them are killed by hunters.

The Gadwell or Grey duck is 19 inches long and weighs two and a half pounds. It is a quick diver and rapid flyer, feeds during the day as well as at night, and makes its home mostly amid pools shut in by rushes and high weeds.

The Springtail or Pintail is a wilder and more wary bird than the mallard and not easily approached. It rides the water as buoyantly as a cork and bounds from it very quickly. Its length is 30 inches, its weight three pounds. It has a long and narrow bill and a pointed tail, the feathers of which slightly curl. The head and neck is a dark brown, glossed with green and purple. The tip of the tail is coal black while the breast is pure white, the wings are bluish grey while the bill is black above and blue beneath.

The Butter duck is a small and very fat little duck, not half the size of the mallard, and is common along most of the small streams of this State. It feeds on grass and grain and is so quick a diver that it is almost impossible to kill it, unless the hunter shoots it upon the wing or watches till the bird just puts its head out of the water. Its body is dark with white underneath and the bill is blue.

OTHER BIRDS.

The robin is unfortunately considered by many a game bird and suffers accordingly. The top and sides of the head are nearly black, the under parts of the body a chestnut brown, and the wings a dark brown. The bill is yellow. These birds are migratory, like the ducks and geese, and go far south during the winter. They do not make their nests or hatch their eggs lower than an altitude of about 3000 feet. Their nests are built in trees, four or five eggs are laid, and these eggs are dark bluish green. Two broods are often raised in one season. Their nest is composed of three layers, the outside of roots, shavings, etc., then a layer of leaves, moss and grass, and this is cemented by mud. Inside of this is a soft lining of fine, dry grass. They eat many insects and should be protected by every farmer and fruit grower.

The dove, like the robin, is migratory, going far south in winter. They are so common that any description of them would be useless. The nest consists of a few twigs carelessly placed together, and in this two eggs are laid.

While the blackbird and the lark are occasionally killed for game, they should not be classed among the list of game birds and descriptions of them are omitted.

The band-tailed pigeon is a large and beautiful bird, loving the dense woods of our mountains. The eggs are white and, like the doves, they lay but two before hatching. They collect in Southern Oregon in great flocks, but here only a limited number are ever seen together. This bird is 16 inches long, it feeds upon acorns and berries and furnishes a delicious table fowl.

The sandhill crane, when young, is a fine table fowl. Their food consists mostly of roots and plants. This bird stands nearly five feet high, owing to its long, stilt-like legs. They breed in Oregon and farther north and return before winter sets in. They are often tamed and kept as pets.

The Great Blue Heron is nearly as tall as the crane, but is smaller in its body. Owing to living mostly on fish it is rarely eaten except when young. The bird is found only along the streams and marshes, where it finds its favorite food. It builds its nest in trees and seeks its food at night. It is said of this bird that the feathers upon its breast give forth a bright light at night that attracts the fish toward the heron.

The Golden Plover is not infrequently killed and is a delicate table bird. Its body is a brownish black with yellow spots, while the under part of the body is almost black. Farther east they frequent grassy plains in large flocks. They are larger than the Mountain Plover which is found here, but are no finer eating. The Mountain Plover is a brownish gray bird, frequenting the dry plains of the Great Basin in pairs, and comes west of the Sierras during the winter. The length of the Plover is about ten inches, while its wings spread a foot. Both of these birds vary greatly in plumage during different seasons of the year.

The Grass Plover, about the size of a dove and a good table bird, is found here at times.

The Snipes are the best small game bird found here. They frequent the low marshy sections or wet fields, where they feed upon worms and insects. The female lays four pale greenish grey eggs with brown blotches upon them. One peculiarity of the snipe is the long bill, which is very sensitive, so that the bird can tell when probing with it in the mud whether the object it has touched is fit for eating or not.

The long billed Curlew is the largest of the snipe family, frequently measuring 18 inches without its bill, which is seven or eight inches long. The bird weighs about two pounds and is a fine game bird. Like the other members of this family, it frequents the low, wet, marshy grounds or flats, where it feeds upon insects' and worms. They are, perhaps, more abundant on the Pit river plains than in any other part of the State. Like all the snipe family, the nests are placed on the marshy lands, four olive green eggs are laid by the female snipe, and the young are quick to run about when hatched from the shell.

Eagle lake is a favorite resting place for ducks and geese in their northern and southern migrations, and here in spring and fall large numbers of these birds can be found. In the tamarack swamps on the borders of the lake, many ducks lay their eggs and rear their young. To give details regarding the various localities where the different game birds are found would occupy more space than can be devoted to this subject.

Swine Yard.

Notes on Swine.

[Written for the Rural Press by Henry J. Philpott.]

The hog is not native to America. The first ones came over with Columbus on his second voyage. They were landed in Cuba in 1493. The next mentioned were landed in Florida in 1538, the next in 1553 in Nova Scotia, the next in Canada in 1604. In 1608 the London Company took 600 head to Jamestown, Virginia.

There have been 56 different breeds of swine in the United States, unless, in some cases, different names have been applied in different sections to the same breed, which is quite likely. No more than seven breeds were exhibited at any State fair in 1891, and that number only in Illinois.

The greatest curiosity among swine breeds is the Solipede, or "Mulefoot." Instead of the divided hoof, otherwise universal among swine, it has a solid single hoof, like that of the horse. As most people have never seen a specimen of the breed, and may reasonably doubt its existence, the writer hereof takes pleasure in vouching for it, having seen it himself. It was introduced into the Delaware Bay Colony at an early day by the Swedes. It is a very worthless breed, except to proprietors of "side shows" at fairs and circuses, where it is advertised as having just been found wild in the Rocky mountains or some distant or inaccessible region—no matter where.

Old accounts of large hogs must be taken with a grain of allowance. The earliest American claim is 1500 pounds, breed not given, date 1818. The largest is 1743 pounds, average of two hogs, raised in Lancaster county, Pa., exhibited in Baltimore in 1820. Ages 14 and 18 months. One measured six feet three inches girth, eight feet one inch length from tail to end of nose. Breed not given. The largest recent hog, age considered, was a Berkshire exhibited at the Iowa State fair in 1891. But the claim that it then weighed 650 pounds at 13½ months old is evidently not unquestioned by the *Swine Breeders' Journal*. The originator of the new Victoria breed claimed last year to have raised a litter of 10 pigs averaging 67 pounds apiece at eight weeks old, two of them weighing over 80 pounds each. But these were runts compared with four pigs, Grass and China breed, said to have been raised in Massachusetts in 1822; weights at four months old, 348, 318, 310 and 308 pounds.

I know of but two breeds of swine that were premeditatedly originated by a single person. 1. The Prince Consort, Queen Victoria's husband, originated the Tarnworth and on exhibition won some prizes with it. It is too long-nosed for American breeders, but liking it in other respects, they are at work trying to breed a few inches off the end of its nose. 2. About a dozen years ago, Mr. Geo. F. Davis of Dyer, Ind., originated the Victoria breed by a cross between four well-known existing breeds—a black and a white American and a black and a white English breed, namely, Poland-China, Chester White, Berkshire and Suffolk. The breed thus originated is not spotted, as one might expect, but "white, with occasional dark spots in *skin*," none in the hair. It has carried off some carcass prizes at the Chicago Fat Stock Show, and secured recognition as a distinct breed at some State fairs. Its color is against it, white hogs not being considered hardy, but the originator claims that it is "as hardy as any black hog."

Thirty years ago the American hog was generally white. He is still white everywhere east of Ohio, but in the West has changed to black. The color prejudice is about as strong in the one section as in the other.

The highest average value of swine in any State in 1890 was $9.61 in Massachusetts, and the lowest $2.42 in Florida. The average for the whole country was $4 72. For California it was $4 91.

The greatest number of swine in any State in 1890 was 5,805,000 in Iowa. The smallest was 13,796 in Rhode Island. The whole country had 51,602,780. California had 647,000. The great State of New York had only 686,321.

Nebraska has a lady breeder of high-class Poland-China swine. At a recent auction sale she sold 100 head in one day at an average price of $50 per head. The highest price realized was $225. She thinks she would have done better if the day had been longer.

The sale of pedigreed swine at public auction is an innovation only five or six years old. Last year about 50 such sales were held.

So far as I am able to learn, the highest price paid for a hog last year, 1891, was $900 for Free Trade, the winner of first and sweepstakes at two successive State fairs in Iowa and Nebraska, and at one in Kansas.

The highest price ever paid for a hog under one year old at public auction, is said to have been $625 for Geo. Wilkes, a son of King Tecumseh and grandson of Tecumseh 4339.

First-class male swine are the cheapest breeding animals in existence. The price is very much less for the same degree of individual merit and breeding and the produce is very much greater than of other domestic males. One colt a year per dam, vigorous enough to reach maturity, is more than any stallion is good for, and a bull or a ram will hardly do better than one calf or lamb a year per dam. The hog will bring 10 per dam to maturity, in two litters of five strong pigs each; and one male suffices for as many females as in the case of the horse or cow, though not so many as the ram. A chicken-cock will fertilize a greater number of each hen's eggs in a year, but is limited to a third as many hens as there may be of sows in a herd. In order to equal in total reproduction, he should show his markings in 30 chicks a year, raised, for each hen. He will not do it. Half-bloods from a high-bred, $100 male hog will easily be worth $5 apiece more at a year old than extra-good scrub pigs, or pigs from a grade sire, the dams being scrubs, with the same care and feed, provided these are such as will make the common hog weigh 200 pounds at that age, which is the least any hog ought to weigh if in good flesh. And $5 added to each pig means $50 added to the produce of each dam. It has often been realized, and in a herd of 50 sows it means $2500 a year. But, of course, the sum realized on each pig depends on the size it is allowed to attain. If this be limited to say 200 pounds, the gain will express itself in the time and feed saved, and will be restricted accordingly. But it may be estimated at from $1 upward on each pig at weaning time; $10 on each dam, and $500 on the maximum number of dams to be safely coupled with one sire. He ought to live five years if worthy of it.

At the last Iowa State fair the leading breed of swine was represented by 1667 specimens; at the Missouri State fair by 133. The two States lie side by side, having nearly the same number of hogs, over 5,000,000, and raise about the same superabundance of the same kinds of swine feed. The average value of Iowa's swine, Jan. 1, 1890, as per the report of the Secretary of Agriculture, was $5.94; of Missouri's, $3.64; difference, $2.30 per head; difference on 5,000,000 head, $11,500,000. Can it be that this prodigious difference in the value of their swine has any relation to the difference in the number of thoroughbred ones at the respective State fairs? The Iowa farmers think so, and that is why so many of them would not put a gift hog at the head of their herds, unless he were a thoroughbred of just the breed they like, and of the best breeding the size of their herds will justify.

The Berkshire is an English breed, said to be 100 years old, named from Berks county, England, within driving distance of the London market. It is a cross between Siamese, Chinese and probably other foreign breeds, and the native hog of the county. Its great rival, the misnamed Poland-China, is strictly American, and originated 60 years ago, within driving distance of the world's then greatest hog market, Cincinnati. All known breeds were crossed in its make-up, including the Berkshire and the native descendants of the Jamestown, Massachusetts Bay, and other 17th century importations. No other breed has so many diverse lines of foreign blood in its veins, nor so many native strains, selected from so wide a field and occupying so long a time in the selection. The good old American name "Miami," by which it often used to be called, should not have been discarded for the foreign, false and misleading name of "Poland-China."

Track and Farm.

Talk About Trotters.

The national horse of America is a trotter. The national sport of America is as much in trotting contests as the "sport of Kings" was in running races. The trotter has come to stay and is regarded as an American institution.

The people of England commenced to train and develop their "Suffolk trotters" at about the same time that the Russians began on their "Orloffs" and America on her "Messengers," but at the end of 100 years, the first two nations were so far behind America that they were not in the race for supremacy—or as the boys say, "they were not in it." In the year 1800 the Norfolks were a long ways in the lead—especially in long distance races—for in July of that year a mare called Phenomenon trotted 20 miles in one hour and two minutes and twenty seconds. This was the record for that distance for 49 years, when our horse Trustee trotted the 20 miles in 59:35½. He is the first horse that ever trotted 20 miles within the hour and his time is very near the top notch to-day. A few of the Norfolks have trotted a little under 2:30 but the best one would be no matchfor someof our Petaluma raised horses—for instance, Nellie R, Dawn or Oaknut.

The fastest Orloff of which any authentic record can be found is 2:31¼—a performance that would only be called good here if made by a two-year-old. A number of Orloffs were brought to this country at different times to mix with our trotting blood, but the results have always been unsatisfactory. Notwithstanding this fact, Gov. Stanford is going to give them another trial. He is to exchange a number of his Electioneers with the Emperor of Russia for an equal number of Orloffs. As the Orloffs are large and stout it is probable that Gov. Stanford expects to originate by this mixture a superior breed of carriage horses. At any rate he knows what he is about.

Nor have we improved our trotters by any infusion of Norfolk blood—with one single exception and that is imported Bellfounder. He had some of the Norfolk blood in his veins, though he was almost a thoroughbred. Bellfounder was the sire of the dam of Rysdyk's Hambletonian, the greatest of all trotting progenitors. Notwithstanding we are so far ahead of England and Russia, all three started from the same source, the Arabian. The Norfolks were largely made up of Arabian blood. History also tells us that in 1772, Count Alexis Orloff, a commander of the Russian fleet, obtained from a Turkish Pasha a large white Arabian stallion who founded the Orloff family of horses. In 1808, when Count Orloff died, his stud—or great family of horses—was turned over to the Russian Imperial government, and has ever since been kept as a distinct breed.

The pedigree of Messenger is like "household words" with the lovers of the trotter, but inasmuch as he is the fountain head of this great interest and has done more through immediate and remote descendants to promote the highest type of trotters, something more than a passing notice is due to this great horse. The English Studbook describes him as a gray horse foaled in 1780. He was sired by Mambrino, out of a daughter of Turf. Mambrino was by Engineer, son of Sampson, by Blaze, by Flying Childers, son of Darley Arabian, a horse imported into England from the Levant in the reign of Queen Ann. Turf, the sire of the dam of Messenger, was by Matchem, son of Cade by the Godolphin Arabian. Thus it will be seen—as above intimated—that the founders of the Norfolks, the Orloff and the American Trotters all originated in Arabia.

I will now deal with the American Trotter exclusively, and endeavor to show that the gilt-edge trotters of this county are of one family in reality, and that all the different branches trace back to grand old Messenger. He was only in this country about 20 years, having been imported to Philadelphia in 1788 and died on Long Island in 1808. About all the gilt-edged trotters descended from imported Messenger. A friend who is interested in, and an admirer of the Patchens asked me where they "got-off." It would be a long story to trace up the Clays and show the number of remote Messenger crosses in their dams. The Patchens were from the Clays. Andrew Jackson was the founder of the Clays. He was from the Arabian stock on his sire's side, the same as Messenger, and his grand-dam was by Messenger. The Clays and Patchens are good game horses and a fair proportion that were trained, turned out to be fair trotters. George M. Patchen 30, was the best of the Clays, for he sired what was extreme speed in his day—Lucy 2:18¼—and what was better he sired sons that "breed on" and the end is not yet. His son George M. Patchen Jr., sometimes called California Patchen, if measured by his opportunities, was certainly greater than his sire. He was brought to this State in 1862 when we had very few trotting brood mares, yet like all the other Clays and Patchens whenever crossed with mares that had the Messenger blood, through the Hambletonians or any other source the result was speed. His speediest California son was Wells Fargo, 2:18¾, out of a mare by Gen. Taylor, an inbred Messenger. But he did better than this he sired sons and daughters that "breed on." One of his sons was raised in Petaluma, and "like the prophet, not without honor save in his own country"—Alexander 490—who sired speed whenever he had a good mare, and also sired the sire of extreme speed in Alex. Button. Alexander was very near the front as a trotter in his day. This writer timed him a mile in 2:29½ in a heat won by Ajax when Alexander was in poor condition, and he then thought that if Alexander had been properly handled previously he would have been a first-class race-horse. I have devoted a lengthy paragraph to this horse because he deserves it, and for the further reason there are many Alexander mares in this vicinity that will one day be in demand for breeding purposes. Nothing crosses better with the Hambletonians and the Nutwoods than the Clays—unless it is the Hambletonians and the Nutwoods themselves—and most of the Petaluma Clay blood comes to us through Alexander.

But I must go back to my first proposition and endeavor to show the prepotency of the Messenger blood. Messenger sired Membrino, Membrino sired Abdallah, Abdallah sired Rysdyk's Hambletonian No. 10. It would take much space to tell what this great horse has done for the trotting world: how many of his sons and daughters—grandsons and granddaughters—down to the present day—have electrified the lovers of the trotting horse and how they have "bred on."

Electioneer, 125, measured by his present record, is the greatest son of Hambletonian 10. He has not only sired more 2:30 trotters than any other horse, he has 100 in the list—but he has sired earlier and more extreme speed. Yearlings that beat 2:30. A two-year old that beat 2:11; and aged horses that beat 2:09, and what is better for the public than all this is, that his sons "breed on;" Anteeo, as a proved breeder, is his best son. Anteeo has left this State, but he, like his illustrious sire, "breeds on," and has left producing sons behind that are probably as good as himself.

Fortunately for California, Palo Alto, the most rapid son of Electioneer, is owned by a man who can afford to keep him here. The horsemen of the East have plenty of money and they will have our best horses if they do come high. They offer such prices that our owners cannot afford to hold. But I do not regard this matter of our horses going East so much of a calamity as many others do, for I know that we have the material left to produce plenty more. I would like to ask those who are particularly fond of the Electioneers and are grieving over the departure of Anteeo, Mortimer, Hernanni and others, "what's the matter" with Eclectic? He is close-by and the best bred son of Electioneer on earth—except his full brother Arion, and his services are offered to you "for a song," considering his breeding and prospects. Any one of my readers who possesses a really good mare had better not tarry. Now is the accepted time! Now is the day of salvation if you wish to get into the swim. I am told that Mr. Page has already been offered such inducements to send Eclectic to the East that he is becoming a little nervous, and that by next season he will let go. Remember that Eclectic is an inbred Hambletonian, a representative of the two greatest families. His sire has an even hundred in the "charmed circle," while the sire of his dam has seventy, and is yet in the flesh and full of vigor, Nutwood with two-year-olds and yearlings, and the crop of 1892 yet to be heard from, which will swell his number beyond 100. Also that both sire and dam trace back through Hambletonian 10, to imported Messenger, and through him to the Arabs.

In the next article I propose to deal with the Nutwoods, Directors, Wilkes and other branches of the great family that descended from old Messenger and the Arabs, and if your readers don't tire of this "Horse Talk" I will have something to say about all of our horses "if it takes all summer."—J. H. McNabb in Petaluma Imprint.

Mrs. Annie Smith, of Richmond, Va., the wife of a lawyer and herself well qualified to practice, was refused admission to the bar on account of her sex. She has had a bill introduced in the Virginia Legislature to allow properly qualified women to practice law. The bill was favorably reported by the Senate Committee on courts and justice, and has passed the Senate.

"When have you leisure," said a caller to the city editor, "I would like to speak to you." "All right; come around after I am dead."—Cincinnati Post.

Patrons of Husbandry.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Now for the garden!

Look to the poultry yard! Did you see those pretty little chicks? Hear those little turkeys, and keep your hands off the downy, tiny ducks and goslings! But you may find much to amuse and profit you by close attention to the poultry yard.

Keep party politics outside the Grange; but inside the Grange, discuss pure Government, equal taxation, just laws, honest measures and the best means of obtaining these ends. Be honest, be just, and fear not!

Corporations have their friends and advocates. Who are the friends of and advocates for the farmers' cause?

The following named persons have been appointed County Deputies for the territory named: It is hoped each one will, at once, familiarize himself with the secret work of the Order and prepare fully to build up the Grange. There is much pleasant work for a Deputy to do. Let us see who can best work and best agree. The appointments are: Alameda Co., Julius Hollister of Eden Grange. Butte and Yuba Cos., Hon. C. P. Berry of Yuba City Grange. Colusa Co., to be supplied. Contra Costa Co., to be filled. El Dorado Co., Mrs. Kate Briggs of Placerville Grange. Los Angeles Co., Theodore Staley, P. M. of Santa Rosa Grange. Merced and Stanislaus Co., H. W. Brouse of Merced Grange. Monterey and San Benito Cos., Bates De Hart of Hollister Grange. Nevada Co., S. J. Alderman of Grass Valley Grange. Placer Co., B. A. Giantvalley of Eureka Grange. Sacramento Co., Eben Owen of Elk Grove Grange. San Joaquin Co., Robt. G. Williams of Woodbridge Grange. Santa Barbara Co., Delos Wood of Carpenteria Grange. Santa Clara Co., Amos Adams of San Jose Grange. Santa Cruz and San Mateo Co., to be supplied. Shasta Co., C. P. Dunham of Millville Grange. Solano Co., Joseph Kline of Dixon Grange. Sonoma Co., A. P. Martin of Two Rock Grange. Sutter Co., C. P. Williams of Yuba City Grange. Tulare Co., A. P. Merritt of Tulare Grange. Other appointments will soon be made. The Grange cause is in a healthy condition, and if the Deputies will put forth a reasonable effort, new Granges and new members will greet them on every hand. Please turn to the work in hand with both the spirit and the understanding.

Are you up with the times?

Keep two eyes, backed by an intelligent brain, on the acts of Congress! Do you know what your Congressman has done this session for the benefit of those who, in the sweat of the brow, eat their bread? What has he done? Ought he to be reelected? Congressmen are to be elected this fall.

Masters, Overseers, Lecturers, Stewards, Chaplains and Patrons, let me urge you to give Grange speakers a most cordial welcome. Get your fellow-farmers to come and hear the truth. Have application blanks, and when your good neighbors have been convinced, then ask them to sign the paper, pay the fee and thus become members of an Order that will strengthen them morally, socially, financially.

Now is the time to organize Granges. Go right to work. The harvest is ripe and ready for the gleaners.

Weigh all things in the scales of justice and tell me where some—yes, too many—of our public men will come out? How heavy a weight will counterbalance them? Surely, a very small weight will be too heavy for some of them.

Vaca Valley.—W. L. Overhiser, P. M., writes that the horticulturists are now very busy plowing their orchards in Vaca Valley. More rain would be beneficial. He has spent several days visiting homes in different sections. Saturday last he visited and spoke at the Grange. Six new applications were received and a meeting held Monday to confer degrees on a new class of members. After visiting Dixon he was to return to Stockton, and start for Monterey and other southern counties on the 20th.

Appointments Accepted.—Past Master I. C. Steele accepts of the appointments made for him in the State canvass, saying: "I will do my best to fill the appointments made for me. My health is fairly good, and I hope my strength will be equal to the work." Hon. C. P. Berry states that he will fill all appointments made for him, with the exception of those at Eureka, Pilot Hill, Magnolia and Placerville Granges.

Enterprise Reunion.—Perkins, Sac. Co., March 8: Enterprise Grange, No. 129, will hold its annual reunion April 14th at Enterprise Hall, when a general good time is anticipated. All good Grangers are cordially invited to be with us.—Mrs. Flora Holmes, Sec'y.

Many Patrons will read in kindly remembrance the memorial of Alhambra Grange on the death of that venerable and faithful Patron, T. T. Hooper, which will appear in our next issue.

Accepts.—Daniel Flint, P. M., accepts his appointment for work in the State canvas, and expresses satisfaction with his fellow speakers and the field assigned them.

Waking Up Lively.—B. F. Walton, of Ex. Com. writes from Yuba City Grange March 9th: "We have a class of 23 to initiate on Saturday, the 12th inst."

California Patrons, in view of the State Grange canvas announced, should be present at every meeting of their subordinate Grange.

The Lecture Stand.

[By J. D. Huffman, Lecturer State Grange, P. of H., of Cal.]

Lodi, March 14, 1892.

Having just returned home, perhaps I had best give an account of myself for the last ten days. March 4th started for Selma Grange. Upon the train I found Bro. Frisbie, destined for the same place. Arrived safely at Selma and was there met by Bros. Holton and Roadhouse, and soon thereafter was placed under the kind care and protection of Bro. and Sister Holton at their home in the town. March 5th we attended a closed meeting of their Grange, the third and fourth degrees being conferred upon a class of four, after which a feast in the afternoon, and, in the evening, open meetings were held with flattering success, having secured 25 applications before leaving the town, and I feel quite sure they will have a class of 30 or more before their next meeting. Sunday, took a run down to Fresno to reconnoiter, and I think there is a good prospect there. On the 7th, we went to Tulare. Arriving there, we were met by the zealous Patron, Bro. A. J. Woods, and escorted to his home in the town, and were heartily welcomed by Sister Woods. March 8th, we attended a closed session and conferred the third and fourth degrees upon a class of four, I think, after which a feast was prepared at the hotel; in the afternoon an open meeting, the result of which was not so flattering as at Selma.

March 9th we left Tulare for Plainsburg or California Grange, but from neglect, oversight or mishap, there was no meeting held as per program, and we did not have the pleasure of meeting but two Patrons, and they were in the town of Plainsburg. One was boring a well for water so we could get something to drink when we got there, and the other one came in town after some plow points, and he left the town just as quick as the Lord would let him. Then Bro. F. and I set about for some means to get out of the place without going on foot. In due course of time, history and events that I have not the space to tell all about, suffice it to say, we reached Bro. J. A. Perry's home about 8:30 P. M. and gave them a complete surprise. Arriving there at that hour, we were much pleased to hear Sister J. A. Perry say she was glad we came, and we were welcomed as only true Patrons can welcome. Upon arriving there, I found Bro. Davis had assigned me to go to Madera, March 12th, to organize a Grange there, where Sister J. A. Perry had been and secured a charter list. March 11th, set about to get ready for that task. Upon going down to Merced, found Bro. and Sister Brouse. Sister Nettie Brouse then called upon Bro. and Sister A. Smith, and they with Sisters J. A. Perry and Emma Perry and Bro. Applegate, Master of Merced Grange, Bro. Frisbie and myself, made the arrangements for the move on Madera. On the evening of March 11th, all arrived there for work. Had some posters printed and circulated and held an open meeting on the 12th, and increased the charter list to 28. At 1 P. M., duly organized a Grange in that town and named the infant that day Madera, and the father's name is Grange, and elected and installed the officers. After adjournment, secured ten more applications. I see no reason why they cannot have as large a Grange there as at Merced. The officers for the remainder of the term are: W. M., F. J. Quant; W. O., E. S. Russell; W. Lect., B. W. Childs; W. Stew., A. E. Shedd; W. Ass't Stew., W. H. Dyer; W. Chap., J. J. Kerr; W. Treas., B. A. Maxson; W. Sec., Sister M. E. Quant; W. G. K., Oscar Eastin; W. C., Sister Addie Childs; W. P., Sister S. J. Arnold; W. F., Sister O. H. Eastin; W. L. A. S., Sister Rissa Kerr.

The Lesson of Spring.

It is only a leaf. But oh! how pretty it is. See it glisten in the bright spring sunshine! How nicely the hand of Nature has placed the varnish. Notice, if you please, its anatomy, study its physiology, and comprehend its hygienic power! Is it a paralleled, or an opposite veined-leaf? Do you know how much air its lungs purify for the plant or tree it ornaments, and for your lungs to inhale? Do you know how much nourishment that leaf gets from sun, moisture, air, for the stalk which is its parent? Have you ever thought what an ornament a leaf is? How dull and homely our trees, plants and vines are when the leaves are gone. How these same trees charm us with their beauty when the first leaves shoot forth! How we enjoy the cooling shade when the foliage is full and the hot days of summer are at hand!

Who does not love to sit beneath his vine and fig tree at early spring time, and enjoy the chorus which the feathered choir are ever ready to furnish? Among the leaves are the young birds; and the forest home or orchard bower seems almost a paradise in the early spring. But it is the leaf, the charming leaf, that has turned the desolate to the charming. It is the leaf that has added strength and beauty to the tree. Each leaf is an individuality; each leaf has a duty to perform, a work to do, a service to render. No one leaf completes the beauty of the plant, or gives more than a proper share to its development and growth. It is not the one leaf that makes the cooling shade or the life blood for vegetation. But it is all the leaves of the forest that go to make up this world of beauty, use and instruction.

Just so with our noble Order. Each member is one of the life-giving, health-producing, useful and ornamental leaves of the great fraternity of Patrons of Husbandry. With each spring our Order, like the trees and vines, ought to put on a new suit, and exhibit a new life and growth. New leaves—new members—full of life, health, growth and usefulness, ought to be found in every Grange. And new Granges, like the new trees, plants and vines, ought to be found in every community. Nature is not partial to this section or to that in the bestowal of the leaf. Neither is our Order partial to this county or to that in the organization of Granges. The world is the field both for leaves and for the Grange. And as the leaf purifies, ornaments and aids the tree or vine of which it is a part, so does the Grange purify, elevate and benefit any community in which it exists. What the leaf is to the vegetable world, the Grange is to the moral, financial, social and intellectual world. As you, in spring, love and admire the new leaf, so may you, fellow reader, love, admire and embrace the Grange. Let the leaf teach you its many lessons, and let the Grange assist you to enjoy and communicate the lesson thus learned. Study the leaf at the Grange school.

E. W. D.

Nicaragua Canal Matters.

Resolution Adopted by Watsonville Grange March 5, 1892.

Whereas, There is a canal company which has received a charter from the United States, Costa Rica and Nicaragua, for the purpose of constructing a ship canal from the Atlantic to the Pacific ocean, and

Whereas, Said company has called upon the United States to subscribe 70 per cent of the stock of the company, and

Whereas, It is of paramount interest to the agricultural and horticultural interests of the coast, and

Whereas, The railroad companies are doing all they can to prevent the construction of said canal, and are now about to build a railroad in opposition to it, therefore be it

Resolved by Watsonville Grange, in regular session assembled, that a copy of these resolutions be sent to the Secretary of the State Grange, and he be requested to correspond with said company as to present data, amount of capital stock, price per share, etc., believing as we do, that if the importance were fully understood, self-interest and protection would compel the farmer and fruit raiser of the Pacific Coast to subscribe for sufficient stock to elect a majority of the directors of said company and make the scheme a success and a perpetual menace to all carrying monopolies.

On receiving the above, I requested the desired information of Capt. W. L. Merry, the leading representative of the canal enterprise on this coast, who responded as follows:

San Francisco, March 12, 1892.

A. T. Dewey, Esq., Sec. S. G of Cal.—Dear Sir: Your esteemed favor of 10th [announcing the resolutions of Watsonville Grange asking information regarding the Nicaragua Canal Co.] is at hand. In compliance therewith I send you printed documents, which contain most of the information you want. The passage of the bill in Congress would largely modify the conditions existing between the Canal Co. and the Nicaragua Canal Construction Co., which has a contract for construction in case the Government does not act in the premises. In such event it is probable that the stock and bonds of the company will be negotiated in Europe in the near future, and I fear the canal will go under foreign control, which would be a blunder much more serious, however, politically than commercially. The Government will obtain for us the canal sooner and much cheaper than if constructed without Government control. Unfortunately, party politics and not legislation for the public good is the motive at Washington at present, and it will require united public opinion to force favorable action. In this the Grange can do much to aid the cause. The stock of the Canal Co. is selling in New York at about 60 per cent. The public will soon have a chance to subscribe to the first issue of five per cent bonds. A canal convention will be held here on March 29th, and I know that the Supervisors of the various counties will be pleased to have the State and subordinate Granges represented. Stockton Grange has already appointed delegates. If you will do so, please send me the names and I will see that they are welcomed. Yours very truly, William L. Merry.

One of the documents furnished by Capt. Merry contains much information concerning "The Inter-Oceanic Canal of Nicaragua," including its history, present plans and prospects, a copy of which volume we have mailed to Watsonville Grange. Next week, the Rural will give more of the information requested by Watsonville Grange.

Recently, a letter was received by W. B. Ewer, M. A., of the Rural Press, from Hon. M. M. Estee, recommending that the Master of the State Grange appoint delegates to the Convention in San Francisco mentioned by Capt. Merry, which letter was duly forwarded to Worthy Master Davis. Not feeling constitutionally authorized to appoint such delegates, the Worthy Master has expressed the desire that representative members of the Order be present and show the true interest of the Grange on that occasion.

A. T. Dewey,
Sec. S. G. of Cal.

From Washington.

Mrs. Jennie Jewett, in recently writing from White Salmon, enclosing subscription for the Rural Press, adds:

"Our Grange is doing well. We are to build a hall in the near future. We went to Lyall and installed their officers for them two weeks ago. Good speeches and recitations were enjoyed. As one of the Executive Committee of Washington State Grange, I had occasion to spend some time at Vancouver last summer. During that time I visited Fourth Plain Grange at the dedication of their fine new hall. I think it is one of the best Granges in the State. Henry Chint was Master. He is a power in his own right, and with a band of noble assistants, things have to move. During my sojourn there, State Master Russell and wife organized a Juvenile Grange at Fruit Valley, and a very earnest little band it seemed. So the good work goes on.

Mr. Jewett and myself hope soon to go to North Yakima to organize a Grange we have been working up by letter, also to look after Granges that we hope to encourage."

We hope to hear from Mrs. Jewett again, also Mr. Jewett, who is a horticultural farmer. Their place is beautifully located on the north side of the Columbia river, nearly opposite Hood River, the home of another able friend of the Rural, Hon. E. L. Smith.

The Lecture Canvass.—Granges over the State as a rule seem wide awake, with interest taken in the appointments recently published for a general State canvass. There has been an unusual number of orders received at the Secretary's office for blank applications for membership, song books and other evidences of general activity along the whole line. It is expected that all members will use their best efforts to make this first grand lecture canvass of the State Grange of California a splendid success.

Patrons will find in another column an excellent original article on putting up fruit, etc., read by Mrs. Lizzie Hale recently before Stockton Grange. The reading of such original articles adds much to the value of Grange meetings, and when published, furnishes a still greater benefit to farmers' wives and households.

FARMERS' ALLIANCE.

Joined the People's Party.

TOPEKA, Kans., March 11.—The action of the Kansas Democratic State Central Committee in deciding to put no State electoral tickets in the field in the coming campaign, and to work for and vote with the People's Party, in consideration of certain Congressional candidates whom the People's Party agree shall be Democrats, has aroused the Republican leaders throughout the State.

It is now understood that in a few days a committee of prominent Kansas Republicans will go before the Republican National Committee and present a request for a retaliatory campaign in the South. The National Committee will be requested to organize a party in Georgia, North and South Carolina and Virginia, for united action with the Alliance, and in this way offset at least the action of the Kansas Democracy in trying to turn enough States in the People's Party column to throw the election of the next President into the next House of Representatives, which is Democratic.

An Alliance Campaign.

WASHINGTON, March 11.—The Alliance men in Congress have under consideration the establishment of a Congressional Campaign Committee on much the same basis as the Republican and Democratic committees, to look after their interests in the Congressional districts. It is also proposed to establish a national newspaper in Washington. These, and many other things of interest to the Alliance men, were discussed at a recent meeting at the home of Representative Watson of Georgia.

DENVER, March 11.—The Greystone Club has sent an invitation to the California delegation to the Democratic Convention to be guests of the club while in Denver en route to Chicago. It is expected the California delegation will arrive at Denver June 17, remain during the day and go to Chicago the next day with the Colorado delegation.

CONTROL OF LEGISLATION.—The Charlestown (W. Va.) *Farmers' Advocate* says: When the farmers owned this country 40 years ago, they controlled its legislation and rendered every class of business profitable. In 1892, when they own only 20 per cent of the wealth of the country, and every branch of the Government has passed out of their hands, paralysis of business of every character has followed, and it has become difficult for many to even obtain subsistence in a land of p'enty. Farmers, remember that the reins of government have simply passed out of your hands, but not beyond your control, if you make up your minds to influence their management or regain control of them. Isn't your situation a sufficient commentary on the wrongs you have endured, or do you wish to be further enslaved, ere you wake up. Verily, "a little more sleep; a little more slumber, and your poverty cometh as an armed man." Will you sleep on and lose your heritage?

ON A HIGHER PLANE.—The Georgia *People's Economist* says: The Alliance has no war to make on any profession or class except such as take away the fruits of the labor of the people under the guise of law. It seeks to place farming and farmers on a higher plane, and when this is done the country will be more uniformly prosperous. The decadence of England begun when the farmers of the seagirt isle began to fall behind and to grow restive under the unjust burdens they were bearing. Experience ought to suggest that the best time to forestall such results is to take time by the forelock and begin the work of reformation when the premonitory symptoms appear. This is what the Alliance has sought to do.

Cooper (Tex.) *People's Cause:* If the South and West must give up silver, genuine tariff reform, and every political principle, for a few Eastern votes, and under a threat of having a force bill, let us take the force bill along with other republican oppression, and make the most of it. Either we are for free silver coinage as a law or against it; either we are for a reduction of the tariff to a minimum on manufactured goods, as well as on raw material, or it is not an issue. This heathen Chinee political game of "now you see it and now you don't," is unworthy of the reputation of the South and West for vigor and honesty.

Chicago (Ill.) *Express:* By dividing the people into two camps, the privileged class on election day determines the result by buying the purchasable voters. Break away and keep in the middle of the straight road.

HORTICULTURE AT THE STANFORD UNIVERSITY.—It is announced that Emory E. Smith, who is well known to readers of the RURAL, has been placed in charge of the department of horticulture at the Stanford University. Horticulture is to be considered by itself and distinct from other branches of agriculture, and it is proposed to build up the department with all the advantages of the best facilities in the open air and under glass. In preparation for his work, Mr. Smith will spend some months in visiting horticultural establishments of all kinds at the East and abroad, and will aim at making the Stanford department the best of its kind anywhere. Mr. Smith's experience and training has been in this line hitherto, and he brings to the work youth, aspiration and a sincere love for the work. He is quick and energetic, a close observer and a good speaker, and we are glad this field has opened for the enlistment of his best efforts in California horticulture.

THE influx of tourists into Southern California this month has been greater than in the same period for several years. Several large excursion parties are expected during the coming two weeks.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CROP OUTLOOK.—Oroville *Register:* Reports upon crops up to the present time are of the most favorable nature. O. P. Ormsby says that toward Marysville everything is looking splendidly. G. H. Stout lately rode through Dayton and Durham grain fields and reports grain looking unusually fine. It has a good color and is stooling out well. Sam Patterson from Sundale says he has barley nearly knee high, and that Mr. Retson has rye heading out. Grain in all sections is very forward. Charley Hefner reports a good outlook for crops in Union district. B. Russell of Paradise says fruit and grain are very forward in his portion of the county. Reports from Gridley are very favorable, for all say grain is looking well. Near Moore Station the grass and grain are rank and vigorous. If the north wind does not injure crops, all that is needed will be moderate rains the latter part of this month or the first of next.

Colusa.

DRYING WIND JUST THE THING.—Colusa *Herald:* The north wind began to blow March 5th, continuing day and night for full three days, leaving no trace of the last bountiful rain in the brightening up of growing vegetation. The surface of the ground is hard and dry. Farmers say the wind is just the thing needed to check the too rapid growth of grain, and allow the stalk to gain strength and prevent it from falling down.

Los Angeles.

ORANGE CULTURE AT COVINA.—Cor. L. A. *Express:* Covina is surrounded by one of the very best and largest orange-growing districts in the county. Many of the settlers in this vicinity are now engaged in planting orange trees. The whole Phillips tract is destined soon to become a solid orange orchard.

LARGE DEMAND FOR DECIDUOUS FRUITS.—L. A. *Express:* Tree-planting for the season of 1892 is fairly under way. The supply of local stock is about exhausted, and importations must be relied upon. The daily receipts of nursery stock at the depots is very large—much greater than ever before. Great quantities of young trees are being shipped to Arizona and New Mexico. From these two Territories come orders of peach, apple, prune and apricot stock. The orders are more numerous and larger than during any previous season. So far, about three carloads of peach stock from the East have been received. They were carefully inspected before they were allowed to be unloaded. In fact, there is an inspector at the depots every day keeping an eye on diseased and bug-infested stock. Several consignments of peaches and apricots have developed the borer, a most dangerous pest. The trees were immediately destroyed. This year a good deal of almond stock has come from the East. The trees are a year old, and it is said the nurserymen find that the stock can be as easily grown there as in this State. The prospects for tree-planting are good. Hundreds of acres in this and adjoining counties have been prepared for fruit trees. In Antelope valley, a good many almonds have been set out. Commissioner Scott has in his office some specimens of the purple scale, which give an excellent idea of the destructiveness of that pest. The trees were imported from Florida three years ago, when there was no one to look after infested stock. These trees are literally eaten up with the purple scale. Oranges the size of walnuts are covered with the scale. The inspectors are doing all they can to clean up infested orchards. When the scale is very abundant, the better way is to burn the trees. Fumigation is also resorted to. In spite of all the inspectors are doing, the various scale bugs find lodgment. If orchardists and others were alive to their best interests, they would enter more heartily into the work of exterminating fruit pests. There is a great scarcity of olive stock. The demand has been so great as to exhaust the supply and prices have advanced. Good orange stock has also advanced in price. Olive culture has received considerable attention during the past two years.

Monterey.

CROP PROSPECTS.—Salinas City *Index:* J. P. Raymond, who has for years made it his business to collect local statistics of crop prospects for the information of dealers throughout the world, observes there is obvious need of a supply of water stored in the ground against the time when the grain fields are pumping large quantities for mature growth. It is now believed that the crop of this season will be unusually large, although some of our more cautious producers maintain that it is never safe to bet on a California crop until it is in the sack. The wheat granary of this section is in the southern end of the county, and the result of recent inquiries among producers has elicited the fact that the acreage is large and the present prospects never before so favorable as they are at the present time, especially on the mesa lands where production has never been so certain as upon the bottom lands.

Napa.

FRUIT GROWERS FEARFUL.—Calistoga *Calistogian:* Fruit growers are naturally alarmed at the outlook. Trees that should still be dormant are putting forth blossoms and foliage, and in some localities grape vines are already leafing. The supposition is, of course, that frost will follow the rains yet to come and that loss will result.

Sacramento.

HOP NOTES.—Sacramento *News*, March 10: The last few days of warm weather and north wind have alarmed many growers who fear a dry season. The result of a dry season would be a too rapid ripening of the catkins, hence a red hop. Old and experienced growers declare that there is a marked absence of moisture this year on the river bottoms. The snow in the mountains has not been sufficient to give the river the usual flood season. The river maintaining a low stage has not sufficient pressure to force the water through the levees and into the loose soil of adjacent fields. George Menke, Daniel Flint, W. H. Leeman, Russell Flint, E. Casselman and others have arranged to irrigate their yards. Pruning is progressing rapidly in the hop fields. No shoots have appeared as yet, and it is not expected that the earliest humulus twiners will begin their convolute journey up the poles for several weeks yet.

Solano.

FRUIT MEN IRRIGATING.—Davisville Cor. Dixon *Tribune:* Fruit men are preparing their machinery for irrigation. The Briggs vineyard has already started up, and the Oak Shade will follow in a few days. Mr. Gould has never resorted to artificial irrigation, relying solely upon the thorough cultivation of the soil, and in this he has never been disappointed, his vines yielding steadily a superior quality of raisins. Perhaps there is wisdom in this course; certainly the present season promises a fair test.

Stanislaus.

WEST SIDE CROP PROSPECTS.—Modesto *Herald*: The west side of the San Joaquin was more generously remembered by Jupiter Pluvius during the last storm than the east side. They had almost an inch of rain, and the plows are now at work summer-fallowing. The crops look well, and are growing rapidly under the genial rays of the warm sun; but C. C. Eastin says that unless they get two or three inches later on in the season, they will not reap a large harvest of grain away from the ditch.

Sutter.

RANK WINTER-SOWN GRAIN.—Woodland *Democrat:* J. B. Tisdale, a Sutter county farmer, says the crop prospects of that county were never better than at present. His farm is located 20 miles above Knight's Landing. The farmers never summer-fallow any of the rich river bottom land of that vicinity. The winter-sown grain is thrifty and strong, and in many instances unusually rank. Mr. Tisdale is running sheep on his grain to prevent it from becoming too rank.

Tehama.

HOOKER.—*People's Cause:* One of the comparatively new and not the least prosperous of settlements in Tehama county is Hooker. Six years ago this small town in the northern confines of the county was unknown and the place was designated as Hooker creek. The creek is still there, a small, shallow stream, coursing through the canyons of the fertile hills, and along its banks are established a number of prosperous and picturesque homes, which bid fair to rival in beauty those of the older sections of the county. This settlement, within a radius of five miles, comprises over 100 families. A new depot has recently been built, an excellent school is maintained, and the small settlement promises to continue to grow in importance. Within half a mile of the depot, and on the bank of the creek from which the place takes its name, Dr. R. L. Hill, lately from Oakland, has built a home which has every appearance of affording pleasure, luxury, and ease. The house is a handsome, two-story structure of modern architecture, with a broad veranda extending across the front. It is handsomely furnished and is provided with an extensive library. The grounds are sloping. Surrounding the house on three sides is a young and thrifty orchard of prune, peach, almond and other fruit trees. In front, the yard is handsomely laid out and planted to shrubbery. A large windmill and tank and pipe which are laid about the premises, form a convenient system of water works. It is the most pleasant country home to be found anywhere in the county. The homes here are all provided with young orchards which will come into bearing soon. S. D. Pierce has a pretty place. The Wilkinson Bros., three of them, all have nicely improved places, with young orchards growing on them. A colony of young Frenchmen are improving several tracts. Mr. John Hutchinson, an English gentlemen, lately purchased an 80-acre tract which he is putting in a high state of cultivation. He has erected a beautiful cottage on it, provided it with a large barn and outhouse, a tank and windmill, and has a force of men busy plowing and planting 12 acres to fruit. Mr. Wadsworth and Mr. Goff both have beautiful places at Hooker. The English gentlemen who recently purchased the Merrill place on South Fork, are planting 16,000 fruit trees this season and making many other improvements.

Tulare.

HOW TO PLANT TREES IN ALKALI LAND.—Grangeville Cor. Hanford *Journal:* The work of replanting trees on the Kimble prune ranch is about completed. About 20,000 trees were replanted. They were missing mostly in the spots where the alkali was strong. As the method of planting adopted on this ranch may be of benefit to others who contemplate planting trees in alkali land, we give it below: A hole is dug 2x2 feet and 2 feet deep, and good soil, sufficient to fill each hole, is hauled from land free from alkali and placed at each hole so as to be handy to fill in, and from one to three pounds of gypsum are mixed in with the dirt as it is thrown in, varying the amount according to the strength of alkali apparent in the land.

IRRIGATION DISTRICT ELECTION.—Traver *Advocate*: In response to inquiry relative to the election of directors from the Secretary of the Alta irrigation district in this county, Attorney-General Hart has rendered the following opinion, which is applicable to all irrigation districts in the State: "The act of March 20, 1891, provided that an election shall be held in each irrigation district on the first Wednesday in February, 1893. This would seem to repeal the law requiring an election to be held on the first Wednesday in April in even numbered years, and consequently the present directors will hold over until 1893. The term of the present directors expires in April, 1892, but as there is no provision for electing their successors until 1893, they will continue to hold over until the qualification of their successors. Section 879 of the Political Code, providing that every officer must continue to discharge the duties of his office, although his term has expired, until his successor has qualified, applies to irrigation districts as well as to other officers."

CROP PROSPECTS.—Visalia *Delta*: The prospect for the largest wheat crop in the history of this valley is exceedingly flattering at this day. From every part of the county come reports that the growing grain could not look better. The outlook is very favorable for the largest wheat crop of any county in the State, and Tulare promises to be the banner wheat county of the Golden State again. The grain men are making unusual preparations to handle the vast crop to be harvested. Warehouses will be erected at Reedley and Dinuba, and additions will be added to warehouses now constructed.

TO PROTECT TREES FROM SUNBURN.—C. J. Berry in Visalia *Times:* To the fruit grower, his best friend is the sun. It is the bright and continuous sunshine of California, particularly of Tulare county, that gives us these luscious and highly colored peaches, fine prunes and delicious pears, for which our district is becoming so rapidly famous. While the sun is our good friend when our trees are grown up, he must be guarded against in protecting the bodies of our young trees from his warm rays. There are several ways of doing this effectually. One way is the use of shakes, stood up alongside of the tree on its southwest side. If there are no rabbits to annoy you, the following is a better remedy than the shakes: Take one pound whale-oil soap; mix with one gallon water; add whiting enough to make a thick whitewash and daub on the trunk of your tree close down to the ground, even putting it a little way under the ground. The soap is a good protection against borers. The whiting deflects the rays of the sun. If it should rain after applying them, apply again. If, during the summer, you should have a sandstorm and the blowing of the sand whips the whiting off them, apply again. This remedy is no more protection against rabbits than the shake. In order to protect your trees against rabbits and sun, too, I have found the using of any paper that is free from tar, any old grain sack wrapped loosely about the tree's trunk, and a good tree wrap made out of a thin shaving of wood, now sold in the market for a small price. If you expect to grow an orchard, it is positively necessary that you protect the bodies of your young trees from sunburn.

NEVADA.

LIVE STOCK AND BUTTER INDUSTRIES.—Virginia *Chronicle*: While the silver market is lagging, not through a lack of the white metal in Nevada, the State is coming to the front as a producer of live stock and prime butter. Cattle shipments to the Golden State are of daily occurrence. The creamery business is also booming, and Nevada will soon supply a large proportion of the Pacific Slope with choice butter. Before the end of the year many new creameries will be erected. The Nevada Commercial Company will commence the erection of two more creameries at an early day—one in Jacks valley and the other near Baseman's ranch, at the head of Carson valley.

THE HOME CIRCLE.

The Old Folks' Longing.

Don't go to the theater, lecture or ball,
But stay in your room to-night;
Deny yourself to the friends that call,
And a good, long letter write—
Write to the sad old folks at home
Who sit, when the day is done,
With folded hands and downcast eyes,
And think of the absent one.

Don't selfishly scribble "Excuse my haste,
I've scarcely the time to write,"
Lest their brooding thoughts go wandering back
To many a by-gone night
When they lost their needed sleep and rest,
And every breath was a prayer
That God would leave their little babe
To their tender love and care.

Don't let them feel that you've no more need
Of their love and counsel wise,
For the heart grows strongly sensitive
When age has dimmed the eyes.
It might be well to let them believe
You never forget them quite—
That you deem it a pleasure when far away
Long letters home to write.

Don't think that the young and giddy friends,
Who make your pastime gay,
Have half the anxious thoughts for you
That the old folks have to-day.
The duty of writing do not put off;
Let sleep or pleasure wait,
Lest the letter for which they waited and longed
Be a day or an hour too late.

For the sad old folks at home,
With locks fast turning white,
Are longing to hear of the absent one,
So write them a letter to-night.

—Portland Oregonian.

Deacon Babcock's Second Wife.

Conversationally, Deacon Seth Babcock's second wife had shaken the village of Petit Hollow from center to circumference. From the moment she walked into church, quiet and unpretentious as her modest bridal garb, the people in general disliked her. Yet there was nothing offensive in the mild glance of her soft brown eyes, which were so near-sighted that she could scarcely tell one person from another. From the waves of her chestnut-hued hair to the tip of her dainty foot she was a lady. "A stranger at their gate."

It was a crime against the public in their opinion, that Deacon Babcock, the corner-stone of the church, religiously and financially should choose a wife out of his own town—and marry her unbeknown to anyone. The very atmosphere became heavily saturated with the subject, and the loungers in the store and at the postoffice talked it over daily. Even the schoolchildren felt that somehow the deacon, as supervisor of schools, had lowered himself in their estimation, and kept a sharp eye on the daily life of Mrs. Babcock, as seen from the porch of the brick edifice where they sought to walk in wisdom's ways for six hours out of the twenty-four, five days weekly.

Her first real offense was "making up" with the deacon's oldest daughter Harriet, who had married against his wishes. Somehow she showed the worthy man that it was wrong to be so unforgiving, and the daughter, who had not crossed his threshold for twelve years, spent Thanksgiving day with her father. He discovered that her husband was "quite a man, after all."

Secondly, she used the first Mrs. Babcock's parlor furniture every day, in the bare sitting room, which she had converted into almost a bower of beauty, with flowering plants and climbing vines showing between the soft folds of creamy falling curtains at the large staring windows. Here a picture, there a statue or vase, a bit of color in the shape of afghan for the slippery hair-cloth sofa, plump cushions and head rests, gay trifles of fancy work, a gilded cage with a gorgeously plumed parrot; and last but not least, the first plush parlor suit Petit Hollow had ever seen in *her* parlor.

But the third and greatest sin of her committing remains to be told. Society was indignant. A murder had been known to create less sensation. If mob law had been in vogue, Aunt Phrasie Gilly and Sister Eliza Sturgis would have advocated lynching little Mrs. Babcock. The former ladies were the leading gossips of the place, who were always excited in an inverse ratio to the real importance of the subject.

Down at the store, the village potentates talked it over. Reuel Smith, the deacon's first wife's cousin, was spokesman:

"Seems as ef Seth was kind o' henpecked, don't it?" leaning back lazily on his seat of grain bags.

"Does so," responded 'Lias Tarr, hitching around on his nail keg so as to have a better aim at the stove hearth. "Don't 'low him to drink no coffee now."

"On account of his dispepsy," said a mild little man behind the stove.

"Cat's foot!" exclaimed Reuel so contemptuously that the speaker drew back in affright and made no further remark.

"Tight-fisted, ain't she, Steve?" to the spruce trader behind the counter.

"Looks like it," assented Steve, carefully arranging the pencil over his right ear. "Looks like it. Did Sunday, anyhow. If you had been there you'd seen Deacon Babcock passing around the contribution box in a plain cotton shirt—no bosom—just a fold in front, buttoned up with cheap agate buttons, not even starched."

"Whew!" said 'Lias. "An' he's the man that always wore a stiff, boiled shirt and stand-up dicky to town meetin'."

"His fust wife always kept him spic an' span," said the man behind the stove.

"That's so," said Smith, feeling complimented by the tribute to his cousin's merits. "But I don't think much of schoolmarms for wives, anyway. They're too well posted; trip a fellow up, you know. Why, Sile Snow's wife, she that was Ellen Dawson, over to the Corners, would set right down, every time she spent an extra dollar, an' calkilate how much 'twould amount to put out to interest in, say forty years. Apt to be too savin' some ways, and then again extravagant other ways. Always wants good furnitoor an' books, and newspapers a plenty."

"Yes, sartin; but I allow they generally have smart children, an, their husbands get rather forehanded," said Lias Briggs with a sly chuckle, for the storekeeper's wife was an ex-schoolteacher. Smith's wife, a robust hired girl before marriage, was now the village washerwoman, doing her best to help her shiftless spouse support his family.

"Thet ain't here nor there! 'Twas real mean to send the poor old deacon to meetin' with a shirt on like that," retorted Smith, lighting his pipe and buttoning his coat preparatory to going home.

Mrs. Smith told the news at Squire Graham's, and Mrs. Graham "ran in" to several houses to repeat it. Aunt Selina Tarr had "observed it when the old saint passed round the sacrament," and all agreed that the worthy man was an abused person.

At the Thursday night prayer-meeting, poor Mrs. Babcock felt the social chill that pervaded the atmosphere and wondered what ailed every one. The deacon seemed odd, too. She strained her near-sighted eyes to be sure she had not spoken to the wrong people, and concluded that perhaps the wrong feeling was in her own breast.

Friday afternoon her husband's other daughter came over from Brompton to spend a day or two. Young Mrs. Lee was very kind and cordial to her step-mother and commented freely on the many improvements that had been made by the new mistress in the interior.

"I am so glad you came to-day; now you will go over to Mrs. Graham's to the church sociable to-night, won't you? exclaimed Mrs. Babcock.

"Yes, indeed; but here comes pa," and the daughter ran to meet the father as joyfully as a little child. As her eyes ran over his person, her face changed in expression and her manner became constrained.

Mrs. Babcock sighed as they sat down to the cheerful tea table with its snowy linen, gold-banded china and cut glass. She had found her husband rather silent lately—he seemed sulky—only she would not use the word even in thought.

It had not been a love match, only grounded in friendship and strengthened by respect. Deacon Babcock had been her father's best friend, and hers from childhood up to middle age. She was a lonely little schoolteacher without father, brother or any near relative. Her lover—the one love of her life—lay in an unknown grave somewhere on a Southern battle field. She felt it would be a rest, a change, to be the wife of such a good man; and, above all, she would once more be independent. She was trying to do her duty. The deacon had reached that time in life when the senses seem a little dulled and home comforts are the only refuge.

"I guess you found pa's wardrobe a little out of repair," said Mrs. Lee, with a disagreeable smile as she toyed with a spoonful of golden honey.

"Rather. His linen was, to say the least, deficient," smiling. "I have made him a dozen fine shirts, and am knitting him some woolen socks."

A cloud passed over her husband's face.

"Yes," said Mrs. Lee, with a peculiar inflection. "What nice corned beef this is. pa!"

Deacon Babcock declined to attend the sociable, and his wife, not a little hurt by the curtness of his refusal, departed with her step-daughter, feeling rather sober.

It was a very unpleasant evening for Mrs. Babcock. The ladies were severely cool, and one or two had slighted her openly. At length she withdrew in a cozy curtained alcove in the broad hall and sat down on the window shelf, looking out on the moonlit garden and gnarled old trees. Suddenly voices drew near—she recognized Harriet's.

"I tell you, Ellen, she is just as good to him as she can be," she was saying warmly.

"Perhaps so," returned Mrs. Lee, cautiously lowering her voice, "but she makes him cotton shirts for his best. He told me so—he hasn't worn but one of them yet—and Mrs. Graham told me, too. Said she thought 'she would cry to see him try to button up his coat with his trembling old fingers'—to hide it, you know."

"Don't believe a word of it," declared Harriet. "'Tain't a mite like her! Sh! Here comes Miss Tarr."

Mrs. Babcock winked very hard to keep back the tears, and her cheeks burned. Just before she bade her hostess good evening, she overheard some remarks about the deacon staying at home "because he hadn't a decent shirt to wear." Perhaps the women—Mrs. Gilly and Miss Sturgis—intended that she should hear. It was a very determined woman that invited the company, collectively, to spend the next evening with her and her husband, in honor of Mrs. Lee's presence at her old home.

Curiosity caused all to assemble at Deacon Babcock's at an early hour. Mrs. Babcock, and her husband in an immaculate shirt front, received the guests. She set all at ease by a pleasant tact of getting the right persons together. Music and conversation was the only entertainment until a dainty collation was served. After coffee and cake, most people feel good-natured.

Mrs. Babcock called Aunt Phrasie Gilly's attention to a collection of foreign photographs, and a group soon gathered around the table. "I will show you something I have been doing myself," she said, modestly, showing them a panel of pansies done in water colors, on which this stanza stood out in bold relief, being done in illuminated letters:

"Against the darkness outer,
God's light his likeness takes;
And He, from the mighty doubter,
The great believer makes."

The deacon cleared his throat as if about to make a mighty effort. "Hem! I want your attention, friends, individooally and collectively. She has got a meaning in them verses. You all mistrusted her an' ill-used her, 'mighty doubters;' now I want you to be 'great believers.' She's the best wife a man ever had, and you've all been making a great fuss, an' setting Harriet an' Ellen against her because I didn't—know—enough—not to wear a shirt *hind side ajore!*"

Amid shouts of laughter, the good man sat down. The men awkwardly joked him, and the women, one by one, stole off with Harriet to look at the drawer full of nice shirts, with glossy fronts, opening behind instead of in front, as the old gentleman had been accustomed to wear them.

To think of his being so stupid as not to see and "her being so near-sighted as not to see either," said Ellen, with a laugh.

"To think of our all being such fools," said Mrs. Graham, shortly, flouncing downstairs.

From that day, Mrs. Babcock had no cause to complain of her neighbors' coolness. Opinion veered as suddenly as a weather cock, and she became the village authority on manners, methods and modes. Some of the men growled and did not take kindly to the garments with which the clothes-lines in Petit Hollow were, ever after, weekly adorned, said garments *all buttoning behind.*—Sarah P. E. Hawthorne in Portland Transcript.

The Memory of Mag.

There was one more knot to tie, and after a little difficulty Mother Grubb tied it. Her wrinkled fingers were slow and clumsy, but the work was done at last, and then the old woman laid the bundle carefully on the table and looked at it. She stood silent for a moment and then began to grope clumsily in her pocket. Mother Grubb was crying.

After another tender look at the queer object, the old woman reached for the faded green shawl that hung on a lonesome nail in the corner, and tremblingly placed it upon her bent old back. It took time to get ready, to put on her shabby bonnet, and to get the snake-like crutch that stood against the wall. Old Mother Grubb was not so young as she had been, and a journey of this sort was not a common thing with her.

At last she was ready. With a tedious hobble she went to the table, took up the awkward bundle, kissed it and started off. The wind slammed the door as she crossed the sill. She saw the crowd of scapegraces ahead of her, ready to make fun of her faded clothes and her old-fashioned bonnet, as they had done in years gone by. But Mother Grubb set her teeth and hobbled on.

When the old woman saw that she was going to be bothered again she clasped her bundle more tightly and tried to hurry, but all in vain. The boys came up with malicious grins on their impish faces, all primed for sport.

"I say, Mother Grubb," said one youngster, with a saucy look on his dirty face, "what yer got in the bundle?"

"That's so," said another warty young one; "what is it?"

Mother Grubb did not appear to notice the boys, but clasped the roll passionately to her breast.

"Come, mammy," said the first little fellow, "show us, or we'll plague yer."

Mammy did not pay any attention, but, with an added effort, walked steadily on.

"I say, Mother Grubb, yer don't come out so much now as yer useter 'fore Mag died, do yer?" said another grimy urchin, as he prodded the old woman with a stick.

Mother Grubb did not seem to mind the stick, but the sound of Mag's name worked a change. The tears began to roll down her wrinkled cheeks, as she thought of the little child with her brown eyes and bright smile. Still she pressed on along the dreary road.

Her step was heavier now, and she was getting tired. The youngsters followed her closely, and plied her with all sorts of questions. "When are you going to sell the bonnet, Mammy?" and "How old is the shawl?" Still Mother Grubb pushed wearily on.

"Say, ain't yer goin' show us what yer got in the bundle?" said the curious lad who had spoken first. "Show us what yer got."

Mother Grubb stopped short and looked at her tormentors. The tears were still on her face, and such a face! It was old and homely and wrinkled, but there was such a loving look upon it. The tears seemed to add to the sadness. The boys were abashed. Old Mother Grubb had never cried that way before.

Without a word the old crone slowly untied the bundle. The knots were hard and yielded stiffly to the awkward attempts; but at last they were untied. The youngsters were still eager to see the contents of the curious bundle, and watched every movement of the withered hands. The wrapper came off slowly, but soon it was off. With a look of ineffable sadness the old woman lifted the object to her lips and then held it up to the boys. It was only a piece of wood in the form of a cross, with a few words straggling upon it.

The boys fell back. They had not expected that. They didn't know what to say. In a moment, however, one little fellow spoke, as he took his cap off: "We didn't know it was that Mammy. We won't trouble yer any more. Excuse us, ma'am." The old woman looked at the boys for an instant, and seemed to say yes. Then she slowly wrapped up her cross, and wearily hobbled on.

Her steps grew feebler as she neared the graveyard. Now and then she would stop with a twinge of pain as some obstinate stone got in her way and bruised her tired feet. Her face, however, became brighter the farther she went. The sunshine was kissing her aged cheeks. Slowly she plodded on amongst the gloomy headstones; but those marble slabs held no interest for her.

She pressed on, over turf and fallen leaves, until she came to one lonely grave. The ground crackled under her feet. The grass on the grave was fading and the few flowers on the top were now withered and old. Mother Grubb got down on her hands and knees after a painful effort, and brushed away the rotting leaves. Then she began to dig away the earth at the head of the grave with an old rusty

knife. The ground was getting hard, now that the fall had come, and the threads of frost covered the loam with silver. It was not easy for the old woman to dig. She seemed to grow tired, but she still kept on.

Her hands were trembling as she was finishing the work, and the tears began to come again. With a painful effort she reached for the cross, where it had fallen at her side. She kissed it again, and pressed it to her breast long and tenderly. With another effort she stuck the end into the hole which she had dug.

The cross dropped into place with a slight jar. Old Mother Grubb reached forward to touch it, and then tried to get up. A flush came over her face and a smile lighted her eyes—then she fell heavily downward on the grave. They found her the next day, with that loving look upon her wrinkled face, and the rusty old knife in her bony hand.—J. Walter Smith, in the Harvard Advocate.

YOUNG FOLKS' COLUMN.

Siskiyou Boys.

[Written for the RURAL PRESS by DUANE MORLEY.]

"Brad" and "Chet" Goodwin were mending the old hay rake out on the common before the doors of the big hay and cow barn, preparatory to the hay harvest. The long meadows were to be cut and their weight and bulk of choice provender stored away in the long mows for winter. The old Buckeye mower had been refitted, the sickles ground, and even then it was heard in the not distant field. "Brad" and "Chet" were brothers—Brad the leader, twenty-five past, quiet but amiable, and full of business when business was the order. Chet was younger by five years, though larger, and dark of skin, while his brother Bradford was fair. Chester, or "Chet," could give or take a joke with equal grace, wherever the laugh came in; he was as quick to join in as any, and for any misdeed, any little ebullition of temper, an excuse was always ready upon his lips for the offender.

You will have to look in more valleys than Broad Valley, Siskiyou county, California, to find better boys than the warm-hearted Goodwin boys.

Mr. Goodwin had made a fortune in the gold fields, and by speculation lost it. Now he was old and crippled. Mrs. Goodwin, though aged, was vigorous, superintending and managing, by the help of a daughter, and a Chinaman for all work, the manufacture of the butter. And such butter! One would have to go back to St. Albans for nicer or sweeter. Now everything had not been swept by speculation; there were cattle ranges, meadows and pastures, buildings and orchards, and mountain sides clad with pine, scrub oak, fir and cedar, while in the far distance were the mountain meadows where the wild deer fed and the springs gushing out from the rocks from which they drank. But Brad and Chet were mending the hay rake, tightening the irons and shaping back the stretched out teeth so that they would catch and carry the long, succulent sun-dried grasses. Whatever they had been talking about while working, the subject had dropped; in fact, both were thinking pretty seriously about the haying and the harvest which was to follow; so there was more thought than expression.

Finally Chet spoke up. "Where are we going to get a fellow to help us?"

"Don't know," answered Brad; "perhaps one will come along."

"Come along?" was Chet's rejoinder, "not much, up here where we are, at the head of the valley. If we were down to the 'Fort,' or over at 'Rough and Ready,' likely enough."

"Well," continued Brad, "if no one comes along before then I'll see the Budinger boys to-morrow night and have them look out around the 'Fort' for a good man for us."

While they were yet speaking, a solid-built boy seventeen years of age was rounding the bend of the road and coming into view from behind the clumps of chapparal and manzanita. I wish to add that he was red-headed and very determined in spirit, for he was then looking down and talking to himself about how he would find work somewhere. "Ef Brad and Chet," said he "don't give me work some one else shall." As he looked up he saw the boys, himself yet some distance away. "Ther's the boys now," said he. I'm glad Chet's ther for he'll be on my side." Brad he had seen but once or twice, and never to speak to.

"Hayin'?" he asked, as he came near.

"Yes," Chet answered, "we are just beginning; you hear the old Buckeye singing over there, don't you?"

"Yes," the boy replied, listening, "I du now; he's a rippin' it fer all thet's out, ain't he? It's Jud er mowin' ain't it?"

Chet answered "yes," and turning to Bradford said: "You know Will Bray, don't you Brad?"

"Yes, remember seeing him down to the lumber camp; Crabbe pointed him out to me one day. Glad to see you Bray. Are you going to the Fort?"

"No; nuthin' ter go ter town fer. I come over ter help yer through hayin' ef yer'll give me a chance."

"Why," said Brad with surprise, "I thought you were lumbering.

"Wus, but mills shet down fer want o logs, thet's what they makes ther lumber on, yer know. Father's gone ter Arcata; don't know how he'll find things ther, and mother says es how I must get something ter do, so I can clothe myself and start in with ther school when it takes up fer winter. She says it's er shame fer me ter grow up and know nuthin', an' I guess she's right. Yer can let me hev the work, can't ye?"

Then there was a long pause and not a little awkward, Brad scowling over the thought of taking on a green hand and Chet grinning and idly fingering the wrenches and other tools, while Will was nervously digging his toes into the dirt and unconsciously drawing a sigh. Finally Brad said: "You stay about until after dinner and I'll talk with mother about it." Then instantly, as if a point had been forgotten: "You are no milker are you Bray?"

"W'y yes," said Bray, "milk our ole cow all summer."

Then both Brad and Chet haw hawed long and loud, until Will got red in the face.

"Milking your old cow don't make you a milker! If you could milk your 'string' of cows that would do. 'String,' let me say, is a technical designation of the number usually alloted to a milker."

"I kin try," Will replied to Bradford; "gimme my cows, I'll do 'em somehow."

"Well, stay to dinner," said Brad, "and I will see mother about it."

As the hay rake was about mended, Chet took young Bray off to show him his nice young pigs, and as much to assure him that his chance for a job was a very good one. At noon Mrs. Goodwin's decision was "that the boy should have a chance if he was in real earnest about going to school and would work faithfully." So they came to terms and Will started in.

Will had good qualities, was strong, patient, persevering, able to bear ridicule, and not very hasty in temper, if his hair was red, and while at first he was clumsy, he finally became very apt—the making of a capable workman. He was better in the hay field than in the barn, yet in the latter place he soon equalled the rest. It was his dogged determination which carried him through. Three or four cows was Will's best score at the start, gradually increasing to eight, ten, twelve, and finally, when three months were past and gone, he scored his full "string." It is almost a marvel how he stayed with it, for his fingers were short and thick—little adapted to the work—and the cows, unaccustomed to him, abused him miserably, hooking him and sometimes kicking him clear across the shed floor and against the wall. He never complained, but readjusted stool and bucket, starting in again as though nothing unpleasant had occurred. Chet was always full of fun, poking ridicule at Will for being so slow, and he had a habit of pointing off his jokes with a comic rhyme. At first he used to sing:

"There sits Will by his one little cow,
He'll never get through, 'cause he don't know how."

In the hay field he sang a snatch something like this:

"If William Bray don't pitch that hay,
He'll go away without his pay;
Now William Bray, heed what I say,
Or rue you will that rueful day."

It was simply sport on Chet's part, and Will received it as such. One day the Chinaman fell ill, his skin turning nearly black. He refused food and kept his pallet, save as he went about through the brush gathering herbs, which he stewed, drinking off the liquor in great quantities. While he was off duty Will took his place about the house, helping at the butter and cheese-making. So faithful was he, that Mrs. Goodwin pronounced him a number one helper, and always afterward, whenever Chet would ridicule Will at the table, as he was likely to do, Mrs. Goodwin would defend him, not only with her tongue but with any weapon seizable.

Brad was more reserved than Chet, being older, and having, so to speak, the farm upon his shoulders; but there were times when he would mellow up like a sweet-bough apple in the sun. At such times he would get out his violin and play some of those quaint melodies which so readily catch the ear and hold the heart in thrall.

One evening, as I remember, we sat out on the south porch of the rambling old house, the moon hanging broad and full over a far away mountain gulch, and shedding her silver glory alike on mountain peak and pointed pine. Mrs. Goodwin entertained us with stories of the old days—"the days of forty-nine"—until we could almost see the forms of the departed miners gather in the shadows about us. Mingling in with the old lady's mellow words came the delicately ravishing notes of the violin. Never shall I forget that evening, and Bradford was very considerate. When the harvest was done and the threshing on and finished, that last night he collected the thresher boys into the long room—once a storehouse, a broad fireplace at one end brimmed and burning. He treated them royally to fruits and cakes, played the violin for their entertainment, and drew from each of them a song or a story. Of course it was rude, but it was warm with human-heartedness.

Will stayed right along until the fall plowing was done and the winter grain sown; then, there being a lull in the work, the boys, with one good recruit added, went up into the farther mountains after deer. While they were fitting themselves out for the trip, rigging up the camp tent and the cooking utensils, and, lastly cleaning their guns, Will happened to think he was without one. "Always behind," said Chet, with good natured sarcasm, "never think till the last minute of the thing most important. I'll tell you, Will," he added, "shoot the deer with a tent stake; you will get about as many that way."

"No," was Will's response, "it must be a gun, er no go fer me."

"I'll tell you," chimed in Mrs. Goodwin, who had heard it all and was waiting to know Will's conclusion in the matter, "I've got a good second-hand Henry and a full equipment with it. You can take that, Will, with the understanding that if you shoot a deer with it, that the deer shall be my present to your mother. I know the boys will agree to it."

They all agreed, Will included, and off they went, the others declaring that Will would not shoot one 'cause he was so slow.

To narrate the sport they had would take more space than the printer would be willing to yield, but they had a happy, glorious time, drinking in with the cold spring water the health-giving odors of the cedars and pines. They took turn about at camp-keeping and cooking, and out among the pines were very careful against accidents. Will's every shot went wrong up to the last day before breaking camp, and as that was Will's day to cook, he gave it up that his departure would be without deer—at least of his own shooting; but that last day he made full preparations for a fine supper for the boys upon their return, getting things over the fire in good season. When he started down the slope to the spring for the last bucket of water, it was without his gun, but he returned and got it. Arriving at the spring, and in the act of drawing himself up, bucket of water in hand, his gun leaning against the rocks, a magnificent stag walked leisurely out of the brush into an open place and stood stock still, looking Will calmly in the face. As for Will, he shook and trembled as with an ague, set down his bucket and grasped his gun. Then, realizing that it was his last chance to secure a deer, by a mighty effort he calmed his nerves, slid his gunbarrel across the rocks, took good aim and let drive. Down came the deer prone in his tracks. Will's feelings I will not attempt to analyze nor his actions describe, though I suppose both were of the kind called *capery*. When the boys came in, they were laden with game and in good spirits.

"Takes us to shoot deer," said Chet. "If you could do it, Will, there might be some fun for you; but to be a camp sutler, bah!"

"Take a good long year to practice," said Judson, and then come up next season and show your marksmanship—that's what I say.

Will waited a moment for Brad to put in a word, and he keeping still, blurted out: "Mebbe yer fellers thinks I can't shoot. Ef yer do, jest go down ter ther spring and se what you find in ther open space fifty yards on beyant et."

Brad, seeing that Will meant it, was the first to run down the slope, past the spring and over to the opening where the deer lay. They got it up to the camp, rough dressed it, and Will was so proud of it that next day he slung it on to his saddle and carried it in whole. It was a magnificent prize and it ended the sarcasm lavished on Will Bray. When he handed back the gun to Mrs. Goodwin, he told her "thet he wus proud of et, fer et hed fetched him the biggest deer of the season." Her answer was "that since he liked it so well, she would present it to him, if at the close of his winter schooling he won the first prize for good scholarship." Mrs. Goodwin sold the deer pelt to a peddler for a nice pair of shoes for Mrs. Bray, and took the carcass over to her in her carriage. So ended the hunting expedition.

(*Concluded next week*)

DOMESTIC ECONOMY.

Putting Up Fruit at Home.

STOCKTON, March 5, 1892.

TO THE EDITOR:—I have been requested to give my method of preparing fruits, jellies and pickles, and am aware that every housekeeper has her own way of canning fruits, and perhaps thinks it the best; but a comparison of methods often helps each to discover defects in her own way.

To have good canned fruit, one must have good fruit to can. In preparing fresh fruits, such as peaches, apricots and pears, I make a syrup of the proportion of one coffee cup of sugar to one and one-half cups of water, using a granite pan or kettle. When the syrup reaches the boiling heat, drop in fruit sufficient to fill three cans, so that it may cook evenly and not crowd together. When tender, fill the cans nearly full of the fruit, then fill with the syrup, wipe the groove dry and seal immediately with either rosin and beeswax or fruit sealing-wax which comes prepared for that purpose.

Berries, cherries and plums require more sugar, being more acid. I am aware that many are opposed to the use of cans, but my experience proves that the fruit is firmer, retains the natural flavor better, and keeps longer than when glass jars are used, providing the cans are perfectly air tight. I often find that fresh fruit, after having been kept for a few months, becomes soft, or a portion of the top layer, which seems to permeate the whole jar, destroying the good flavor. For preserves, berries, jams and sweet pickles, the glass jars are always desirable.

In preserving, the old time custom was to use a pound of sugar to a pound of fruit, and it required that amount to keep it; but since the self-sealing jar has superseded the stone, three quarters of a pound of sugar to one of fruit is sufficient, and I think more agreeable to the taste. After boiling and skimming the syrup, drop in the fruit which has been previously weighed, adding a few of the blanched pits (to improve the flavor), and cook until the fruit looks clear. Use one cup of water to each pound of fruit for the syrup. All fruits should be sealed hot, and after the fruit cools, give the tops an occasional turn as they loosen as the cooling glass contracts. When put away, the jars should be wrapped in paper or cloth and kept from the light. If it is desired to keep the fruit whole, fill the jar with it, then cover with warm (not hot) syrup and place in a kettle of water on the back of the stove, where it will cook slowly. Have an extra bottle filled with the fruit with which to refill the jar as the fruit shrinks, and when tender, fill with the boiling syrup and seal at once.

Fruits for jelly, such as berries and currants, require no water, simply mashing and cooking in their own juice, after which, strain through a flannel bag, letting it drip if wanted clear, as squeezing makes it cloudy. The rule is a pound of sugar to a pint of juice, but I find measuring more convenient—cup for cup or bowl for bowl. Before adding sugar to the juice, boil and skim; then add the sugar and boil and skim again. Then boil until it drops in thick drops from the spoon. For quince, apple, crabapple and apricot, I scant the measure of sugar. Fill the glasses, and when cool, put on the top a brandied paper, cover that with another paper sealed to the glass, and keep in a cool, dry place.

My rule for sweet pickles of all kinds (except figs, which require less sugar) is seven pounds of fruit, four of sugar and one quart of good vinegar, whole spices, a little of clove, cinnamon and allspice tied in a cloth, boiling it with the vinegar. When the fruit can be easily pierced with a straw, it is ready to bottle and seal. I have tested receipts for orange and fig marmalade, and also for crystallizing fruits, which any one can have if they wish.

LIZZIE D. HALE.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 19, 1892.

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[NEW THIS ISSUE.]

Irrigating Machinery—Byron Jackson.
Carriages, Harness, Etc.—California Wagon and Carriage Co.
Harrows—Allison, Neff & Co.
Combined Harvesters—Stockton C. H. & A. Works, Stockton.
Flour—Farmers' Union and Milling Co., Stockton.
Bookkeeping Taught—H. K. Starkweather Co.
Cultivator—S. W. Luitwieler, Santa Ana.
Pigs and Sheep—Daniel Shanks, Redwood City.
Trusses—Magnetic Elastic Truss Co.
Windmills, Pumps, Etc.—Woodin & Little.
Analytical Chemists and Assayers—Wade & Wade, Los Angeles.
"Germania"—The J. C. Jens Co.
Catalogue of Seeds, Bulbs, Etc.—Mrs. Theodosia B. Shepherd, Ventura.

☞ *See Advertising Columns.*

The Week.

The season has righted itself on the rain record by the week's downpours, and in most parts of the State all that remains is to watch with confidence for the spring showers which will make the crop. It has been a glorious winter, barring the drop in temperature which hurt the oranges and gave a sorry look to some ornamentals of the tender kinds. It has been a fine winter for work, and very few days, indeed, have been unsuitable for outdoor occupations. The great area of grain and the large plantations of trees and vines can now proceed under good growing conditions to reward the industrious planter. The outlook is as fine as the State ever enjoyed at this season. There has been no waste from flood, nor likelihood of any. Nearly all lands have been available, and with favorable conditions henceforth, will yield their quota to the general prosperity.

Local politics are moving. The Republican State Convention will meet in Stockton, on May 3rd. As the coming winter will find a new legislature at the State capital, the preparations for the fall elections should receive careful attention from all citizens.

Traffic and Tariff.

We are glad that the Traffic Association of the San Francisco merchants is stirring up the useless railway commissioners. The actual game is hardly worth beating the bush for perhaps, but the game, judged by the legal description, should be big as an elephant. If a thing which was intended to be an elephant is only a mouse, it is some satisfaction to drive it out and have a look at it. This seems to be about what the Traffic Association is doing with the railway commissioners.

The present unpleasantness has been gradually brewing, but it began to foam when the manager of the Traffic Association forced upon the railway commissioners a carefully prepared statement, showing that California rates for moving wheat by rail are much higher than those prevailing in other States, notably in Kansas, where they have a set of railway commissioners who really seem to believe that it is their duty to do something. Although this statement would be enough to create in any mind an assurance that California rates for wheat ought to be investigated, the commissioners ruled that unless the document should be presented as a complaint, they were not called upon to take any notice of it. The reply of the manager of the Traffic Association was to this effect:

I don't agree with you that your duties are wholly judicial. Upon the proper information the board should, upon its own motion, take up a matter of such importance to the State and adjust it. On this basis I wrote that communication. I don't believe that the people of California should be obliged to file complaints against the carriers when the facts in the case are pretty evident to every one. I think that the charges are excessive and discriminative. It occurs to me that under the circumstances your board should be prosecutors rather than judges. Section 22 of Article XII of the Constitution is very plain. It states: "Said commissioners shall have the power *and it shall be their duty* to establish rates of charges for the transportation of passengers and freight," etc. I find nothing therein which says they shall wait for complaints.

The position taken by the manager of the traffic association is that held by the people of the State. If the commission is not for the purpose of doing some real work and of actually finding out whether railway rates in this State are fair or extortionate, then according to popular notion it is for no purpose under the sun. Producers know that the life is being ground out of them by transportation costs, but they do not know what the carriage can actually be done for and still give fair interest and profits to the railway owners. And how can the commissioners know it either without putting forth a little brain power and securing this knowledge on subjects in which they are supposed to be experts and to command all sources of information. The idea that they are to sit as a court and hear the lamentations of the producers and the specious pleas of the railway managers and then balance one off against the other, without knowing from their own study of the question where the right lies, is simply a shrewd scheme of theirs to determine how not to do anything.

It is a sublime spectacle indeed, a body of men endowed with great powers and ordained for high purposes fairly wearying themselves in the effor to kill time and to fight off any one who brings a suggestion which might lead them to do a stroke of work. On some points they are alert and incisive. If there come a complaint that a sidetrack somewhere is a hundred feet too far north or south, they fly in a body by special car and sit on that sidetrack till the rails bend beneath them, and then they rise in their might and command a change of the sidetrack to a point whose distance is described in feet and decimal fractions of a foot—but what it should cost to move produce over those rails they shudder to inquire.

How long is this State to have the expensive shadow of railway regulation which it now has? Is there not some way in which men can be placed upon that Board who will study the question of transportation and place before us the measure of the imposition placed upon us? It is not satisfactory to producers to be continually in the dark as to what certain service should cost and therefore be forced to cry in general terms for some relief they know not what. One or two bright men, backed on the Board by others with some backbone, honesty and energy, could give California a reputation for fair traffic, while now her name is notorious for the reverse. It seems almost a waste of time to mention it, or even to hope for it, and yet occasionally the disgrace of the State in this matter of railway regulation, which has endured ever since the creation of the Commission, comes to mind with such force that it compels comment.

Grain Bags.

Grain bags are attracting more attention and earlier in the season than for several years past. This is largely due to grain crop prospects in this State, which are of an exceptionally favorable character for a large outturn to the acre, creating fears that the supply available in time for next harvest will not meet our requirements. While this condition obtains at this writing, yet the fact must not be lost sight of that up north the acreage seeded to grain in both Oregon and Washington shows a falling off when compared with last year's acreage, and consequently it is quite reasonable to conclude that the requirements from those two States will be less this year, which is likely to partially offset any increase in the demand in this State. But, independent of this, it now looks as if we will not suffer very materially from a scarcity of bags, even though we have a large crop of cereals. This opinion is grounded on experience that with improved telegraphic and water communication with India, supplies are made available within a short period of time, and therefore any prospective shortage just before harvest can be made good before harvest work is over. This, of course, prevents speculators running successful corners. The San Quentin jute mill, when not run in the interest of dealers, is another important factor in the prevention of corners. The production of the mill this season is placed at 1,500,000 bags, which will be placed to farmers only as indicated by the action of the State Board of Prison Directors at their meeting held on March 12th. At this meeting the follow was read and adopted:

The Warden is hereby directed to sell to *bona fide* farmers only, growers of wheat, for their own use solely, 250,000 bags upon the following conditions: The price shall be 7⅞ cents per bag, and they shall be sold in lots of not more than 10,000 to each farmer; provided, that when the farmer files his order with the Warden it shall be accompanied by a certificate, blanks for which shall be provided by the Warden, from the postmaster of the section in which the farmer resides, setting forth the fact that the applicant is a farmer and a grower of wheat and is known as such to said postmaster. Said order shall be accompanied by a certified check for an amount equal to one cent per bag. Said bags shall be held by the Warden, at the farmer's risk, for a period not longer than June next, when the farmer shall take delivery of the bags and pay the balance of the price for them.

Ticks in the Ear.

About ten years ago we received from a RURAL subscriber in Tulare county specimens of cattle ticks which had been found in the ear of a horse which had given signs of loco poisoning, and at the time it was considered conclusive that the loco symptoms were due to the colony of ticks which had lodged in the animal's ear and by irritation gave rise to such distress that the animal acted as though "crazy" with loco.

Last summer we received from Monterey county another colony of ticks taken from the ear of a horse supposed to be "locoed," the ticks being found after the death of the animal, in a rude post mortem examination of the head made by the owner.

Still later there came to our knowledge the facts set forth in the paper which we publish below. The writer is Dr. H. N. Miner of Berkeley and the paper was presented with the specimens referred to at the meeting of the Alameda County Medical Society last week. The communication in full is as follows:

AN IXODES BOVIS IN THE HUMAN EAR.

While visiting in the family of a friend about Feb. 1st of the present year, my attention was called to the ear of a girl five years of age, in which there was supposed to be some foreign substance. There was no pain, no sign of inflamation, nor discharge. The child, by moving uneasily on her pillow and frequently putting her hand to the ear, had given signs of discomfort for 18 months previous to my visit; otherwise she had been well and vigorous. At the time the ear symptoms began, she lived in Arizona and was much of the time out of doors, frequently going to sleep and remaining in a hammock until 11 o'clock at night. She had been in the family where I saw her since September, 1890, during which time there had been more or less complaint about the ear. I straightened the meatus and observed a grayish-white disk projecting from the inner third of the canal. As the child was not suffering, and having no suitable instruments with me, I asked that she be brought to me the following day, and I could remove what I believed to be a button lodged in the inner third of the meatus. At breakfast the next morning the child in rubbing the ear dislodged the animal, which I exhibit, and it fell upon the table. I examined the meatus and *membranum tympani* carefully, and could find nothing pathological except the excessive dryness of the entire canal.

The animal belongs to the order *ixodidæ* of the class *arachnidæ* and is of the genus *ixodes bovis* or common cattle tick. The ordinary life history is about 2½ months. It is parasitic and lives upon the blood of the host by imbedding its beak in the skin. The specimen which I exhibit is a female in the adult stage, just before the egg-laying period. It is filled with eggs. It is the habit of the female to let go its hold upon its host during the ovipositing stage, when it shrivels up and dies. It has a digestive organ which may be likened to a liver when the blood is digested and stored.

I also show specimens of the same order in various stages of development. These were taken from the ear of a horse, supposed to have died from eating the loco weed, in June, 1891. A female who deposited her eggs recently, is dead. Two adults are still living. They have been kept in a tin box, without food. They moult twice in their life history, and two testes are shown.

In *Psyche*, Feb., 1891, Dr. H. A. Hagan reports having removed from the ear of a Texas cattleman, an *ixodes bovis* which had been in the ear from January till July and was living eight months later.

The case is interesting for several reasons: 1. It is rare for a living animal to remain in the external meatus of the human ear for 18 months. 2. That such a foreign substance should excite so little trouble to the patient; and, 3, that the ear is now in a normal condition.

I am indebted to Mr. Woodworth, instructor in entomology at the State University, for making the classification.

H. N. MINER.

This statement of facts is of interest to all residents of the coast where the insect species occurs, especially to those who keep stock. The question arises, in view of Dr. Miner's account of the comparatively small injury and discomfort occasioned by the long presence of this insect in the ear of the child, whether the ticks found in the ears of the horses really occasioned the distress accredited to them or whether the animals were really "locoed" and "ticked" as well. Further observation will be necessary to determine this point.

It seems to us remarkable that the tenancy of the ear by such a formidable insect as an adult tick should not occasion more disturbance than was found. The insect is an exceptionally ugly one, as large as a large coffee-grain or a medium-sized bean, and for its growth would seem to require not a little of the blood of its host.

The fact that the human species is liable to serve as host for these pests should be widely known, and ear distresses should be referred to the local physician for early examination, lest the cause be of the nature described.

ADVICES from Phœnix state that articles of incorporation have been filed for the Arizona Land and Irrigation Co. The company proposes to construct an immense dam at Pasten's Butte, on the Gila river and build 240 miles of canals,

The State Press.

Porterville *Enterprise:* "This is an age of combines and you need not expect competing roads, and the people must avail themselves of the advantage that Nature offers and engage in construction of canals throughout the valley for the purpose of having cheaper transportation."

Sacramento *Bee:* "Senator Vest says that Blaine stole reciprocity from the Democrats. A party that has only one good thing in its constitution then allows it to be stolen, and makes no kick about the theft for three years, hasn't sense enough to run a chicken coop, let alone a great nation."

San Leandro *Standard:* "There is a growing disposition on the part of newspaper writers to append their names to articles which have usually been published without signatures in the past. This is proper. It gives the public a chance to learn the identity of a good many gumdasted idiots."

Grass Valley *Union:* "J. K. Luttrell, one of the mining representatives sent to Washington, says that the bankers are interesting themselves in favor of the measure to restore hydraulic mining, as they think that an additional gold product of $10,000,000 per annum will be a solution of the silver question."

Central Californian: "The Traffic Association seems to be asleep to those who are for drastic measures in dealing with the railroad corporations. The people must not lose sight of the fact that this is to be a battle between giants, and that neither side can afford to commence hostilities until thoroughly 'fit,' to borrow a pugilistic expression. The people cannot afford to lose."

Otay *Press:* "Reciprocity has been in effect in Brazil a little more than nine months, and in that time our exports show an increase of a million and a half dollars over the corresponding period of last year. In Cuba and Porto Rico we have had reciprocity for but four months, yet in that time our export trade has increased more than a quarter-million over the corresponding period last year."

Central Californian: "There should be a determined effort to wrest the gardening business of this State from Chinese control. There are thousands of competent white gardeners in this country and they should be encouraged to engage in the business in California. The business is one of profit when properly conducted, and if it were in the hands of white citizens our State would be far better off."

Inyo *Independent:* "The public do not exactly see why they should be charged rates of fare and freight to enable the owners of one system of roads to accumulate private fortunes aggregating $100,000,000. They do not see why the cost of running a political campaign should be borne by patrons of a road. Neither have these patrons been able to see the justice of being compelled to pay money for the purchase of legislative bodies and courts. These are matters upon which Mr. Stanford, or some of the men who have charge of his political conscience, can throw considerable light."

Los Angeles *Express:* "The presence of thousands of Eastern visitors in Southern California indicates that this charming land has lost none of its attractiveness to the people of less favored regions. Travel to Southern California has never been a mere 'fad.' It is something more than a 'fashion' that brings multitudes here from the frozen East. They come seeking a respite from the ills of a harsh and rigorous climate, and to enjoy the charm of fresh verdure and luxuriance of bloom at a season when the mantle of winter still rests upon the Atlantic Slope. The popularity of this region will never decline. On the contrary, it is destined to increase. In time to come, Southern California will be visited by tens of thousands of people each winter; and, as at present, many who view the land will become permanent residents. The advantages of our climate are real and not fanciful, and they must always remain as fully appreciated as they now are."

Sulphuring Fruit.

Los Gatos, Cal., March 7, 1892.

To the Editor:—In reply to University Bulletin 96., I would like to say a few words.

That sulphurous gas does drive off the volatile oils I do not pretend to deny, when the oil cells have been broken open by fermentation; but unless the oil cells have been bursted by decay, I claim that the volatile oils cannot be driven off by the amount of heat that is developed by the burning sulphur, except those cells that have been bursted by handling. I would also remark that I have doubts whether the oil passes from one cell to another, but I know that the flavor remains in the fruit, and I cannot see why we should imagine otherwise. In animals, when oil cells are broken, the oil runs out, but only from from those that are broken.

We must have light colored fruit to sell for good prices, and this can be obtained no other way than by bleaching, and if we use wooden trays there can be no harm done (unless we sublime sulphur upon our fruit) by bleaching 20 or 30 minutes in a strong smudge. If we wish to be very particular, we can wash our smudge by running our sulphurous gas through a tube or vessel containing water, and thus avoid all danger of sublimed sulphur. Then let our fruit be well dried and it will be free from taste of sulphur. The pitter can place his fruit directly upon the tray by this method and thus avoid twice handling, as he must do if bisulphide of soda is used.

This bleaching, from a grower's, dryer's, shipper's, seller's and consumer's standpoint, is not a "fad," but has come to stay. It is like Topsey—it has "just growed"—and is deeply rooted, so that it cannot be got rid of. The sanitary conditions are all right, just so long as we do not use zinc trays.

Bleaching cannot make a fourth grade fruit into a first; the grade remains just the same, and it does not require an expert to detect it. This has been demonstrated well in Santa Clara county this year, and, I think, all over the State. If you have small but good fruit, the trade wishes it bleached; if it is medium, the trade wishes it bleached; if it is extra, the trade wishes it bleached, and always without dark pieces mixed in.

The old world legally prohibited the bleaching of fruit because they found sulphate of zinc in the fruit. Now, if we use bisulphide of soda, we will have to avoid zinc trays, or we will have sulphate of soda or glauber's salts as well as sulphate of zinc. If we use wooden trays we will have glauber's salts, and our fruit sent to the old country will be found to contain sulphates, or have sulphuric acid in it; but if the sulphurous gas is used, and we keep our trays far enough from the burning sulphur, or wash the fumes, we will have no sulphur sublimed upon the fruit, and we know that the sulphurous gas will leave the fruit just as soon as the bulk of the uncombined water is removed, or just as soon as the fruit is dry enough to rattle on the wooden trays.

But should there be a small quantity of the gas remain in the fruit, and it is sent to England or the Eastern States, parents who use this fruit will not be under the necessity of feeding their children "treacle and sulphur." Nor need they fear cholera or malaria from eating California dried fruit.

The demand is increasing very rapidly, but our output is also increasing. In the year 1890 we shipped six cars of fruit; 1891, 21 cars; but I think the market will be bare of good dried fruit by the time we get ready to ship again. J. J. Shaner.

Comments by Prof. Hilgard.

State University, Berkeley, March 14.

To the Editor:—In commenting on the above remarks of Dr. Shaner, I state, first, that inasmuch as the flavor of our commercial fruit is not contained in separate "oil cells" at all, but is dissolved in the juice and circulates with it, his argument on that score falls to the ground. Whatever is imparted to the outside of the fruit will in due course of time be communicated to the whole, and vice versa, according to the well-known laws of "liquid diffusion." Hence in fruit which is oversulphured, the inside is no better than the outside.

Dr. S. is unnecessarily emphatic in his statement that bleached fruit brings a higher price than unbleached, as though I had asserted the contrary, or was not painfully aware of the fact, which appears on the face of every market report. It is precisely for this reason, and because of the consequent tendency of producers to sulphur more and more heavily and recklessly, that I think it high time to call a halt.

Dr. Shaner's statement that sulphuring in fruit-drying was prohibited in the Old World on account of the use of zinc ("galvanized") trays, is hardly consistent with the fact that the zinc trays themselves are also prohibited there on sanitary grounds. The acid of the fruit itself attacks the metal so energetically that they are sufficiently objectionable without sulphurous gas. But the sanitary conditions are not right, even with wooden trays, when fruit remains exposed to the sulphurous gas for an indefinite time, at the pleasure or convenience of an unskilled attendant.

Dr. Shaner, in discussing the use of sulphite or bisulphite of soda, forgets that I suggest it merely as a smaller evil (on account of the perfectly definite strength that can be given to the solution) than the process of sulphuring as conducted at present, placing the flavor of fruit at the mercy of a common laborer, who is not in the least interested in its quality. I have distinctly stated in my bulletin that it is the abuse, not the strictly moderate use of the sulphuring process, that is so objectionable, and utterly destroys the distinctive high quality of our fruit as compared with that of northern climates. He also, though evidently something of a chemist, forgets that if the sulph*ite* of soda is converted into sulph*ate* (Glauber's salt), by the action of the air, so much more is the sulphur*ous* acid converted into sulphur*ic* acid, which does *not* go off by drying, as he asserts, but stays and is easily found in the fruit, as every analysis shows; even to an extent which will make the consumer's teeth stand on edge. Actual analytically ascertained facts cannot thus be set aside by mere assertion; and while, when sulphuring is done only to the extent strictly required, the amount of sulphuric acid introduced is hardly perceptible and not likely to be injurious, in "well-bleached" fruit I have found it to be present, in the free state, to the extent of nearly one-third of one per cent (see report of the Station for 1890, page 132). The only persons not likely to object to such a state of things are the dentists.

As to the Glauber's salt likely to be eaten with a pound of fruit treated as I have suggested, it would amount to considerably less than Dr. Shaner takes in his daily drinking water, in his locality, so that the nauseous taste alluded to in his former article has evidently not been perceived by his palate. In any case, between the same amount of sulphuric acid in the free state, and in combination with soda, few persons would have a doubt in their choice.

But I repeat, I am nowise anxious to have the sulphite, or any other chemical agent, used in fruit-drying. With the present perfected appliances, fruit can be dried with so fair a color that no sensible person will object to it, particularly if it insures the possession of a fine flavor. If, unfortunately, it is true that at present most persons *do* prefer the substance to the shadow, and are willing to pay double price for the doctored article, so much the more need is there that they should be better informed; and I for my part will continue to do my best to induce fruit driers to be chary of, and careful with, sulphuring, and to convince consumers that their preference for bleached fruit is as irrational as is that of a certain part of humanity for painted cheeks or enameled countenances. For aught we know, these also may have "come to stay;" but we do not on that account cease to denounce them as fads or evils, the disappearance of which all would be glad to see.

E. W. Hilgard.

A California Idea Abroad.—It is announced from Washington that Postmaster-General Wanamaker is considering the adoption of the "ten block system" of numbering country houses in connection with his plan for rural free mail delivery. This idea was originated by A. L. Bancroft of this city for use in Contra Costa county, and was first described in detail in the Rural of June 21, 1890. We believe the system will be of inestimable value in designating rural localities definitely, and we are glad Mr. Wanamaker is looking into it.

The Mustard Crop.—We would like a few letters on the subject of mustard-growing in California. Will some readers who grow mustard, kindly write us of the kinds of soil they choose, their methods of culture, the kinds of seed used, the average product, the total amount grown, etc.? We shall be glad to publish such information.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

California Land-Holdings.

Presentation of Most Interesting and Important Facts.

Some time since, Mr. W. H. Mills of San Francisco read before the "Chit Chat Club," a local society of thoughtful people, a paper on land-holdings in California. From this paper we make the following extract, showing how the evil of large land-holdings is increasing in the Sacramento valley and elsewhere, and how it is affecting the country. Next week we shall give Mr. Mills' concluding remarks, in which he suggests certain radical legislative measures for the protection of the State against this growing evil:

The four principal counties of the Sacramento valley are Yolo, Colusa, Butte and Tehama. They embrace an area of 8547 square miles, or 5,500,000 acres. This area comprises the broad agricultural districts of the Sacramento valley. The other counties within that geographical designation border upon the bays, and contain large commercial populations, as, for instance, Sacramento county itself. I have therefore left them out of the consideration, not because a different tendency in the direction of aggregating land has been there manifested, but because they do not afford a favorable observation as to the effect upon a purely rural community.

In the counties named there were, in 1880, 71 holders having 5000 acres and upward, and the aggregate of these 71 holdings was 797,761 acres. In 1885 there were 85 holders having 5000 acres and upward, and the aggregate of their holdings was 1,130,484 acres. In 1890, there were 106 holders having 5000 acres and upward, and the aggregate was 1,479,104 acres. The increase in the aggregate of the individual holdings of 5000 acres and upward was 700,000 acres. Thus there had fallen into this larger class 700,000 additional acres, and the class itself had increased from 71 to 106.

When the observation is taken by selecting the 50 largest holders in each of the counties, similar results are obtained, the most remarkable relating to Tehama county. In 1880, the 50 largest holders in that county held 264,435 acres. In 1885, they held 546,690 acres; in 1890, they held 687,248 acres. Aggregating the 50 in each county, that is to say, the 200 largest holders in the four counties, and the aggregate in 1880 was 1,162,635 acres, in 1885 it was 1,499,217 acres, and in 1890 it was 1,781,318 acres. Witness the result of a comparison of the largest holdings: In 1880 the largest holding was 31,167 acres; in 1885 the largest holding was 72,993 acres; and in 1890 it was 109,000 acres. The suggestion which obtrudes itself is: Was the increase of aggregates already given due to the increase of the very largest holdings? The answer is in the negative, as the following table will show:

	1880. Acres.	1885. Acres.	1890 Acres.
Twentieth largest holder	4,602	7,924	8,482
Fortieth largest holder	2,316	4,500	4,190
Sixtieth largest holder	1,413	2,742	2,932
Eightieth largest holder	915	1 920	2 040
One hundredth largest holder	640	1,446	1,521

Thus following down the list, the one hundredth largest holder had increased his holding nearly 300 per cent, while the twentieth largest holder had increased his holding but 90 per cent.

The effect of this upon the population was very startling. Tehama county had a population in 1880 of 9301. The natural gain in ten years should have been 1860. The actual gain, as shown by a comparison of the census reports of 1880 and 1890, was 615, of which Red Bluff gained 502 and the town of Vina 139. The actual loss of population in the county was 1245, notwithstanding the apparent gain of 615. In the townships of Paskenta and Tehama, running from the Sacramento river across the broadest area of agricultural land in the county, the actual loss as shown by the census was 1790.

To pursue the statistical facts, however, let us present an aggregate of the population in the four counties as shown by the census of 1880 and that of 1890. The four distinctively Sacramento valley counties had in 1880 a population of 52,852; in 1890 the population was 55,179. The natural increase of 52,852 in ten years would be 10,583; the increase shown by the census was 3049. There was, therefore, in the rural districts of the Sacramento valley, the fairest and most fertile valley of the State of California, an actual loss of population equal to 7534.

These facts do not relate to a remote country. The details of the operation are under our immediate observation. The process and the reason for it are not far to seek. In the first instance, large land-holding superinduces absenteeism. The owner of 10,000 acres of land derives an income which affords the opportunity for the gratification of the higher wants of his nature. The country which his large holding has made desolate of churches, schoolhouses and society, affords no opportunity for the gratification of wants called into being by opportunity. Hence, the family resides in the city. The small holder on the margin of the greater has no neighbors in one direction except the few very undesirable farm laborers, comprising chiefly tramps and Chinamen, and his growing family demands at his hands educational opportunities and higher social enjoyment. He declares that he is ready to sell rather than submit to this isolation. With each sale the unfavorable condition is intensified, and thus the land becomes cheaper as the social condition attending its ownership becomes more undesirable. During the last year, a citizen of Butte named John Crouch purchased of one Bowers 2100 acres of land adjoining the large ownership of Mr. Crouch. Upon the land purchased there stood a beautiful brick residence, which had cost Bowers $15,000. He was a social being, entertaining the belief that some embellishment might attend life in the country; that some of the exaltations of civilization might be enjoyed even in the rural district. But his neighbors were few, and he sold to his nearest neighbor and largest holder. Immediately upon obtaining possession of the land, John Crouch

destroyed that brick house, because the land was assessed at an additional sum in consequence of the improvement. He used some of the doors and windows for the construction of a shanty in which to entertain the men who would cultivate that broad area to wheat, and which the assessor would not value very high as improvements.

In Paskenta township there stands the remains of 12 houses and barns, untenanted because the owners of the land surrounding them have yielded to the inevitable, sold out and left the country. They fell victims to the extension of land monopoly in this State, one at a time. Some yielded reluctantly, for they were content with their homes. But these homes had become hermitages, and their families were being deprived of all social enjoyments, religious privileges and educational advantages.

In the Colusa *Sun* of December 15, 1891, is the following:

That portion of the county on the east side of the river, with Butte county as the business center, is unsurpassed in fertility by any spot on earth. Land is intrinsically worth from $60 to $75 an acre for the production of wheat alone. The large land owner is its only drawback.

Nearly the whole of the river front land, and for a distance of five miles back on the west side of the river, belongs to the Glenn estate, to the Chambers Bros. of St. Louis, and other large land holders. We believe that there is not a single child of school age belonging to the land on this entire district of 255 square miles. The soil is unsurpassed.

In a small tenement, of which mention was made in a recent publication, in the City of New York, there were 56 families, with 68 children under two years of age.

As has already been noted, the entire gain in the four counties, as shown by the census, was 3049. Of these, five towns in Colusa county gained 1116, one town in Yolo county gained 918, two towns in Tehama county gained 641, and two towns in Butte county gained 810. Here, then, in five or six towns of the counties there is a gain of 336 in excess of the entire gain of the district; and to this must be added the gain of villages not noted. The effect of this upon the commercial and industrial activities of the State is very far-reaching. When a single individual owns 100,000 acres, he enjoys the source of wealth derived from that vast area. At the end of a year, when the product of a region so vast is distributed back to the producer, the owner receives practically all, for what is paid to the farm laborer barely affords to him a subsistence. There is a single family capable of gratifying the higher desires of civilized life from the cultivation of land. In the entire Sacramento valley the 100 largest holdings embrace 1,654,000 acres of land. Ninety per cent of it, at least, is capable of supporting a family on each 100 acres, or employing the industry of a single agricultural cultivator, with the assistance of his family, on each 50 acres. Take the larger figure, however, and 100 holders in the Sacramento valley have 1654 farms, of 100 acres each. The proprietorship of 100 acres of fertile land under favoring climatic possibilities, would give to these 100 holdings, 1654 families. The urban population demanded by these would be more than double that number. Thus, 3200 families are displaced in the Sacramento valley by the holdings of 100 men. But, excluding these 100 largest holders in the valley, the next 200 below them own a still greater quantity. Thus, 300 men usurp the opportunity for subsistence of at least 6400 families. They displace civilization; they force the population into the cities, or offer the choice of emigration. Traveling through the region in question, the observer is struck with the great disparity between its fertile attractiveness and the infrequency of human habitation.

The influence of all this on the agricultural laborer is most degrading. He does not become a landed proprietor; that hope is denied to him forever. His usefulness in grain-growing, even, is being superceded by harvesting machinery. Breadstuffs are produced with corresponding cheapness; but this does not compensate for that broad displacement of civilization, and the relegation of the fairest portion of our beautiful State to its primitive solitude. If the barons of the Sacramento valley resided upon their holdings, there would be some compensation. If they erected beautiful dwellings and surrounded them with parks, there would be some relief from the monotony of present desolation. Wherever the soil is monopolized, the result is the same. In his admirable, recently published work, entitled "Siberia and the Exile System," George Kennan furnishes a description of the fertile region of Southern Siberia, which will be recognized as an exact reproduction of the Sacramento valley:

Almost the first peculiarity of a West Siberian landscape that strikes a traveler from America is the complete absence of fences and farmhouses. The cultivated land of the peasants is regularly laid out, but the fields are not inclosed, and one may ride for two or three hours at a time through a fertile and highly cultivated region without seeing a single fence, farmhouse or detached building. The absence of fences is due to the Siberian practice of inclosing the cattle in the common pasture which surrounds the village, instead of fencing the fields that lie outside. The absence of farmhouses is explained by the fact that the Siberian peasant does not own the land that he cultivates, and therefore has no inducement to build upon it. With a very few exceptions, all of the land in Siberia belongs to the Crown. The village communes enjoy the usufruct of it, but they have no legal title, and cannot dispose of it, nor reduce it to individual ownership. All that they have power to do is to divide it among their members by periodical allotments, and to give to each head of a family a sort of tenancy-at-will. Every time there is a new allotment the several tracts of arable land held under the crown by the commune may change tenants; so that if an individual should build a house or barn upon the tract of which he was the temporary occupant, he might, and probably would, be forced, sooner or later, to abandon it. The result of this system of land tenure, and this organization of society, is to aggregate the whole population in villages, and to leave all of the intervening land unsettled. In the United States such a farming region as that between the Urals and Tiumen would be dotted with houses, granaries and barns; and it seemed very strange to ride, as we rode, for more than 80 miles, through a country that was everywhere more or less cultivated, without seeing a single building of any kind outside of the villages.

Mr. Kennan's declaration that in the United States such a farming region would be dotted with farmhouses and granaries, relates to a past, not a present and coming condition. The tendency everywhere is to large holdings, and it makes no difference whether the monopolist is an individual land holder, a corporation or a government, the effect is the same. The land ceases to be the home of men and becomes simply a fertile waste—a waste where no human habitations exist, whatever its intrinsic fertility may be.

The question will naturally be asked whether the tendency observed in the Sacramento valley is common throughout the State. My observation has extended to most of the counties of California. Let us take for illustration one of the most progressive counties in the San Joaquin valley, the county of Fresno. In 1875 there were 44 holdings of 5000 acres and upward, aggregating 847,379 acres. In 1880 there were 50 holdings of 5000 acres and upward, aggregating 995,577 acres. In 1885 there were 48 holdings of 5000 acres and upward, and they aggregated 1,061,955 acres. In 1890 there were 41 holdings of 5000 acres and upward, and the aggregate was 943,557 acres. The largest land-holding in this county had increased from 169,464 acres in 1875 to 239,486 acres in 1890. Here a single firm of land holders had added 70,000 acres of land to their already large holding. The same firm held in Merced county in 1880, 200,386 acres, and in 1890, 223,232 acres. Thus, in Fresno and Merced counties, this single firm now own 462,718 acres.

The student of the statistics will be struck with one fact, everywhere apparent, to-wit: the land held by the estates is not divided up. There is but one single instance in the Sacramento valley where the amount of land set down opposite the holder decreases when the holding passes to the ownership of an estate; that instance relates to the holding of Hugh J. Glenn. In 1880, Mr. Glenn being alive, he appeared on the assessment roll as the owner of 58,000 acres of land. In 1890 the estate of Hugh J. Glenn appears for 42,000 acres. This decrease was wholly due to the fact that Mr. Glenn died leaving his estate heavily encumbered by debt and a portion had to be sold. There has been no sale of any land since the debts of the estate have been adjusted. In other instances, where the individual appeared first on the assessment roll and subsequently the same land is assessed to his estate, the holdings increased in the same ratio with private holdings. The instances of this are frequent. A large holding already cited, relating to Fresno, will serve as an illustration. The holding is that of Miller & Lux. In 1875, Miller & Lux appeared on the assessment roll for 169,464 acres. This holding rises steadily, notwithstanding the death of one of the partners, until upon the assessment roll of last year the firm of Miller & Lux appears for 239,486 acres. Like instances of this are found in Sacramento, Butte, Yolo, Colusa and other counties of the State.

EXPANSIBILITY OF THE ATMOSPHERE.—A cubic inch of air taken 4000 miles above the earth's surface would expand sufficiently to fill a sphere 2,000,000,000 miles in diameter. By the same law, if a well could be dug to the depth of 46 miles, the density of the air at the bottom would be as great as that of quicksilver.

The Southern Citrus Fair.

[Written for the RURAL PRESS by CLARA S. BROWN.]

(*Concluded from last week.*)

TULARE COUNTY,

Through the efforts of the Porterville Horticultural Society, has furnished proof of the capabilities of Central California for citrus culture. Her exhibit last year, though small, was so choice that it was a revelation to people who had an idea that the citrus belt was confined to the southern counties, and the favorable impression made at that time is renewed by the showing made this year. The seedling oranges grown by A. Miles were pronounced superior to any others in that class, among 30 entries. W. J. Prettyman shows St. Michael and Mediterranean Sweet oranges and Eureka lemons. The Lewis Creek Ranch sends seedling oranges and Eureka lemons, and Sam'l. Pogue & Son, Eureka and Lisbon lemons.

ORANGE COUNTY

Fittingly chose a mammoth orange for its design, and has mounted it handsomely above the large, square table alloted to this section. The amount of fruit entered is not large, but is of good quality. The town of Orange shows Washington Navel and seedling oranges, loquats and dried figs, entered by C. P. Taft and H. G. Hill. Tustin exhibits Washington Navel and seedling oranges, grown by W. H. Phillips, A. Guy Smith, H. K. Snow and C. F. Bennett. Mr. Snow's crop of seedlings from 22 acres sold last year for $7500, and this year realized $12,500. Mr. Gilman of Fullerton sent some extra fine St. Michael oranges, which experts say would have been awarded a premium if they had been properly entered. F. H. Daniels of Fullerton shows seedling oranges of high color and large size, also immense English walnuts. Geo. W. Ford of Santa Ana has an exhibit of improved softshell walnuts, and Ray Billingsley sends Washington Navels and Mediterranean Sweet oranges. A noteworthy display is that made by J. C. Joplin, who lives on a small ranch in Bell canyon, 25 miles from a town. He shows seedling and Washington Navel oranges, Eureka lemons, limes, orange jelly and marmalade, orange cider, preserved oranges and Japanese persimmons.

LOS ANGELES COUNTY'S EXHIBIT

Is mostly on the main floor. Duarte has a large table next that of Orange county and part of another adjoining. The latter is occupied by A. C. Thomson with 30 boxes of choice Washington navels, which were awarded the premium for best individual display of that variety. The next largest exhibitor is Ernest Watson, who shows a lot of seedlings, also Valencia late, St. Michaels and Navel oranges and lemons. All the fruit on the main table is entered as a locality display, and not in competition for individual premiums. It embraces the well known varieties and was grown by Walker H. Wrenn, H. A. Buttolple, John Scott, W. H. Young, Renneth Carter, J. L. Bradbury, Thos. Glenney, W. Chippendale, Jos. Fowler and Church & Arthur. Geo. H. Merriell shows the prize orange wine. F. M. Douglas has honorable mention for his grape fruit.

Pasadena, whose name signifies "crown of the valley," has a design in the shape of an orange covered crown, 20 feet high and 13 feet in diameter, supported by eight columns, under which is a conical pile of oranges and lemons. This exhibit is by the locality as a whole, principally from the orchards of Butler Talmadge, J. H. Baker, P. M. Green, Mrs. Suesserot, M. H. Waite and Henry Fessler, comprising the usual varieties. Pasadena suffered from an extraordinarily high wind in December, which injured so much of the citrus fruit that no effort toward premiums was made by individuals.

San Gabriel exhibits navel and seedling oranges on a part of the Duarte table. They were sent in by J. H. F. Jarchow, Geo. S. Patton, J. K. Dobbins and H. D. McDonald.

SAN DIEGO COUNTY.

Beginning at the stairs leading to the west gallery, and continuing around the pavilion to the San Diego exhibit, next the wall, a number of small exhibits are seen. First come the coast towns of Los Angeles county with a determination to show that oranges and lemons can be cultivated with some success near the ocean.

Long Beach exhibits Homasassa, Hart's Tardiff and Navel oranges, also lemons from the grounds of F. G. Butler and J. P. Colver. Ballona is represented by Harry Lowe, who sends seedling and paper-rind St. Michael oranges.

The Palms shows lemons and oranges, among them the Bergamot lemon, referred to in the Santa Barbara exhibit, raised by Mr. Osgood. Other exhibitors from The Palms are J. Brown, Mr. Lelong and Jos. Curtis.

Dan Freeman of the famous Centinela ranch shows a pyramid of seedling oranges. John Wolfskill of Buenos Ayres rancho has Mediterranean Sweet and Australian Navel oranges, citrons and budded lemons.

C. H. Hovey of Downey sends seedling oranges and lemons, and C. A. Teel has peanuts, English walnuts, limes, seedling oranges and lemons.

It is a good-sized jump to the foothill region of La Crescenta and La Canada, represented, respectively, by B. B. Briggs and J. L. Lauterman with several varieties of oranges and lemons.

Cahuenga, in the same frostless belt, sends eight boxes of Navel and seedling oranges and lemons raised by Henry Claussen; Sicily and sweet lemons, Mission olives and olive oil from the ranch of ex-Senator C. Cole; and oranges, lemons, cherimoyas and green coffee berries on twigs, cultivated by Jacob Miller.

Abbott Kinney of Lamanda Park enters a box of Tangerines.

McNeil & Vosburg of Azusa show a lot of Washington Navel oranges and seedless lemons.

The ladies of Vernon deserve unstinted praise for their ambition and industry in creating so attractive a design as their graceful gateway of oranges and lemons, relieved with wreaths of ivy and smilax. Within the gate is a floor of oranges. No individual exhibits were made.

S. M. Woodbridge of Los Angeles has the most complete display of the products of the orange, exhibiting wine, oil, bitters, extract, cordial and syrup of the orange and lemon.

IN THE GALLERY.

The remainder of the Los Angeles exhibit is in the first gallery. Here, Pomona has a long table that one delights in looking at. The fruit upon it is so uniform in size, so clean and smooth and beautiful in color that it well merits the distinction accorded it of being the best display from any locality. On the raised center of the table the word Pomona is spelled in huge letters, each letter being in a different variety of orange, and rising from a groundwork of lemons. There are 125 boxes of fruit in the display, sent in by J. Parsons, W. B. Dole, G. F. Ferris, G. W. McClary and others.

Alhambra makes for her a modest, though creditable, showing of Navel, Valencia Late, Malta Blood, Mediterranean Sweet, seedling, Satsuma, St. Michael and Tangerine oranges, and Eureka lemons, grown by A. Phillips, A. C. Weeks, J. A. Graves, G. B. Adams, E. Pollard, F. Z. Story and R. F. Bishop.

San Fernando is first and foremost a grain country, but does not propose to be left out of a citrus fair. The St. Michael and Washington Navel oranges entered by John Burr, compare favorably with those from other localities.

The design of the Ladies' Annex to the L. A. Chamber of Commerce must not be overlooked, as it shows up beautifully under the electric lights at night. A lovely wax figure, representing the Goddess of Plenty, stands picking oranges from a tree. At her feet is a cornucopia, overflowing with the fruits of Southern California. Near by, the Ship of Commerce is in her dock heavily laden with the products of this section, oranges predominating in her freight.

The preliminary arrangements of this fair were made easier and less expensive for exhibitors than ever before, and 50 per cent of the profits are to be divided pro rata among them to defray any expenditure that may have been incurred. The attendance numbers thousands every day, and there is no question of pecuniary success. Entertainments are provided both afternoon and evening. I should like to speak of many things not mentioned herein, if space permitted, and beg to submit this as merely a bird's-eye report.

Brown Leghorns.



Mature Earlier,
Lay Earlier,
Produce More Eggs.
Consume Less Food,
Are the Most Hardy,
Are the Most Beautiful,
Are the Most profitable of all Fowls.

Choice Selection and expensive purchases for ten years make my fowls equal to any, excelled by none.

Eggs, $2.50 for 13.

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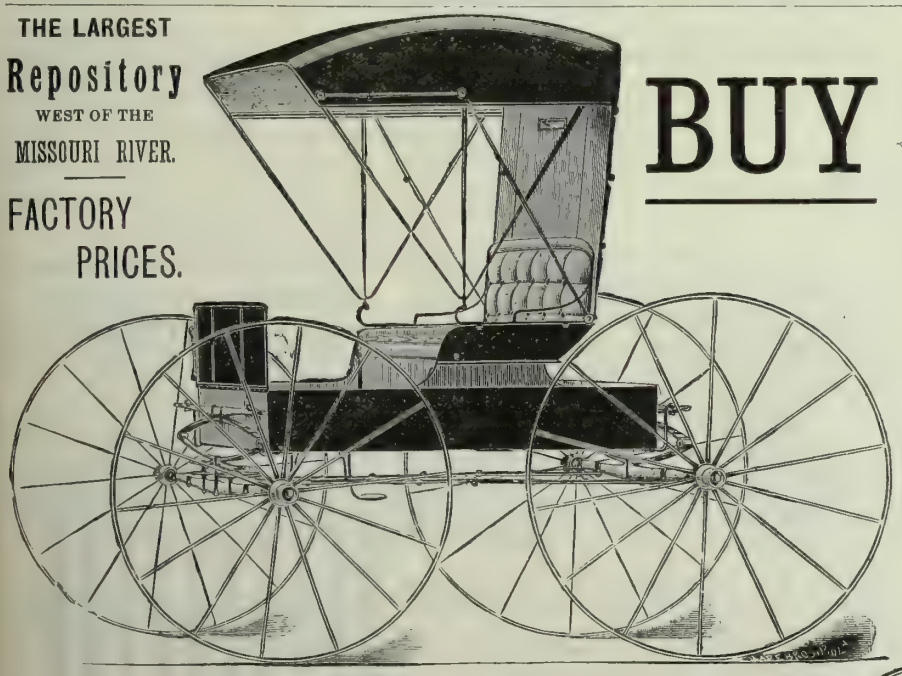
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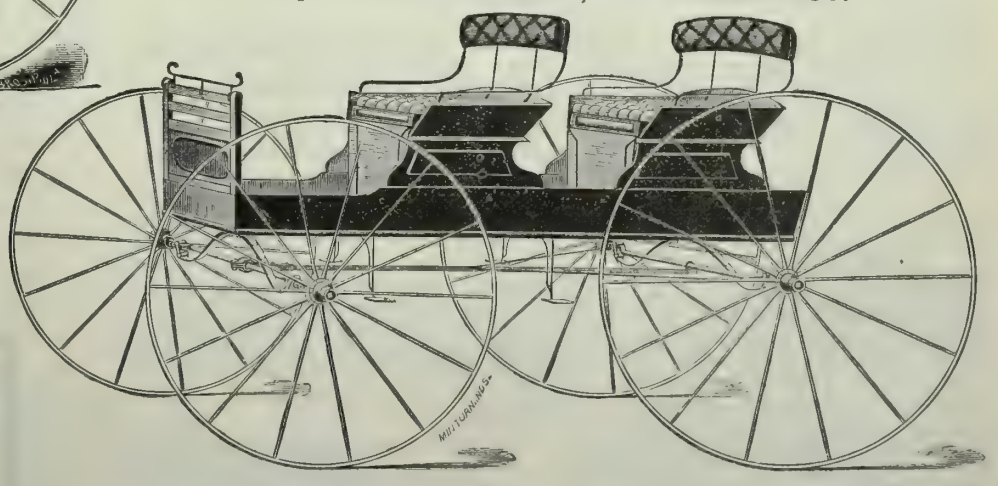
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The Irrigationist.

The Irrigation Movement in Congress.

On page 241 of last weeks RURAL we gave an outline of Representative Lanham's irrigation bill which provides for cession of the arid lands to the several States in whose borders they are situated, etc. This bill was favored by a majority of the House Committee to whom it was referred and a dissenting minority report was also presented.

The report and views of the majority are as follows:

Sundry bills, resolutions, memorials and petitions have been referred to this committee during the present Congress relating to the subject of irrigation and the proper disposition of arid lands, the general trend of which has been favorable to the proposition of relegating these lands and the problems involved to State and Territorial control and administration. The greater number of them has been of a general character, while others have been of local application, but all have been marked with the same distinct feature and uniform object, discovering a noticeable concurrence of opinion upon a subject matter of vast public importance.

VACANT PUBLIC DOMAIN.

The vacant public domain of the United States, exclusive of Alaska, the Cherokee Strip (not yet opened to settlement) and certain other lands now claimed by Indians, is estimated by the report of the Commissioner of the General Land Office, at 579,664,684 acres, surveyed and unsurveyed, in approximately equal proportions. The principal amount of this land is situated within what is known as the arid region, embracing a greater portion of territory west of the ninety-seventh meridian of longitude and contained chiefly within the boundaries of the States and Territories named in the bill, to which, respectively, it is proposed that a cession shall be made by the United States.

THE AREA OF THE ARID RFGION.

According to estimates of the Government officials, the arid region, including semiarid plains, embraces 1,340,000 square miles. Of this about one-fourth lies in the great plains region east of the Rocky Mountains, which is principally arable land. Another fourth is embraced in the Rocky Mountain belt, not more than one-third of which is arable; three-eighths lie in the great basin and plateau of the Rio Grande, between the Rocky Mountains and Sierra Nevada, about one-half of which is arable, while the remaining one-eighth is embraced in the ranges of the Sierras and is in the main rocky and unsusceptible of cultivation. It is estimated that about one-fourth of the arid region is composed of rocky or mountainous or nonarable land.

WHAT CAN BE REDEEMED.

Major Powell, Director of the Geological Survey, has expressed the opinion that 100,000,000 acres of this arid region can be redeemed by irrigation, through the utilization of stream waters. Mr. Newell, as shown in census bulletin, estimates that 70,000 acres of land are now irrigated in semiarid plains regions and that about 4,000,000 acres are irrigated in the arid region proper. It cannot be stated with accuracy what amount of irrigable lands yet remain unreclaimed.

The greater portion of land proposed by the bill to be ceded is in its present condition of little practical value, but is capable of being appreciated beyond computation by the process of irrigation. But to accomplish its reclamation and successful development it will require a long time of careful treatment and a great expenditure of money.

THE DEMAND FOR HOMES.

It is now comparatively an arid waste, forbidding to the homeseeker, though fraught with untold possibilities of our mighty civilization. The demand of our large and constantly increasing population for homes and the necessary development of its latent though incalculable resources, cries out for the redemption from its now unprofitable condition. It is not in keeping with the progress of the age, the growth and the dignity of our country, and the wants of our people that it should remain in its present unproductive condition. It must be rendered habitable. It cannot and ought not to remain a perpetual wilderness and destitute of useful results. Either the United States must sooner or later accomplish its reclamation by direct appropriations from the Federal Treasury, by the construction of irrigation works and the operation of manifold agencies for its development, or failing so to do, it must leave to the States and Territories within which it is embraced in their own way to work out that salvation which is possible.

THE GREAT COST

If the Federal Government is to do this work, it may well take notice that the ultimate demands upon its Treasury will be enormous, far beyond any present accurate calculation, but certainly at an expense greater than it has ever encountered yet for any specified object for international improvement, reaching even billions of dollars. Nor can the point be overlooked and ignored that if the National Government shall undertake the execution of this immense enterprise it must perform that function in an impartial and comprehensive manner. It cannot afford to lavish its expenditures on any favored locality, but it will be constrained in all fairness and propriety to treat distinct special and local problems of reclamation in a suitable way, where they may arise as well in one State or Territory as, in another. To do all that will be expected of it, and that the exigencies will require, will be simply impossible of accomplishment, nor is it believed that the tax-payers' of country remote from the arid region will be induced to consent to the outlay necessary for such purposes?

THE GREATNESS OF THE WORK.

When the magnitude and far-reaching consequences of such a proposition are considered and understood in all their phases, it is reasonable to assume that thoughtful, prudent and economic men will conclude that the General Government essaying that object has a work upon its hands from which it may well pray deliverance; and if that deliverance can be made in a manner consistent with sound public policy, just to the whole people, advantageous to the people most directly concerned, and upon their voluntary acceptance of the burden and assumption of the responsibility involved, why should the Government desire to longer retain proprietorship of this arid region? Why, for that matter, should it now have a vast domain of unappropriated public land? It only holds lands as a trustee and until they can be suitably settled and occupied, and it is presumptively interested only to the extent that actual bona fide settlers may be accomodated. It is not supposed that it wants to retain them in order that they may be donated to corporations, or given away as subsidies. Enough of that has already been done. The system in the past has not escaped severe censure.

THE GREAT BENEFIT TO FOLLOW.

After a careful review of the whole question we have arrived at the conclusion that the General Government will be benefited by it, and will gain rather than lose by the proposed cession; that it will gain in the acquisition and increase of a strong, self-supporting western population; that it will be benefited by the opportunity that will be afforded an outlet for its present and prospective millions of landless and homeless people who now crowd, and will in future overflow its dense and more populous Eastern States; that additions to the popular well-being and prosperity will ensue; that fresh stimulus will be given to the States and Territories immediately interested to an earnest endeavor for their own development; that local self-government in all the problems involved will assert its forces; that civilization will be advanced; that the rich waving fields and comfortable homes will make glad the solitary places which now abound in this dormant and unproductive region.

THE LAND WILL GO TO THE PEOPLE.

What will—what can the Government lose? What citizen—what State will begrudge its proportionate contribution of heritage remaining in this fragment of public domain to people who are to redeem it? What sacrifice to either will be involved in surrendering these now barren wastes and hills and mountains? They will not go to aliens, but to our own people. It is worthy of notice that no serious protest from any Eastern States against the objects sought to be accomplished by this bill have found their way to your committee, notwithstanding the long time they have had the subject under consideration, and the public notice which has been given concerning the character of the measure upon which they have been deliberating.

THE PEOPLE WILL ACCEPT THE TRUST.

We have been forcibly impressed with the conviction that suitable legislation upon this subject is imperatively demanded and cannot well be longer postponed. That this policy will ultimately prevail we confidently predict. Can the States and Territories administer the trust which it is proposed to commit to their hands, and will they do so wisely and well? It is not contemplated that a burden shall be forced upon them. The voluntary acceptance must precede actual cession. It will be left to them in their own sovereign capacity to determine for themselves as to whether they will receive the grant. We are led to believe that they will accept it with conditions and reservations defined and stipulated. The Western people almost with one accord have united in asking this cession, They have signified their purpose and desire through legislative memorials, through the expression of large and representative conventions, through resolutions of the great irrigation congress held at Salt Lake City in last September, composed of delegates from ten States and two Territories, and through numerous petitions from different parts of the country. That they are in earnest about the matter there seems to be no room for doubt. If State legislatures are accessible to corrupt compassings the responsibility will rest upon the people who choose them. If the voters of the States can make a wise selection in the case of members of Congress no reason is perceived why they cannot exercise the same judgement in the election of a State legislature.

THE PEOPLE CAN BE TRUSTED.

Western people, as a rule, reflect as high types of real manhood, in all its better elements, as adorn the American character in any quarter of the Union. They are heroic, patriotic, energetic and self-reliant, and can be depended upon for the performance of all the duties and obligations which devolve upon them. If an illustration be required of the capacity of a State to administer its land system without supervision or interference on the part of the general government, the State of Texas, with its immense area, will furnish an instructive example. It has held out its own encouragement to immigration. It has invited capital in its own way. It has granted its lands at its own pleasure. Both in preemptions in aid of education and for internal improvements it has issued its own patents, and exercised without restraint its own judgment in the disposition of its public domain.

EARLY IRRIGATION.

The objection which may be urged against the cession to the Territories before they are admitted as States of the Union, the doubt that the people would act wisely in discharge of the trust; that the legislation on the subject might be reckless, and thus defeat the object to be attained, is largely met by pointing to the success which has attended the irrigation and reclamation of arid lands in the Territory of Utah. Irrigation in the United States by white men began in Utah in 1847, and has proved a most gratifying success under wise and conservative legislation, based largely upon actual experience. The waters have been so distributed and utilized by the settlers as to produce very good results. Considering the scarcity of water and vast area irrigated, there have comparatively few conflicts over water-rights.

UTAH'S DEVELOPMENT.

The showing in the recent United States census of agricultural development gives a fair conception of what has been accomplished in that Territory. Crops were raised by irrigation in the census year ending June 30, 1890, on 263 473 acres, or 411.68 square miles, a trifle over five-tenths of 1 per cent of the entire area of the Territory. The aggregate number of farms was 10.757, and of these, 9724, or about nine tenths depended on irrigation, the remaining tenth being either stock ranches or farms in the northern end of the Territory, where the climate is less arid, or situated so high on the mountain side that the crops can be raised by what is known as dry farming. The irrigated farms in Utah are small, averaging from 20 to 30 acres each. It has not been the policy of the people of Utah to encourage acquisition of large bodies of land, and the monopoly of water has been impossible. The laws were made to encourage and protect the settlers. The small holder has an equal opportunity for his proportional share of water with the large holder. The greatest good to the greatest number is the prevailing idea and has always been strictly enforced. Water-rights are considered sacred and no theft is regarded as more despicable than the theft of water in the irrigation season, and no misdemeanor is more quickly punished.

The quantum of land that may be disposed of to any person, corporation or association is limited to 160 acres. This, it was believed, would have the effect of preventing monopolies and syndicates from securing possession of large bodies of these lands to the detriment of the rest of the people, and might serve as a restraint upon rash legislation in this respect should the same be accepted.

THE MINERAL LANDS.

The mineral lands are reserved to the United States. Those lands have not been distinctly classified, and special localities where minerals may exist cannot be satisfactorily designated, but must be left in great measure to the discoveries of prospectors. From the nature of the case, it is impossible to specify the extent of these lands. Each State and Territory affected by the bill will, it is believed, better understand and more thoroughly appreciate its particular condition and the specific problems which require solution, than it will be possible for Congress to do; and when it accepts the cession proposed, it will do so with full knowledge of the responsibility assumed; it will take the grant *cum onera*. The hold upon its wise administration of the power conferred will depend its own prosperity and future success. The lands which will be ceded if the bill becomes a law and its provisions are accepted by all States and Territories therein named, will amount to 558,141,374 acres, less whatever number of acres may have been taken up since the estimate of the report of the Commissioner, dated September 23, 1891, and deducting also the mineral lands, which, for reasons before stated, cannot be differentiated nor their extent determined, and are distributed as follows: Arizona, 55,061,005 acres; California, 52,299,499; Colorado, 42,167,030; Idaho, 33.781,851; Kansas, 799,078; Montana, 74,372,769; Nebraska, 11,460,436; New Mexico, 54,893,679; Nevada, 53,689,524 North Dakota, 16,135 440; Oklahoma, 3,502 406; Oregon, 3,902,251; South Dakota, 1,485,394; Utah, 35,426,987; Washington, 2,040,691; Wyoming, 50 842,434.

What Cheapens Butter.

Many a dairyman does not get the price he should for his butter, owing to the fact that he has churnings of different colors in one tub.

The "trier" tells the tale, but in butter where Wells, Richardson & Co.'s Improved Butter Color is used, the "trier" shows the same rich color all the way through. There is nothing equal to this preparation for giving a golden June yellow of the same shade the year round. It possesses peculiar properties which prevent making a reddish shade even when too much is used. As this color is superior in strength, it is the most economical of all coloring preparations. It will win converts to the wisdom of coloring butter, and will fill with gold coin the pockets of dairymen and creamerymen who use it.

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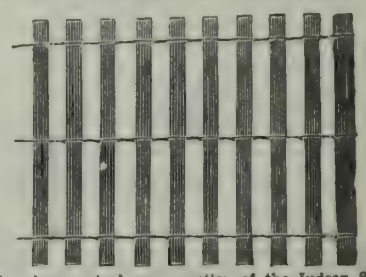
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TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: In response to yours of the 25th would say that I am pleased to give your Triumph Spading Harrow a good recommend. I have used two harrows to cultivate my orchard and vineyard for the past year, and they did my work better than any tool used to do like work on my ranch. I am very well pleased with the harrows. Yours truly, A. W. TOZER.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: We have your favor of the 25th inst. In regard to the Morgan Spading Harrow would say that we have used the harrow cultivating our orchard and vineyard and find it just the tool. In fact, we know of no tool that will surpass it as a cultivator. Yours truly, HATCH & GIST.

VISALIA, CAL., Dec. 5, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow I purchased from L. N. Wood, your agent, is a complete success. I have had considerable experience in the orchard and nursery business in this State, and I can from personal experience recommend the Morgan Spading Harrow to be the best cultivator in existence. Respectfully yours, CAIN FRUIT & NURSERY CO., Supt. GEO. F BEALES.

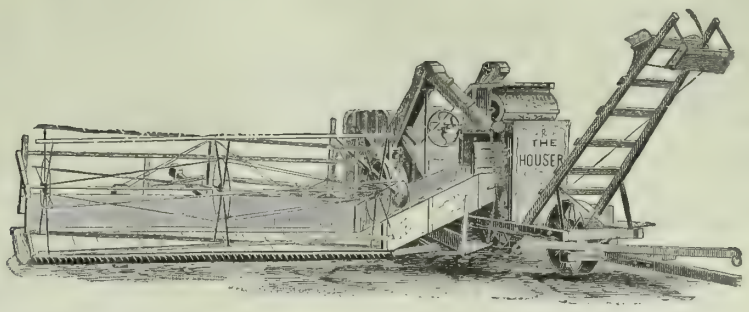
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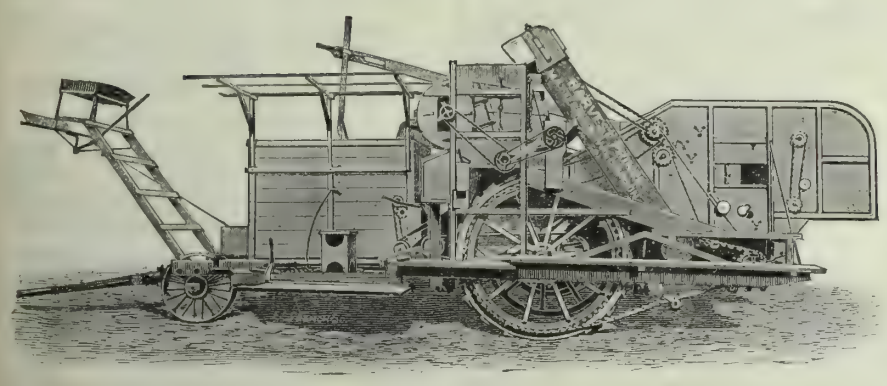
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New Improved Belt Combined Harvester "PRINCE."



Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

HARVEST "PRINCE."

It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20 inch by 4-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

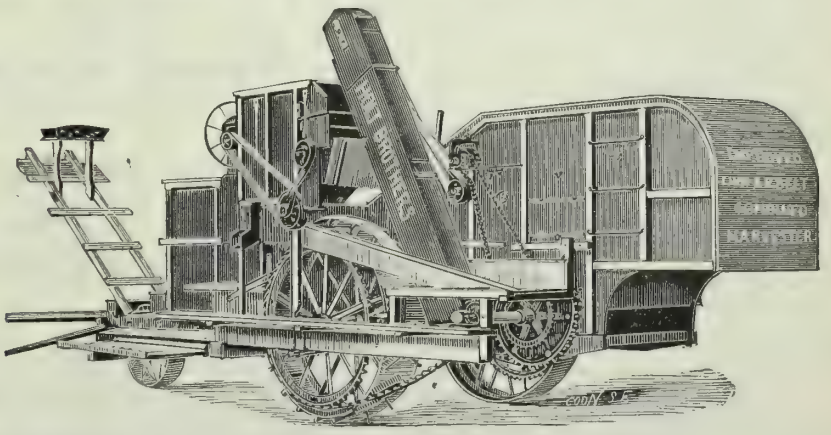
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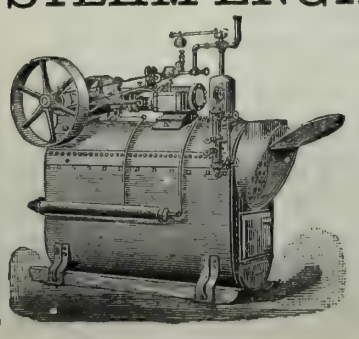
For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. or, **HOLT BROTHERS CO., 30 & 32 Main St., San Francisco.**

STEAM ENGINES AND BOILERS.



Strong and Reliable Steam Driving Power furnished with the Most Economical Consumption of Fuel.

PERFECT SAFETY ASSURED.

IMPROVED PATTERNS AND CONSTRUCTION

Especially Adapted for

DAIRY AND FARM PURPOSES.

Send for Illustrated Catalogue and Prices.

G. G. WICKSON & CO., 3 & 5 Front St., SAN FRANCISCO.

346 N. Main St., Los Angeles. 141 Front St., Portland, Or.

Something Fine from Sutter.

The latest acquisition to the grand display of California's products in the State Board of Trade rooms is the new exhibit made by Sutter county, placed in position on Tuesday last.

The main feature consists of a huge cornucopia, the base resting upon a large table and the point suspended in the air, midway between the floor and the ceiling. This "horn of plenty" well illustrates the happy idea which it represents. The outer surface is covered with green and dried fruits of almost endless variety, arranged in highly effective style, the principal features being oranges, peaches, prunes, apples, lemons, limes and apricots, wrought in fanciful designs and constituting a very novel display.

The "overflow" of the "horn" includes a large variety of green, dried and canned fruits, nuts, etc., embracing some especially fine qualities in dried peaches, raisins and prunes.

Besides the general display, the exhibit contains some notable individual contributions, the more important of which are as follows: Muscatel and Rose of Peru grapes, French prunes and Bartlett pears, R. O. McMillan; Gros prunes and White Heath cling peaches, J. W. Mills; McDevitt and Phillips cling peaches, J. T. Bogue; Gloria Mundi apples and White Heath cling peaches, N. B. Abbott; orange cling peaches, A. D. Cutts; Duchesse pears and Oregon cling peaches, B. G. Stabler; Bilyeau's Late peaches, T. B. Hull; Thompson's seedless grapes and Zante currants, J. P. Onstott; Bishop grapes, R. C. Kells; Flaming Tokay grapes, L. P. Farmer; Hungarian prunes, C. W. Hutchin; quinces, Robert Davis; Rose of Peru grapes, T. B. Hull; lemon cling peaches, J. M. C. Jasper.

All in all, the display may be called a thoroughly creditable one, and it cannot fail to emphasize in the minds of visitors to the Board of Trade rooms the pleasing possibilities of fruit-growing in Sutter county.

Francis Smith & Co.'s Steel and Sheet Iron Pipe Works.

In view of the wide-spread interest now being manifested in the subject of irrigation, and also the prospective speedy renewal of the hydraulic mining industry in California, the matter of conducting water from its various and limitless sources to points where it can be made available for power or fertilizing purposes becomes one of growing importance. In this connection, the attention of readers of the PRESS is called to one of the oldest and largest manufacturing concerns in this city, Francis Smith & Co., who have for more than 30 years been making a specialty of the manufacture of riveted sheet iron and steel pipe for the purposes above mentioned.

Since making the first iron pipe for hydraulic mining in California, back in the fifties, down to the present day, this firm has been steadily growing in popularity, and during this time it has furnished pipe to all the principal mining camps west of the Rocky Mountains, both for milling and hydraulic use. The firm has also put in place the supply pipe for water works in many cities and towns on the Pacific Slope, notably among which is the extensive plant at Ogden, Utah Ter., completed during the year just past. In this instance, the water was successfully conducted to the water works from Ogden canyon, in the Wahsatch Range, a distance of seven miles, along steep and rocky mountain sides where there were many difficulties to overcome. This pipe is very strong and durable, being made of the best quality of iron or steel, double riveted and thoroughly coated inside and out with a special preparation of asphaltum. In some instances, where the expense and difficulties of transportation are great, the iron is punched and formed ready for making; tools for the purpose being supplied. Of course its lightness affords many advantages over any other kind of pipe in the saving of freight and the comparative ease with which it may be conveyed to and placed in position, as frequently happens, in almost inaccessible places. So much has this fact alone been appreciated, that many miles of pipe from this factory have been sold in British America, Mexico, South America, Australia, South Africa, as well as in hundreds of valleys and canyons all over this coast, wherever water wheels for mining or electric plants are operated, or water is brought from a distance for city supply or irrigating purposes.

The works at 130 Beale street, this city, are extensive and amply equipped with skilled workmen and modern appliances of every kind for turning out first-class work upon short notice, and at the lowest prices compatible with fair business methods.

OFFICE OF THE
GRANGERS' BANK OF CALIFORNIA

San Francisco, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892, to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.
FRANK McMULLEN, Secretary.

FRANCIS SMITH & CO.,
Manufacturers of
Sheet Iron and Steel PIPE!
ALL SIZES.
130 Beale Street, San Francisco, Cal.

Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe. Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

TWENTY ACRES
CHOICE FRUIT LAND!
Near Haywards, Alameda Co.
TEN ACRES IN ORCHARD.
TREES FOUR YEARS OLD.
Cheap and Easy Terms. Will exchange for Oakland or San Francisco property.
JOHN F. BYXBEE, 42 Market St.,
SAN FRANCISCO.

Walter Dickins. A. B. Hinckley. Benj. Hobart.
Telephone No. 992.
DICKINS-HOBART LUMBER CO.,
Wholesale and Retail Lumber Dealers.
COUNTRY ORDERS A SPECIALTY.
Berry St., bet. 3d and 4th, San Francisco.
Selling Agents for the Western Mills of Seattle.

NOTICE.

The Annual Meeting of the Stockholders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

CHARLES WOOD, Secretary. I. C. STEELE, President.

A. J. ROBINSON,
AGENT FOR
CLIMAX 2 and 4-POINT BARB WIRE,
THE ASHLEY BOSS 2-POINT,
PLAIN WIRE AND STAPLES.
26 Beale St., San Francisco, Cal.



Make Money FOR Their Users.

They include Stackers, Carriers, Forks, Slings, Sweep Rakes, Hoisting Singletrees and a complete line of special fittings, and represent the practical experience of a quarter of a century. Special inducements for early orders. Send for illustrated catalogue and directions for building economical hay barns. Address
Louden Machinery Co., Fairfield, Iowa.

J. F. Houghton, President, J. L. N. Shepard, Vice-Pres.
Chas. R. Story, Sec'y, R. H. Magill, Gen. Ag't.
Home Mutual Insurance Company,
N. E. Cor. California and Sansome Sts.,
Incorporated A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

DRAIN TILE. ABOUT 15,000 FEET OF DRAIN TILE, with collars & 400 3-in. Y's with branches, to fit one or two-inch lateral drains. Boxed in straw, ready for shipment. Apply at once to JAS. J. SEARLE, Room 24, 402 Montgomery St, S. F.

JOHN CAINE, 369 El Dorado St., Stockton.
1892—Wholesale and Retail—1892.
General Agent Winans' Pat. Carriage Co., Mich; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers. Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.

KNABE
HAINES
A. L. Bancroft & Co.
303 Sutter St., S. F.
Bush & Gerts Pianos
Parlor Organs
Installments Rentals
PIANOS

LOWEST PRICES.
EASIEST TERMS.
LARGEST STOCK.
Oldest Music House.
DECKER BROS.
FISCHER.
PIANOS
KOHLER & CHASE.
25 O'Farrell St., S. F.



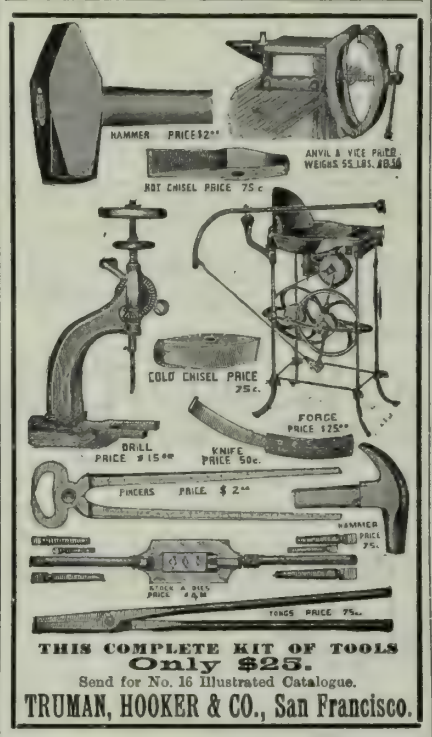
Rice's Patent
CALF WEANER
—AND—
SUCKING COW MUZZLE.

Prevents calf or cow from sucking themselves or each other. Thoroughly tested and endorsed by all. No hindrance in eating and drinking. No pain. Complete success. No. 1, for Calves, 50 cts. each; No. 2, for Yearlings, 75 cts. each; No. 3, for full grown animals, $1. All postpaid by mail.



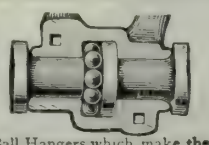
FUNK'S PATENT CALF FEEDER.

Raises calves better than the cow, on prepared feed and all the calf can eat.
No air swallowed; no fingers chewed; no ears sucked. Less trouble; greater success; easy to clean.
Sample Feeder mailed postpaid, $1.00; per dozen, $9.00.
J. G. WICKSON & CO., 3 & 5 Front St., San Francisco.
346 N. Main St., Los Angeles. 141 Front St., Portland, Or.



THIS COMPLETE KIT OF TOOLS Only $25.
Send for No. 16 Illustrated Catalogue.
TRUMAN, HOOKER & CO., San Francisco.

NOTICE THESE LITTLE BALLS!



They make the great Ball Hangers which make the
KEYSTONE DISC HARROW
The WONDER of all practical Farm People.
The same device which makes the Bicycle run easy, enables our Harrow to save one horse power in use, beside cost for repairs. It conquers toughest sod—fits uneven ground. *Examine it yourself.* Where time and horse-flesh are thought worth saving, the "Keystone" goes to stay.



Keystone Mfg. Co., Sterling, Ill.
BRANCHES: St. Louis, Mo. Kansas City, Mo. Council Bluffs, Ia. Columbus, Ohio.
Send for Harrow Book—"*The Reason Why*," Free.

GALE CHILLED PLOWS
BAKER AND HAMILTON
SAN FRANCISCO-SACRAMENTO

ORANGE CULTURE A Practical Treatise by T. A. Garey giving the results of long experience in Southern California. 196 pages, cloth bound. Sent postpaid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S. F.

It Stands the Test!

NITROGENOUS SUPERPHOSPHATE
—OF THE—
Mexican Phosphate & Sulphur Co.,

Now favorably known throughout the Citrus Growing Sections of the State, Stands Unrivaled as a True Fertilizer.
Certain in its Action, Great in Results, it maintains a high standard of fertility without undue stimulation.
Growers in San Bernardino County—notably Riverside—and Butte County—notably Palermo—can attest its merit.
We guarantee uniformity in its analysis, and seek correspondence with bonafide purchaser of a reliable fertilizer.

Mexican Phosphate & Sulphur Co.,
H. M. NEWHALL & CO., Agents,
309-311 Sansome Street, San Francisco, Cal.

FOLDING
Sawing Machine.

9 CORDS IN 10 HOURS.



Send for free illustrated catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket-knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 42,000 in use. We also make larger sized machine to carry 7 foot saw.
Order from the general agent for California.
The machine will cost you less than by single shipment direct from the factory at Chicago.

JAMES LINFORTH,
37 Market St., San Francisco.
HEADQUARTERS ALSO FOR
Blymyer Church, School and Fire Alarm Bells, Zimmerman Fruit Evaporators, Sorghum Mills, Butchers' Machinery and Tools, Rendering Tanks, Steam Jacket Kettles, Farmers' Boilers, Hawkeye Horse Powers, Hawkeye Saw Machines, Steam Engines, Windmills, Wine Presses, Cider Presses, Etc., Etc.
Send for Illustrated Catalogues of the goods you require.



BROWNE'S
—PATENT—
SQUIRREL EXTERMINATOR.

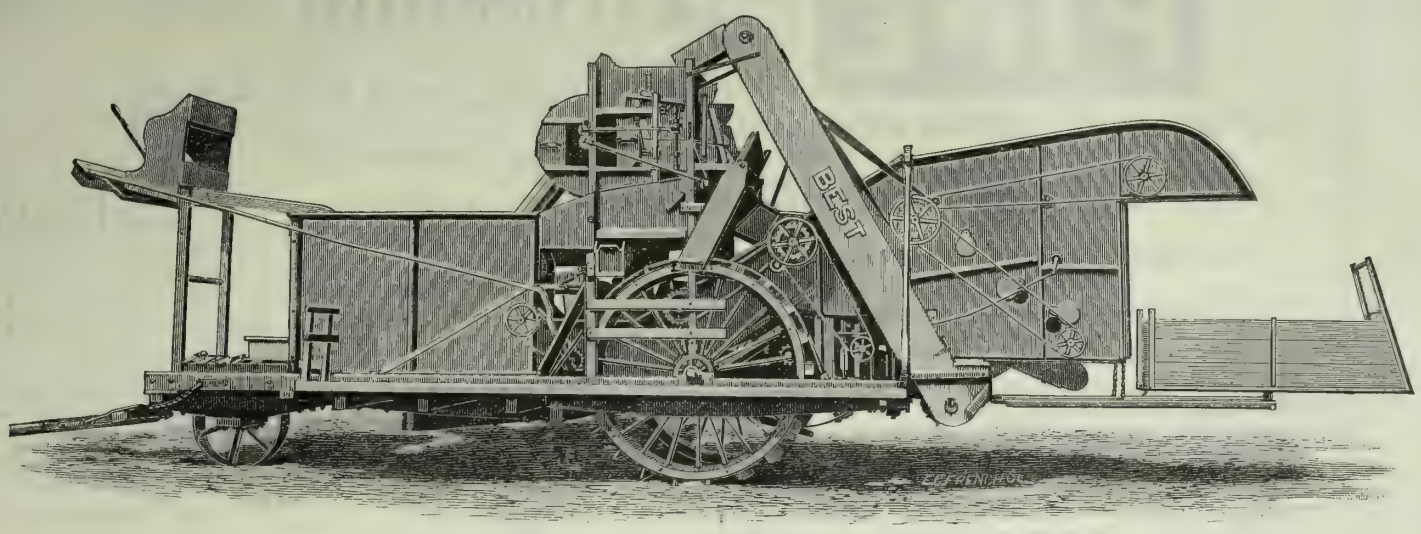
This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3 00. Send for circulars to
F. E. BROWNE,
314 & 316 So. Spring St.,
Los Angeles, Cal.



Write CRYSTAL CREAMERY CO., LANSING, MICH., for Catalogues of
CREAMERIES, Etc.
Glass Milk Cans, Never Rust, Water Tanks of steel plate, everlasting. Cream without ice or with ice. We want agents everywhere. Big cut in prices.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND BREAK, THE CELEBRATED BEST'S CLEANER, LONG STRAW CARRIER, ADDITIONAL STRAW BEATERS, STRAW DUMP CART, ADJUSTABILITY FOR CUTTING HIGH OR LOW,

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

☞ Send for Circular. Send for Testimonials. Come and See the New Model for 1892. ☜

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

STANDARD MOWER

ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.

NO SIDE DRAFT as CUTTER BAR is carried entirely on **Main Wheels.**

7-FOOT mower will do as much with one team as two 4-foot machines, SAVING half the corners.



Cutter Bar

Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.

MAIN WHEELS made interchangeable—one wheel fits either side of mower. **THE FOOT LIFT** raises cutter bar with perfect ease **without the aid** of hand lever, the first ever made. **EASILY TILTED.** **THE STANDARD MOWER** can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

Stanton, Thomson & Co.

SACRAMENTO, CAL.

AGENTS FOR NORTHERN CALIFORNIA.

Farmers' Union,

SAN JOSE, CAL.

AGENTS FOR CENTRAL CALIFORNIA

Newell Mathews,

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AGENT FOR SOUTHERN CALIFORNIA.

CLUFF BROTHERS,

Wholesale and Retail Grocers.

Orders by Mail Promptly Filled. Packed and Shipped Free of Charge.

Send for Price List, or send us a list of what you want and we will put prices to it and mail it back for your approval, by which you can see what you save by ordering from us.

All Goods Guaranteed as Represented, with Special Terms to Grange Trade-Card Members.

— ADDRESS —

CLUFF BROTHERS, Grange Department, 9 Montgomery Ave., S. F.

DEWEY & CO. { 220 MARKET ST., S. F. Elevator, 12 Front. } **PATENT AGENTS.**

If You are Interested in Purchasing Your Supplies

— AT —

BEDROCK RATES!

— WRITE TO THE —

Pacific Coast Home Supply Association,

132 MARKET STREET, SAN FRANCISCO.

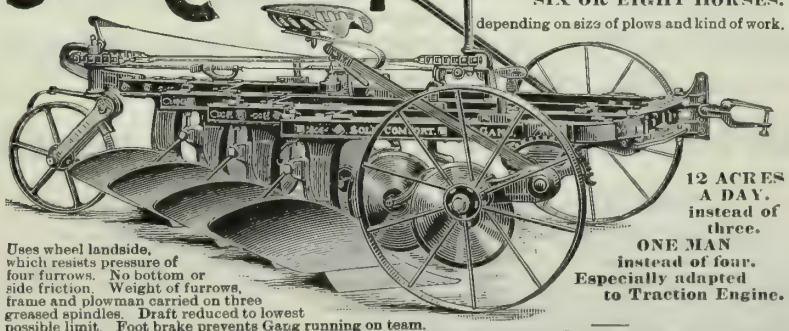
SOLID COMFORT

THE **"WONDER ON WHEELS"**

TONGUELESS. Self-Guiding.

SIX OR EIGHT HORSES.

depending on size of plows and kind of work.



12 ACRES A DAY. instead of three.

ONE MAN instead of four.

Especially adapted to Traction Engine.

Uses wheel landside, which resists pressure of four furrows. No bottom or side friction. Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents Gang running on team. Levers and turning device within easy reach. **Easier Driving,** Straighter Furrows, and **LIGHTER DRAFT** than any Gang in America. Adjustable frame—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms. Ten or twelve inch cut.

ECONOMIST PLOW CO., SOUTH BEND, INDIANA.

☞ **Special prices and time for trial given** on first orders from points where we have no agents. Our book, **"FUN ON THE FARM,"** sent **Free** to all who mention this paper.

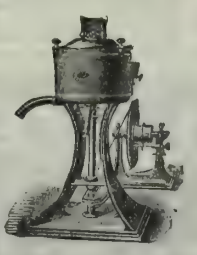


GREAT TRIAL of CENTRIFUGAL MACHINES

At Cottenburg, Sweden, August, 1891.

The EXTRACTOR-SEPARATOR, was awarded the

King's Cup and First Prize of Honor.



This is the **GREATEST CONTEST** in all Europe, and leaves the **EXTRACTOR-SEPARATOR** as the

VICTOR over All Competitors.

It is the **ONLY BUTTER EXTRACTOR.** It is the **Best Cream Separator,** and has a capacity of **2,000** to **3,000** pounds per hour. We guarantee this machine in every respect—material, workmanship and separation of the cream—**equal to any.** The bowl is made of **imported Swedish steel,** the best and strongest steel in the world. It is **superseding** other cream separators, because of the **larger amount of milk** separated with greater thoroughness. **Send For Full Illustrated Circulars.**

VERMONT FARM MACHINE CO., Bellows Falls, Vt.,

Manufacturers of Creamery, Cheese and Dairy Supplies.

SHEET IRON PIPE



IRON PIPE

ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES,

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

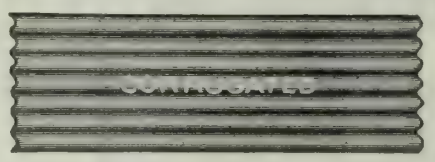
The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a **high grade** o annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit.** It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of

HAY BARNS, DRY HOUSES, STABLES, ETC.

W. W. MONTAGUE & CO.

SAN FRANCISCO—SAN JOSE—LOS ANGELES.

THE PACIFIC HOSPITAL,

Stockton, Cal.



Private Hospital for Care and Treatment of Mental and Nervous Diseases.

Has been in existence for over 10 years and is favorably known as the model institution of the Pacific Coast. For terms and other particulars, apply to the Proprietor and Superintendent,

DR. ASA CLARK, Stockton, Cal.

REFERENCES: Dr. L. C. Lane, Dr. W. H. Mays (late Superintendent of State Asylum at Stockton), Dr. Robert A. A. McLean, Dr. I. S. Titus, Dr. R. H. Plummer, San Francisco; Dr. E. H. Woolsey, Surgeon S. P. Co. and Oakland Hospital; Dr. W. S. Thorne, San Jose; Dr. G. A. Shurtleff (late Superintendent State Insane Asylum), Napa.

CARBOLINEUM AVENARIUS.

PRESERVATIVE AGAINST ROTTING, DECAY, FUNGUS, ETC., OF WOOD AND STONE.

REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:

1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.

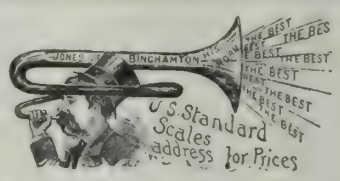
All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

CARBOLINEUM WOOD-PRESERVING CO.,

MUECKE & CO., Pacific Coast Agents. 319 California St., San Francisco, Cal.

PRINCESS CHILLED PLOWS

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TRUMAN, HOOKER & CO.,

SAN FRANCISCO.

BUSINESS CHANCE, FOR MAN OR WOMAN. Address, C. R. ORCUTT, Orcutt, California.

Tiresome

To read long advertisements about things you do not want. We will only speak of one or two items which nearly everybody uses every day and we think you will appreciate the offer.

Ladies' Fine Kid Shoes, $1.25, $1.35, $1.50.
Ladies' Kid Shoes, Extra Quality, $1.75, $2, $2.25, $2.50.
Tipped or Plain Toe, from $1.75 up.
Oxfords. Beautiful Style, Tipped, only $1.00.
Misses' Fine Oxfords, Tipped or Plain, $1 00.
Misses' Neat Sandals, 11 to 2, 50c.

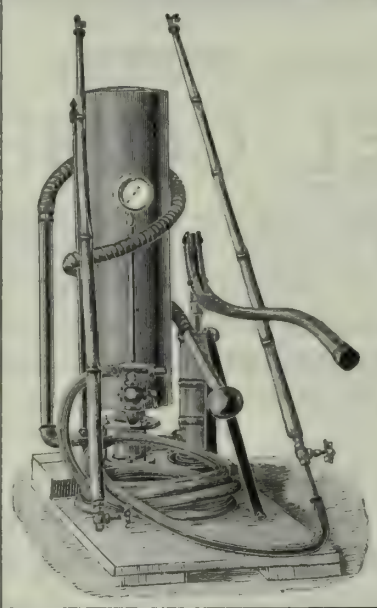
Shoo!

Shew!

Shoe!

Infant's shoes, 1 to 3, 25c up; Infants' 2½ to 6, at 50c up; Child's 5 to 7½, at 75c up; 8 to 10½, at 75c up; Boys' or Girls' 11 to 2, $1 up; 2½ to 6, at $1.25 up; Men's Sunday or every day shoes, $1-50 up. Every day boots, kip, at $1.75 up. Ask for full list, free, and save 50 per cent on Shoes at SMITH'S CASH STORE,

416 & 418 Front St., S. F., Cal.



If you want a First-Class Spray Pump

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.

Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

SAN JOSE, CAL.



SURE DEATH

To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

Ongerth Liquid Tree Protector,

The only effectual remedy in the market. Indorsed by the University of California.

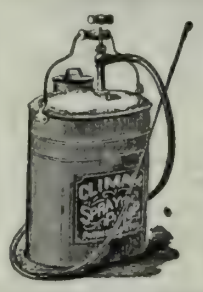
When Grafting or Budding use our Liquid Grafting Compound.

Send for circular with testimonials to

Ongerth Grafting Compound Co.

212 Davis Street,

SAN FRANCISCO.....CALIFORNIA



CHAPMAN-CLIMAX

Spraying Machinery.

BEST IN THE WORLD.

The Chapman-Climax No. 1, represented by the accompanying illustration, is the cheapest complete and reliable Orchard Spraying Pump Apparatus manufactured.

Equipped complete, ready for use, with hose, short-hand extension and our latest improved spray nozzle.

We refer to more than 1000 California orchards where our machinery is in satisfactory operation. In many instances single fruit growers have in use from five to fifteen Chapman outfits.

We manufacture several sizes and styles. Write for illustrated descriptive catalogue and price list.

R. S. CHAPMAN, Office & Works, 14 & 16 Fremont St., S. F., Cal.



Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

For Orchardists, Florists, Stockmen, Poultry Raisers

THERE IS NOTHING LIKE THEM.

Pump sent complete as in cut for $14. Send for Illustrated Catalogue.

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People's Party Platform.

Following is the platform adopted by the People's Party National Convention recently held at St. Louis:

PREAMBLE.

"This, the first great labor conference of the United States, and of the world, representing all divisions of urban and rural organized industry, assembled in National Congress, invoking upon its action the blessing and protection of Almighty God, puts forth, to and for the producers of the nation, this declaration of union and independence.

"The conditions which surround us best justify our cooperation.

"We meet in the midst of a nation brought to the verge of moral, political and material ruin. Corruption dominates the ballot box, the legislatures, the Congress, and touches even the ermine of the bench. The people are demoralized. Many of the States have been compelled to isolate the voters at the polling places in order to prevent universal intimidation or bribery. The newspapers are subsidized or muzzled, public opinion silenced, business prostrated, our homes covered with mortgages, labor impoverished, and the land concentrating in the hands of capitalists. The urban workmen are denied the right of organization for self-protection; imported pauperized labor beats down their wages; a hireling standing army, unrecognized by our laws, is established to shoot them down, and they are rapidly degenerating to European conditions. The fruits of the toil of millions are boldly stolen to build up colossal fortunes, unprecedented in the history of the world, while their possessors despise the republic and endanger liberty. From the same prolific womb of governmental injustice we breed the two great classes—paupers and millionaires. The national power to create money is appropriated to enrich bondholders; silver, which has been accepted as coin since the dawn of history, has been demonetized to add to the purchasing power of gold by decreasing the value of all forms of property as well as human labor; and the supply of currency is purposely abridged to fatten usurers, bankrupt enterprise and enslave industry. A vast conspiracy against mankind has been organized on two continents and is taking possession of the world. If not met and overthrown at once it forebodes terrible social convulsions, the destruction or the establishment of an absolute despotism.

"In this crisis of human affairs the intelligent working people and producers of the United States have come together in the name of peace, order and society, to defend liberty, prosperity and justice.

"We declare our union and independence. We assert our purpose to support the political organization which represents our principles.

"We charge that the controlling influence dominating the old political parties have allowed the existing dreadful conditions to develop without serious effort to restrain or prevent them. They have agreed together to ignore in the coming campaign every issue but one. They propose to drown the outcries of a plundered people with the uproar of a sham battle over the tariff, so that corporations, national banks, rings, trusts, 'watered stocks,' the demonetization of silver and the oppressions of usurers, may all be lost sight of. They propose to sacrifice our homes and children upon the altar of Mammon; to destroy the hopes of the multitude in order to secure corruption funds from the great lords of plunder. We assert that a political organization, representing the political principles herein stated, is necessary to redress the grievances of which we complain.

"Assembled on the anniversary of the birth of the illustrious man who led the first great revolution on this continent against oppression, filled with the sentiments which actuated that grand generation, we seek to restore the Government of the Republic to the hands of the 'plain people,' with whom it originated. Our doors are open to all points of the compass. We ask all honest men to join with and help us."

PLATFORM.

FINANCE.

1st. We demand a national currency, safe, sound and flexible, issued by the General Government only, a full legal tender for all debts, public and private; and that without the use of banking corporations; a just, equitable and efficient means of distribution direct to the people at a tax not to exceed 2 per cent be provided, as set forth in the Sub-Treasury plan of the Farmers' Alliance or some better system; also, by payments in discharge of its obligations for public improvements.

a. We demand free and unlimited coinage of silver.

b. We demand that the amount of circulating medium be speedily increased to not less than $50 per capita.

c. We demand a graduated income tax.

d. We believe that the money of the country should be kept as much as possible in the hands of the people, and hence we demand all national and State revenue shall be limited to the necessary expenses of the Government economically and honestly administered.

e. We demand that postal savings banks be established by the Government for the safe deposit of the earnings of the people and to facilitate exchange.

LAND.

2d. The land, including all the natural resources of wealth, is the heritage of all the people and should not be monopolized for speculative purposes, and alien ownership of land should be prohibited. All land now held by railroads and other corporation in excess of their actual needs, and all lands now owned by aliens, should be reclaimed by the Government and held for actual settlers only.

TRANSPORTATION.

3d. Transportation being a means of exchange and a public necessity, the Government should own and operate the railroads in the interest of the people.

a. The telegraph and telephone, like the post-office system, being a necessity for transmission of news, should be owned and operated by the Government in the interest of the people.

RESOLUTIONS ADOPTED.

Resolved, That the question of female suffrage be referred to the legislatures of the different States for favorable consideration.

Resolved, That the Government should issue legal tender notes and pay the Union soldier the difference between the price of the depreciated money in which he was paid and gold.

Resolved, That we hail this conference as the consummation of a perfect union of hearts and hands of all sections of our common country. The men who wore the gray and the men who wore the blue meet here to extinguish the last smoldering embers of civil war in the tears of joy of a united and happy people, and we agree to carry the stars and stripes forward forever to the highest point of national greatness.

Political Mention.

[Political announcements published under this head at the rate of 25 cents per line of agate space]

Call for County Organizations by the State Central Committee.

MONROVIA, CAL. March, 8th 1892.

To the menbers of the State Central Committee of the People's Party of California:

GREETING:—You are hereby notified to call a convention in your respective counties, on Saturday, March 26, 1892 (or as soon thereafter as sufficient notice can be given) for the purpose of organizing the People's Party in your various counties, by electing a County Central Committee of one from each voting precinct. Also to elect delegates to State convention (or district convention, as may be hereafter determined by the Executive Committee, due notice of which will be given); also to devise ways and means for carrying on a vigorous and aggressive campaign in every county in the State.

All persons, women as well as men, are eligible, to vote or be voted for, who endorse the Los Angeles platform of Oct. 22, 1891.

Counties in which members at large of the State Central Committee reside should hold a conference of all such members, and agree on time and place, and also whether a delegate or mass convention is most suited to their condition.

Each County Central Committeeman is ex-officio President of his county until said county is organized, and may call a convention of delegates from all Industrial and Reform organizations, and fix the ratio of representation; or he may call a mass convention of all men and women who will take the pledge of the Peoples Party platform of California.

Let each convention open with appropriate form and ceremony. Take up a collection and forward one-fourth (¼) to Treasurer State Central Committee People's Party, J. N. Barton, Loomis, Placer county, the remainder to be reserved to defray convention expenses, etc. To the State Convention elect two delegates at large for each county, and one additional for each five thousand (5000) votes or major fraction thereof as cast for Governor at the last election.

Brethren! Settle down to the work like veterans; close up the ranks and push forward to victory.

E. M. WARDALL,
Chairman State Central Com. of Peoples Party of Cal

The National Call.

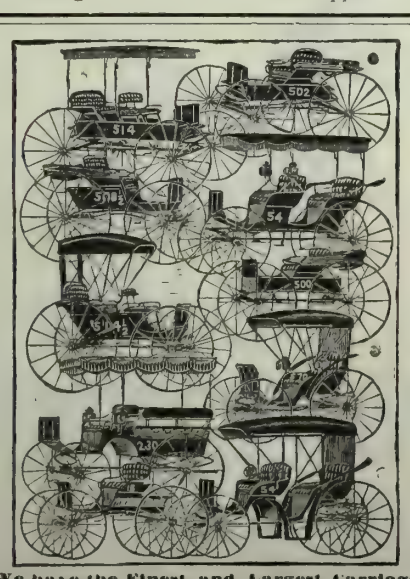
TO THE PEOPLE OF THE UNITED STATES: The National Committee of the People's party of the United States, acting in conjunction with the following persons, C. H. Van Wyck; of Nebraska; C. W. Macune, Texas; M. J. Branch, Georgia; J. H. Powers, Nebraska, R. M. Humphreys, Texas; L. D. Laurent, Louisiana; Marion Cannon, California; T. H. Maguire, New York; J. H. Williams, Kansas; L. L. Polk, North Carolina; Pierce Hackett, Missouri; M. M. Garrett, Illinois; John Seitz, Ohio; Mary E. Lease, Kansas; Anna L. Diggs, District of Columbia; Anna Debbs, Texas; A. P. Parksen, Florida, and Ben Terrell, of Texas, representatives of a certain meeting of members of various organizations of this country, held in the city of St. Louis, Missouri, on the 24th day of February, 1892, respectfully submit to the people of the United States the published preamble and platform of the conference of said labor organizations of our nation, held on the 22d, 23d and 24th days of February, 1892, in the city of St. Louis.

We urge that all citizens who support the demands therein made shall meet on the last Saturday in March next, in their respective towns and villages, and hold public meetings and ratify these demands, and take steps to organize preparatory to electing delegates to a National Convention, and we call upon all duly qualified voters of the United States who are in favor of these principles, and of nominating candidates for President and Vice-President on the above platform, to send delegates to the convention of the People's party to be held in Omaha, Neb., July 4, 1892, at 10 o'clock in the forenoon.

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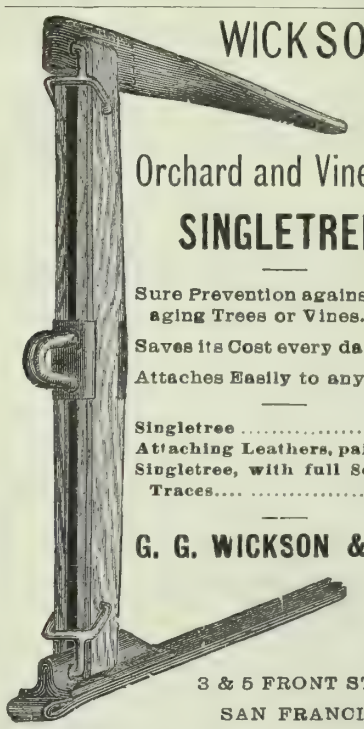
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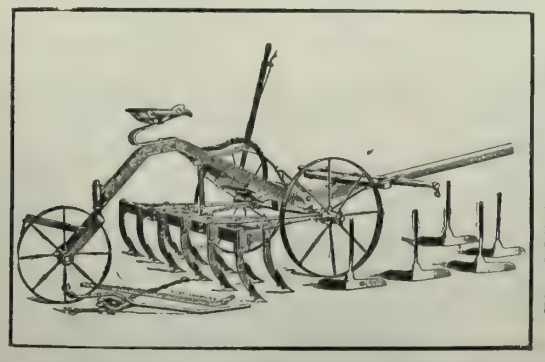


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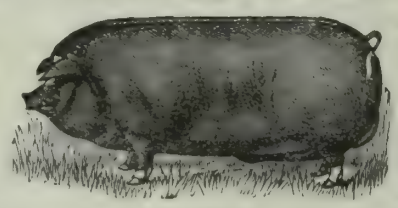
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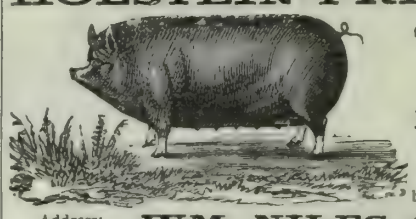
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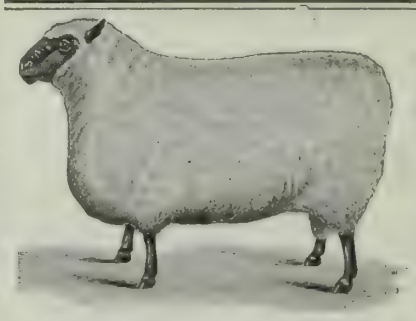
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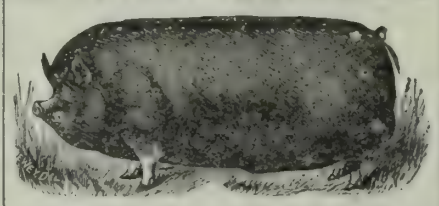
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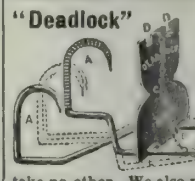
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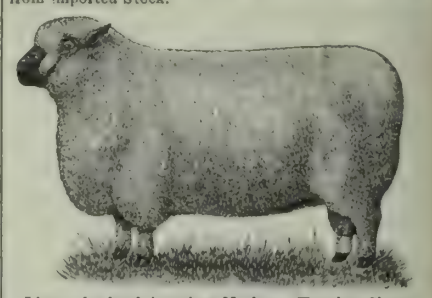


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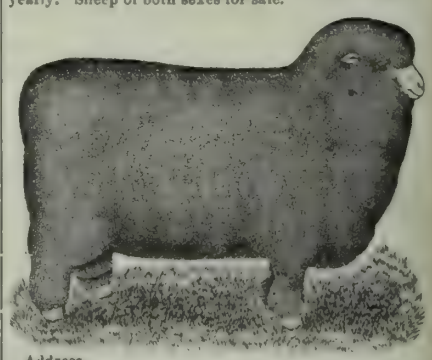
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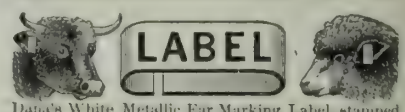
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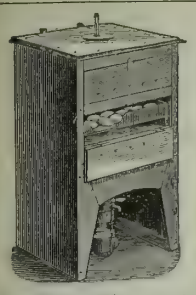


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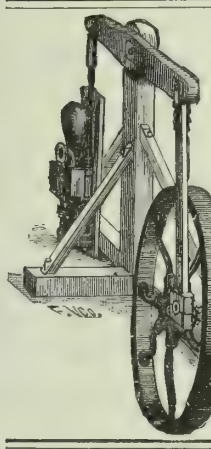
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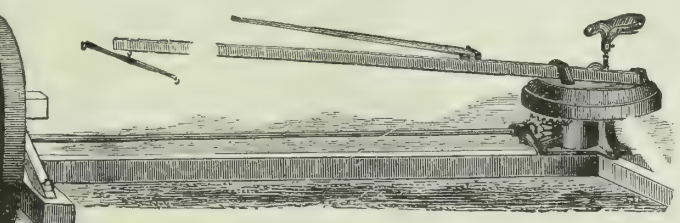
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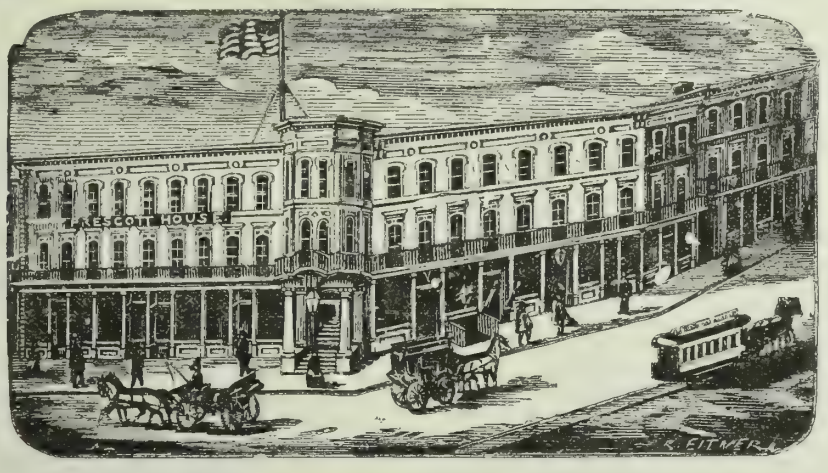


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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

There appears to be a gradual setting in of a better tone to the various branches of the produce market, and as this becomes more marked much better times may be reasonably looked for. This does not necessarily indicate better prices, but better cleaning up of the daily receipts. Rains the past week have, for the time being at least, allayed all fears regarding grain crops, and with usual spring weather a very large outturn to the acre is expected. Returns made to inquiries instituted by the S. P. R. R. Co. indicate an increase in acreage seeded to wheat over that of 1891 of from 10 to 15 per cent, while the prospective outturn is fully 20 per cent better than at the same time in last year. The west side of the San Joaquin promises to have very large crops. This of itself is an assurance of a very large wheat crop for the State as a whole. The local money market continues easy, with the supply of available funds in excess of the demand.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl for the past week:

	Mar.	April.	May.	June	July.
Thursday	8s 1 d	7s11½d	7s11 d	7s10 d	7s10 d
Friday	7s11½d	7s10½d	7s10 d	7s 9 d	7s08½d
Saturday	.....	.....	7s09½d	7s08½d	7s10 d
Monday	7s11 d	7s10½d	7s09½d	7s08½d	7s08 d
Tuesday	7s10 d	.....	7s08½d	7s08½d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	
Thursday	39s6d	39s0½	39s6½	Firm but not active.
Friday	39s6d	39s0d	39s6d	Quiet but steady.
Saturday	39s3d	39s0½	39s3d	Weaker.
Monday	.....	.....	39s3d	
Tuesday	39s3d	38s9d	38s9d	Heavy.

To-day's cablegram is as follows:

LIVERPOOL, March 16. WHEAT—Depressed. California spot lots, 8s; off coast, 39s 3d, part shipped, 38s 6d; nearly due, 38s 9d, cargoes off coast slow; on passage, weaker; Mark Lane wheat, turn easier; French country markets, very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	165⅝	163½	167	164⅛	162½
Friday	166	163⅝	164⅝	161⅝	160⅝
Saturday	165⅞	163⅝	164⅛	161⅞	16 ⅜
Monday	166	163⅝	163⅛	161	159⅝
Tuesday	164⅞	164½	161⅝	1 8⅛	158⅛

The following is to-day's telegram:

NEW YORK, March 16 WHEAT 99⅞c for March, 99⅞c for April, 97⅝c for May, 96⅜c for June and 96c for July.

CHICAGO, March 16.—WHEAT—86⅛c for cash and 86c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	168½	167½	....	....	....	....
Friday	168½	167½	....	....	....	....
Saturday	16 ⅜	167⅜	....	....	....	....
Monday	168	167⅜	....	....	....	....
Tuesday	166½	166½	....	....	144	14 ⅜

The following are to-day's recorded sales on Call:

WHEAT—Morning session—Buyer season—100 tons, $1.66⅝; 500, $1.67; 500, $1.67½; 600, $1.67¼ per ctl. Afternoon session—Buyer season, 200 tons, $1.67; 1000, $1.66⅔; 700, $1.66⅔ per ctl.

BARLEY.

	Buyer Season. H.	L.	*Buyer Season. H.	L.	Seller 1892 H.	L.
Thursday	101½	100⅜	....	....	....	....
Friday	101½	100⅜	....	....	....	....
Saturday	101⅜	100⅜	....	....	....	....
Monday	101	99⅝	....	....	....	....
Tuesday	98½	98½	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

BARLEY—Regular session—Buyer season, 340 tons, 99c per ctl. Afternoon Session—Buyer season, 100 tons, 98¾c; 100, 98½c; 100, 99c per ctl.

Markets by Telegraph.

Foreign Hop Review.

Mark Lane (London) *Express*, February 29, reports as follows: Very little business is now doing in any class of 1891 hops, and the market is hardly so firm, though merchants show a strong resistance to the attempts of buyers to bring down the prices. Were it not for the fact that there are scarcely any holders among the planters, which compels direct dealing with the merchants, values would most likely be lower than they are. Another, and very important factor in the situation is the fact that the stocks held by merchants are by no means large—only just sufficient perhaps, to last out till next autumn. In these circumstances it is hardly probable that quotations will decline; on the contrary, any unfavorable aspect of the 1892 growing crop, when the time arrives for crop prospects to be taken into account, may be expected to harden the market. There is at present no anxiety to sell, nor, indeed, is there any apparent desire to buy, except in the way of meeting immediate requirements. The market consequently is very quiet, and quotations are mainly nominal. On the Continent and in America trade is also confined to narrow limits, but values are steady, and there is nothing at present in the situation to indicate a change in the quotations.

Eastern Wool Markets.

NEW YORK, March 11.—*Bradstreet* says: The Wool sales continue large, but at the same low prices. Quotations, however, do not show any further decline. The dealers say that Wools are selling at cost. The markets have been relieved of a large amount of Wool, and reduced supply may cause a hardening of values. In domestic fleeces there has been a fair movement. The supply of delaine Wools is light, but the stock of X, XX and XXX combing Wools are ample to meet the immediate needs of manufacturers. One-quarter and three-eighths blood Wools are generally reported quiet. There has been some buying of both Texas and California Wools, but as the shearing will begin in these States next month, a large amount of Wool from last year's clip will be probably carried over. It is said that the output of Texas Wools will be smaller than usual, owing to the weather, which has destroyed a large number of sheep and injured the growth of the Wool. The Territories are moving moderately well, with prices unchanged but weak.

NEW YORK, March 14.—Wool continues to be released without hesitation at the low ruling rates. Unwashed hold their own when quality favors. There seems to be nothing to check the soft condition of the market. London's heavy accumulations have only a cheap prospect, and New England dealers regard the unusual available offerings of foreign, as a serious menace to uphold the present "buyers' market situation. Sales at New York: 3,904,000 domestic; foreign, mostly Dunskvi. Sales at Boston: 2,120,000 domestic. Foreign is very active; 785,000 pounds of Australian sold at 32½@41c; and 181,000 carpet. Philadelphia sounds the prevailing low tone of seaboard prices. Sales and stocks are moderate.

Eastern Dried Fruit Market.

NEW YORK, March 13.—With only about six weeks remaining for natural trade in dried fruits, first-hand dealers are delighted with the fact that our heavy stocks are down to a point of quantity which at one time was hardly to be hoped for at this date. No matter what cheapness may have been forced upon prices, it is more satisfactory for goods of this kind to be in the hands of distributors than in indefinite warm weather storage. Unpeeled Peaches are firmer with a marked reduction in the supply. They range from 6½@8c. Large Prunes are scarce and wanted. There is a good trade demand for fifties and sixties at 8¾@9½c; bags and boxes sixties and seventies, 8@8½c; small, 6@6¼c. Apricots are freely offered at 6 to 9c, boxes or bags as to quality. City grocers are carrying large lots of this fruit.

CHICAGO, March 15.—There has been such a liberal trade in raisins that offerings are only moderate and steadiness of values continues, though present sales are small. Other lines sell pretty well. Prunes are in good request. Peaches are in fair demand and being scarce, it turns a little more trade to apricots. Nectarines rule quiet.

Eastern Raisin Markets.

NEW YORK, March 14.—Raisins disclose a better feeeling in the demand, and fortunately the offering is brightened by recent arrivals. Prime three-crown bags are quick at 5c; two-crowns are slow at 4@4½c; boxes, loose, $1.05@1.40; layers, $1.10@1.60.

Eastern Markets for Miscellaneous Produce.

Honey—Steady at 7¼@7½c for light amber.

Lima Beans show better confidence; spot closed strong at $1 65@1.70 a bushel. 10,000 bushels were recently sold, to arrive by sail, at $1.45.

Hops—Quiet; 100 bales of common California sold at 17c. The range for Coast 91's is 20@25c; State, 20@24c. A number of olds at 6@9c have gone abroad. London is becoming steadier. The exports for the week are 412 bales. Options have been neglected all the week.

General Remarks and Statistics.

Cereals.

The crop advices from the West are quite favorable for the growing wheat crop, and state that in the last two or three weeks the crop has improved rather than deteriorated.

The recent advices from France are reported to be considerably more satisfactory than last year, when nearly one-half of the fall wheat needed to be resown. It is stated that in some cases as high as 30 per cent will have to be resown, but this possibly is exaggerated.

The Agricultural Department at Washington, D. C., reports the stock of wheat in growers hands at 171,000,000 bushels, or 28 ℔ cent of the crop, say 63,000,000 of spring and 108,000,000 of winter. This is the largest reserve ever reported, that of the largest previous crop (1884) being 169,000,000 bushels.

From mail advices just to hand we obtain the following summary of wheat crop prospects. In Illinois one-half of the correspondents report the crop in good condition. About 35 per cent represent the condition as fair, and 15 per cent report poor. In Indiana 55 per cent of the correspondents report good, 40 per cent fair and the others poor. The condition in Ohio is not so good. Only 20 per cent of the correspondents report good, 36 per cent report fair, and 24 per cent poor. A number of localities report damage by freezing and thawing, in some cases serious. Two-thirds of the correspondents in Michigan report the condition as good, 30 per cent fair, and the rest poor. In Kentucky 52 per cent of the correspondents give the condition as good, 36 per cent as fair, and 12 per cent as poor. Some damage by freezing is reported. In Missouri the outlook for the crop is not nearly so good as it was at this time last year. One-third of the correspondents report good, one-fifth fair and the rest poor. In Kansas 40 per cent of the correspondents report the condition good, 20 per cent as fair and the remainder as poor. In Iowa 60 per cent of the correspondents report good, 30 per cent report fair and the others poor. In Wisconsin one-half of the correspondents report the condition as good, 42 per cent report fair and the rest poor. The condition in some places is critical, owing to freezing and thawing, with a poor outlook.

In the local market for futures, wheat continues to be the leading speculative article, with barley a good second. The market acts very much as if speculators are largely at sea, and therefore fearful of operating too heavy until they can see farther ahead. While in this State, and up north, crop prospects are all that can be reasonably desired, yet in the Central States they are not up to the percentage which obtained at this time in 1891. European crop prospects are being watched with an unusual degree of interest, for upon them largely depends the future course of the wheat market.

In the sample market wheat has held its own, notwithstanding declining markets at the East and also abroad. The strength of the local market is a source of considerable surprise to the many and can be only accounted for by reason of the surplus being well concentrated and the market for future delivery in this season being oversold. If the latter supposition proves to be correct, then the strength of the market is readily accounted for. The engaged tonnage in port is steadily decreasing, while the disengaged tonnage is increasing. The latter has a carrying capacity of about 200,000 tons. The exports of wheat (flour reduced to wheat) to date aggregate over 700,000 tons, and we have nearly four months to run yet before new-crop season.

The barley market has held fairly firm. Receipts and demand have been about equal. A vessel sailed the past week for England with a cargo of 2745 tons of barley. The stock of barley in this city is being steadily reduced. It is claimed that volunteer and early sown barley will be in market at an earlier date in May than ever before, but of course this will depend largely on the weather within the next 30 or 45 days.

The receipts of oats continue light, which admits of the local stock being steadily reduced. Available supplies up north are said to be light.

Corn does not show any material change. The demand is only fair, while receipts are light. Crop prospects are said to be encouraging.

Rye is very slow and difficult to quote correctly owing to the light supplies and an offish demand.

Feedstuff.

The demand for both bran and middlings is light, causing lower prices to obtain. For rolled barley there is a fair demand.

The receipts of hay are ample for all present requirements. There is a growing impression that the carry over into next season will be larger than has been expected. Crop prospects could not be better.

Dairy Produce.

Receipts of butter are very heavy, but the cheap prices at which consignments are sold, with no competition, by the East, admits of the surplus being readily placed. When Oregon dairies are in the market with their product that demand source will be cut off or else very materially curtailed, and then we can look for slightly lower ranges in prices. This will be more severely felt when Nevada dairies fully set in and have to find a market for their surplus.

Cheese is barely steady. Receipts are increasing, as is the supply which will be available by the end of this month. The demand is good from up north, but only fair locally.

With continued good feed and warm weather, eggs rule in buyers' favor. Notwithstanding the low prices ruling for Californian, a carload of Eastern arrived the past week. The high prices ruling for hens may possibly induce freer marketing of the latter, which, if proven correct, will materially lessen the receipts of eggs.

Live Stock.

Increasing supplies of vegetables together with Lent, are against the free consumption of meat, which is being felt in the market prices for both bullocks and mutton sheep. The drought which prevailed in parts of Arizona and Texas very materially lessened the supply from the former and aided no little in promoting high prices in this State. It is now claimed that as shearing progresses in this State the offerings of mutton sheep will increase when lower prices are not at all unlikely to set in. Hogs are strong at full figures. Dairy cows are unchanged, ranging from $20 to $30 and over.

Fruit.

Apples are slow. A large percentage of receipts are poor keepers and have to be placed on receipts.

The first strawberries of the season were received on March 11. This is from one to three weeks earlier than ever before for berries grown in the open air. All kinds of fruit will be earlier this year than for several years past. In 1891 the crop was backward.

The orange market continues demoralized. Owing to so many frosted oranges being in the market many parents will not allow their children to eat them, and as the consumption is curtailed low prices prevail and seriously interfere even with choice fruit. Limes and lemons are steady at full figures.

The market for dried fruits is firmer for choice grades of all kinds. The stock is being cleaned up by shipments to distributive points on this coast and also to the East. It is now claimed that the new crop season will come on a market virtually bare of stocks, particularly of good to choice grades.

Miscellaneous.

Poultry is scarce and high for all kinds except turkeys and geese, which are steady. Choice well conditioned young poultry are readily sold at outside figures.

Honey and beeswax do not show any material change in prices.

Hops are reported strong. It is said that contracts for new crop hops are being made at 13 to 15 cts. Telegraphic advices received to-day report strengthening markets at the East and also abroad.

The strong bear pressure heretofore reported on beans does not seem to have relaxed. Shipments to the East both by water and rail continue to be large.

The receipts of wool are almost nothing. The market is virtually cleaned up of 1891 clip, but then the 1892 clip is coming in. So far the grade of the latter is said to be poorer than was that of the first receipts in 1891, which if correct will make buyers still more masters of the situation. It will be fully two weeks before a definite idea can be formed as to how the market will open and probably rule.

Miscellaneous.

From reliable advices up to March 15, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	200,498	283,637	*†149,616	83,207
San Diego	17, 22	10,905	7,255	.....
San Pedro	5,440	11,000	.....	
Oregon	21,425	27,811	26,335	22,716
Puget Sound	13,130	22,717	.....	
Totals	258,015	356,070	183,206	105,923

*Engaged for wheat, 1892, 24,334; 1891, 79,109 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1 th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,488,219	8,980,850
Flour, bbls	743,436	787,314
Barley, ctls	786,338	208,535

Bags are strong at 7¾@7¾c.

Produce Receipts.

Receipts of produce at this port for 7 days ending March 15, '94, were as follows:

Flour, qr. sks	103,265	Bran, sks	4,726
Wheat, ctls	136,966	Buckwheat "	.....
Barley, "	43,237	Middlings "	2,595
Rye, "	29	Chicory, bbls	100
Oats, "	7,330	Hops, "	...
Corn, "	1,945	Wool, "	118
*Butter, "	2,315	Hay, tons	1,838
do bxs	628	Straw, "	147
do bbls	.....	Wine, gals	144,730
do kgs	10	Brandy, "	7,120
do tubs	.....	Raisins, bxs	1,560
do ½ bxs	467	Honey, "	650
†Cheese, ctls	610	Peanuts, sks	119
do bxs	106	Walnuts "	60
Eggs, doz	45,160	Almonds "	59
do " Eastern	....	Mustard "	....
Beans, sks	13,383	Flax "	....
Potatoes, sks	14,550	Popcorn "	....
Onions, "	253	Broom corn, bbls	10

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to March 14, '91.	July 1, '91 to March 12, '92.
Flour, ½ sks	216,111	363,272
Wheat, ctls	1,114,211	1,174,330
Barley, "	258,956	22,099
Oats, "	295,266	354,742
Wool, bales	5,911	5,978
Hops, "	392	431
Rye, sks	....	3,3 2
Potatoes, sks	61,706	99,226

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 16, 1892.

Limes, Mex	4 00 @ 5 00	Beets, sk	— @ 1 00
Do Cal	60 @ 75	Carrots, sk	35 @ —
Lemons, box	1 00 @ 3 00	Okra, dry, lb	15 @ —
Do Sicily	5 50 @ 6 50	Parsnips, ctl	— @ 1 25
Oranges—		Peppers, dry, lb	8 @ 12½
Butte County	1 50 @ 2 25	Do green	20 @ 35
Yuba do	1 50 @ 2 25	Turnips, ctl	50 @ —
Do Seedlings—		Cabbage, 100 lbs	45 @ —
*Riverside	85 @ 1 50	Garlic, lb	2 @ 3
*Los Angeles	65 @ 1 25	Squash, Mrft, tn	3 00 @ 6 00
Do Navels—		Do Summer, lb	20 @ 25
*Los Angeles	50 @ 1 25	Pumpkins, ton	— @ —
*Riverside	1 00 @ 3 00	Tomatoes, box	50 @ 1 50
*Duarte	1 00 @ 3 00	Asparagus, box	1 00 @ —
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.		Do choice to ex	1 50 @ 2 00
Apples, box	75 @ —	Peas, green, lb	3 @ 5
Do choice	1 50 @ —	Rhubarb, lb	3½@ 5
Do extra choice	2 00 @ 2 50	String Beans	1 ½@ 20
		Cucumbers, doz	40 @ —

Live Stock.

BEEF.		MUTTON.	
Stall fed	7 @ —	Wethers	10 @11
Grass fed, extra	7 @ —	Ewes	10 @11
First quality	6½@ —	Do Spring	15 @18
Second quality	6 @ —	HOGS.	
Third quality	5½@ —	Light, ℔ lb, cents	5 @ 5½
Bulls and thin Cows	2½@ 3½	Heavy	4½@ 5
VEAL.		Feeders	4½ @ 4½
Range, heavy	5½@ 7	Stock Hogs	3½@ 4½
Do light	7 @ 8		
Dairy	7½@ 9		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 16, 1892

BEANS AND PEAS.		HOPS.	
Bayo, ctl	1 80 @ 2 05	1891 Choice to Ex.	24 @ —
Butter	2 40 @ 2 80	Fair to Good	20 @ —
Pea	2 50 @ 2 80	NUTS—JOBBING.	
Red	1 90 @ 2 15	Walnuts, Cal. lb	4 @ —
Pink	1 75 @ 2 00	Do Choice	6 @ —
Small White	2 25 @ 2 65	Do paper shell	7 @ —
Large White	2 30 @ 2 60	Almonds, sft shl	10 @ —
Lima	1 60 @ 2 00	Paper shell	12 @ —
Wld Peas, Nkeye	1 30 @ 1 60	Hard Shell	6 @ 7½
Do green	1 30 @ 1 50	Brazil	6½ @ 8
Do NLes	1 25 @ 1 40	Pecans small	11 @ 13
Split	2 85 @ 4 15	Do large	14@ 16
BUTTER.		Peanuts	2 @ 3
Cal. Poor to fair, lb	12½@ 20	Filberts	10½ @ 12½
Do good to choice	21 @ —	Hickory	7 @ 8
Do Gilteedged	— @ 22	Chestnuts	11½ @ 16
Do Creamery rolls	— @ 22	ONIONS.	
Do do Giltedge	— @ 22½	Silver Skin, Choice per ctl	1 00 @ 1 25
Eastern	— @ —	Fair to Good	75 @ —
CHEESE.		Cut	40 @ —
Cal. choice mild	12½@ 13½	POTATOES.	
Do fair to good	10 @ 12	Early Rose, ctl	25 @ 40
Do gilt edged	— @ 14	Burbank Seedling	30 @ 45
Young America	12 @ —	Do do Oregon	65 @ 1 05
EGGS.		Do Humboldt	40 @ 75
Cal. ranch, doz	17 @ —	Do do selected	— @ 19
Do do selected	— @ 19	River Reds	25 @ 40
Do store	16 @ —	Sweets	2 00 @ 4 00
Eastern	16 @ 17	POULTRY.	
FEED.		Hens, doz	6 50 @ 8 50
Bran, ton	17 00 @18 50	Roosters, old	7 00 @ 8 50
Feedmeal	26 00 @28 00	Do young	8 50 @10 50
Gr'd Barley	22 50 @23 50	Broilers, small	5 50 @ —
Middlings	20 00 @21 —	Do large	7 00 @ —
Oil Cake Meal	— @25 00	Fryers	7 50 @ —
Manhattan Food ℔ cwt.	7 50	Ducks	9 00 @12 00
HAY.		Geese, pair	2 00 @ 2 50
Wheat, per ton	13 00 @ —	Turkeys, Gobl'r	14 @ 16
Do choice	14 50 @ —	Turkeys, Hens	15 @ 18
Wheat and Oats	12 00 @ —	Do Dressed	14 @ 18
Wild Oats	11 00 @ —	Manhattan Egg Food ℔ cwt.	11 50 @ —
Cultivated do	12 00 @ —	PROVISIONS.	
Barley	11 00 @ —	Cal. Bacon, he'vy, lb	9½@ —
Alfalfa	10 00 @ —	Medium	10½@ —
Clover	11 00 @ —	Light	12 @ —
Straw bale	55 @ 60	Lard	9 @ 11
GRAIN, ETC.		Cal. Sm'k'd Beef	11½@ —
Barley, feed, ctl	93½ @ 1 02½	Hams, Cal salt'd	10 @ —
Do Choice	1 03½ @ —	do Eastern	12½@ —
Do Brewing	1 05 @ —	SEEDS.	
Do do Choice	1 12½@ —	Alfalfa	9½ @ 10½
Do do Giltedge	1 15 @ —	Clover, Red	14 @ 15
Do Chevalier	1 05 @ 1 40	White	20 @ —
Do do Giltedge	1 45 @ 1 50	Flaxseed	1½ @ 2
Buckwheat	1 70 @ —	Hemp	3½@ 4
Corn, White	1 27½ @ 1 32½	Mustard, yellow	3½ @ 2½
Yellow, large	1 22½ @ 1 27½	do Brown	3 @ 2½
Do small	1 26½ @ 1 30	WOOL.	
Oats, milling	1 42½ @ —	SPRING, 1891	
Feed, Choice	1 38½ @ —	Humb't & Men'cino	20 @ —
Do good	1 30 @ —	Sac'to valley	16 @ —
Do fair	1 22½ @ —	Free Mountain	19 @ —
Surprise	1 50 @ —	S Joaquin valley	13 @ —
Black Cal	1 10 @ 1 40	do mountain	15 @ —
Do Oregon	1 20 @ 1 27½	Cala'v & F'th'll	16 @ —
Gray	1 20 @ —	Oregon Eastern	14 @ —
Rye	1 60 @ —	do valley	21 @ —
Wheat, milling, Gilt edged	1 72½@ —	So'n Coast, def	11 @ —
Do Choice	1 70 @ —	So'n Coast, free	13½@ —
Do fair to good	1 68½ @ —	FALL, 1891.	
Shipping, choice	1 65 @ —	San Joaquin	9 @ 11
Do good	1 60½ @ —	Mountain	10 @ 15
Do fair	1 63½ @ —	Humb't & Men'cino	14 @ 18
Common	1 57½ @ —	HONEY.	
Sonora	1 57½@ 1 70	WhiteComb, 2-lb	10 @ 13
FLOUR.		do do 1-lb frames	12 @ 14
Extra, City Mills	4 90 @ 5 25	White extract'd	6½@ 7
Do Country Mills	4 90 @ 5 25	Amber do	5½ @ 6½
Superfine	3 00 @ 3 45	Beeswax, lb	22 @ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	8 @—
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	11 @—
Do do prime	3½@ 4	Do do choice	12 @—
Do do choice	4 @ 4½	Do do fancy	13 @—
Do sliced, common	3½@ 4	Evap, peeled, in boxes,	
Do do prime	4 @ 4½	choice	15 @—
Do do choice	4½@ 5½	Do do fancy	16 @—
Evap, bleached, ring, 50-lb boxes	7 @ 8	PEARS.	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl. com.	2½@ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	6 @—
Do do choice	6 @ 6½	Do ring do	10½@—
Do bleached, prime	7 @—	PLUMS.	
Do do choice	7½@—	Pitted, sun-dried	4½@—
Do do fancy	8½@ 9½	Do evap, boxes, choice	@—
Evap, choice, in boxes	9½@10	Do do do fancy	@—
Do fancy, do	10 @10½	Unpitted	2 @ 2½
FIGS.		PRUNES.	
Sun-dried, black	3 @ 3½	Cal. French, ungraded	5½@—
Do white	3½@ —	Do graded, 60 to 100	6 @—
Do do washed	— @ —	Do do 40 to 60	8 @—
Do do fancy	— @—	Fancy sell for more money.	
Do do pressed	— @—	RAISINS.	
Smyrna boxes	— @—	London Layers, choice ℔ bx	$1 50@ —
Do sacks	— @—	Do fancy, do	1 75@ —
GRAPES.		Layers, ℔ bx	1 25@ —
Sun-dried, stemless	3 @ 3½	Loose Muscatels, common, ℔ bx	1 00@ —
Do unstemmed	2 @ 3	Do choice, do	1 20@1 30
NECTARINES.		Do fancy, do	1 50@ —
Red, sun-dried	3½@ 5	Unstem'd Muscatels, in sacks, ℔ lb	4@ 5
Do Evap., in boxes	6 @—	Stemmed do do	5@ 5½
White, sun-dried	5 @ 6½	Seedless do do	6@ —
Do evaporated	6½@ 7	Do do ℔ 20-lb bx	1 15@ —
PEACHES.		Sultanas, unbl, bxs	1 15@1 40
Sun-dried, unpeeled, common, bleached	3½@—	Do bleached, in bxs	1 30@1 60
Do do prime, do	5 @—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do choice, do	6 @—		
Do do fancy	7 @—		
Evap, unpe'l'd, choice	7 @—		

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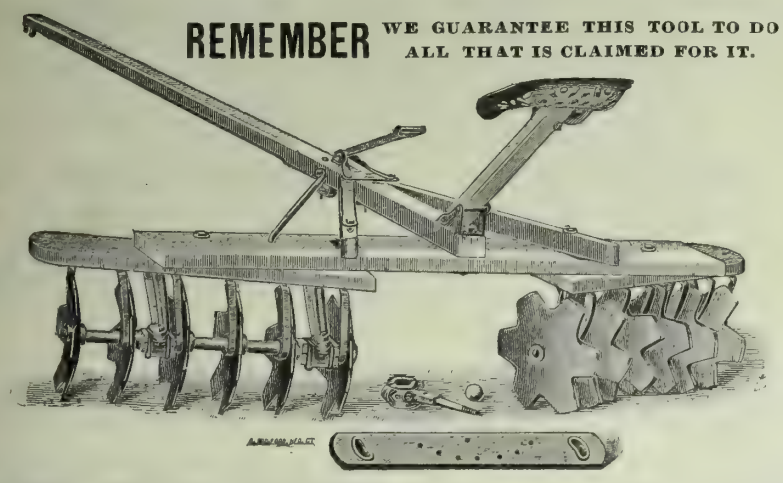
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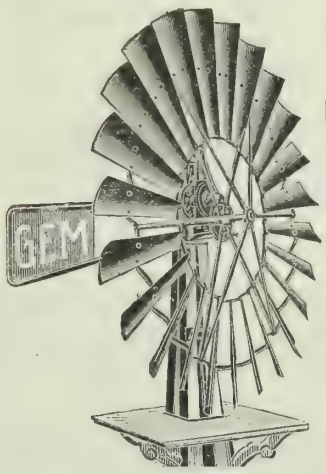
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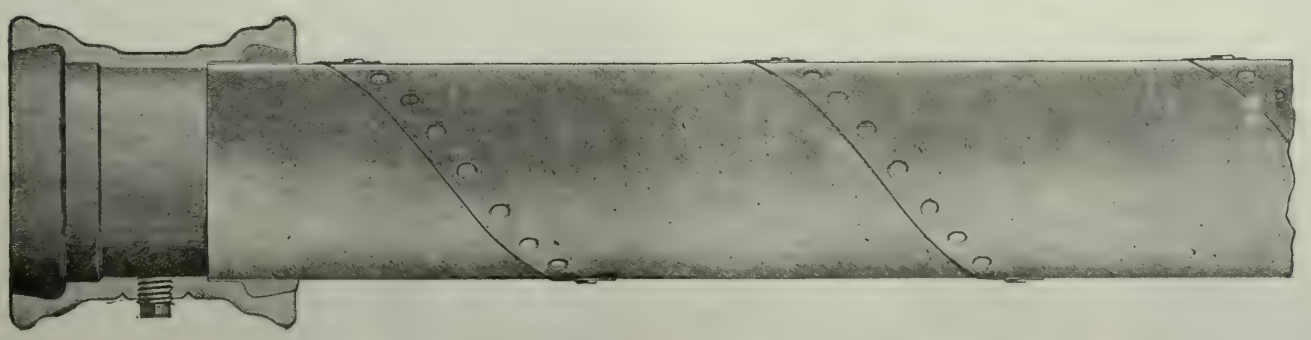
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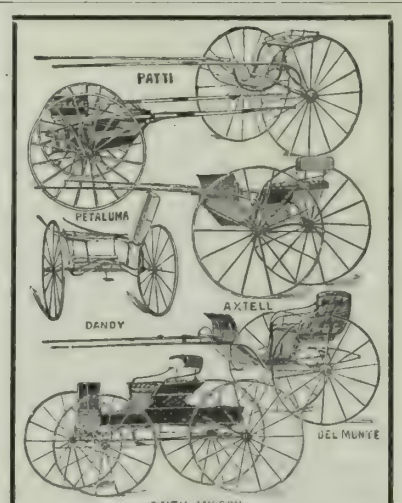
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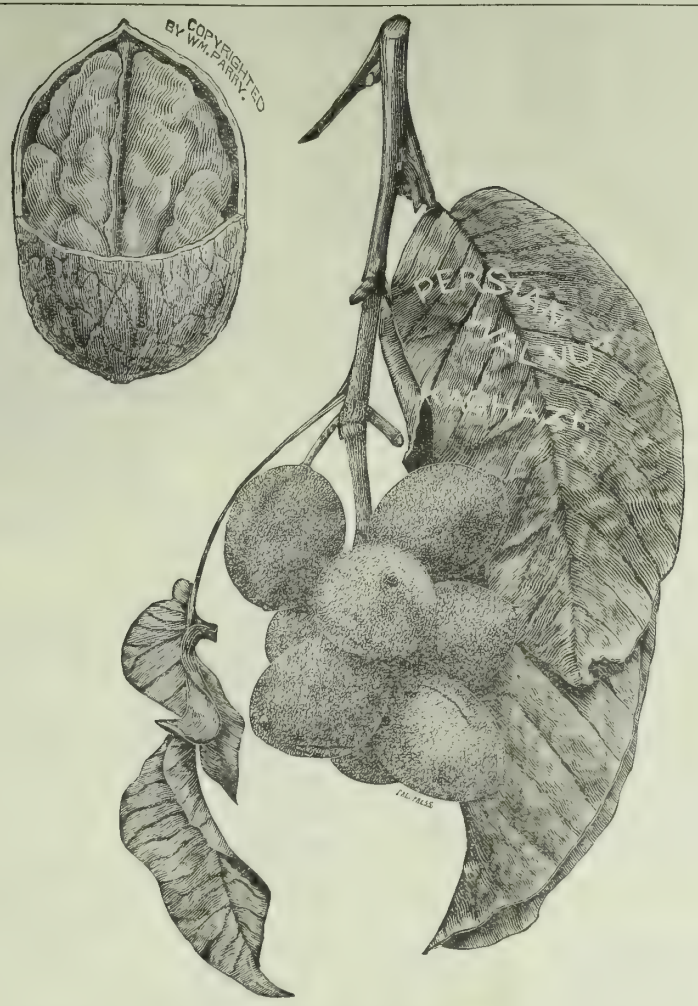
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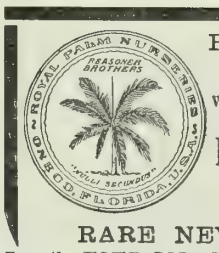
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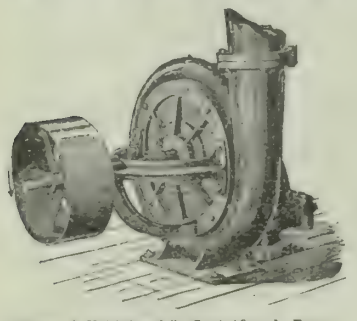
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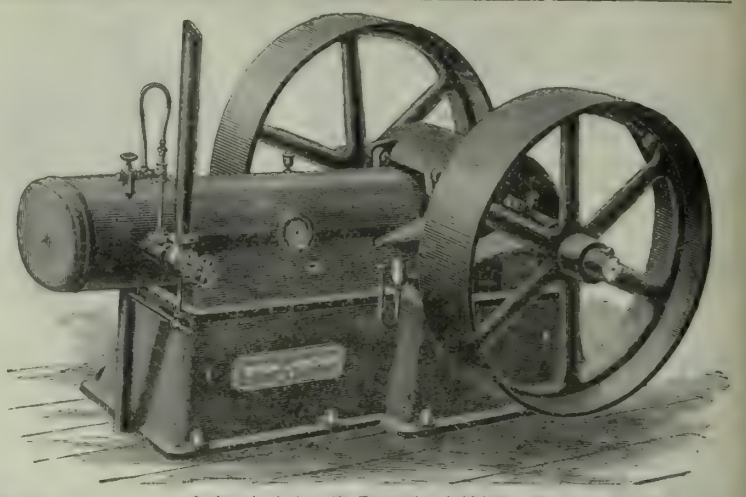
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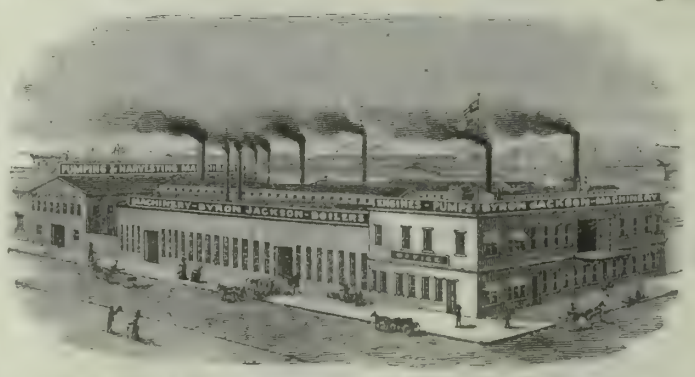
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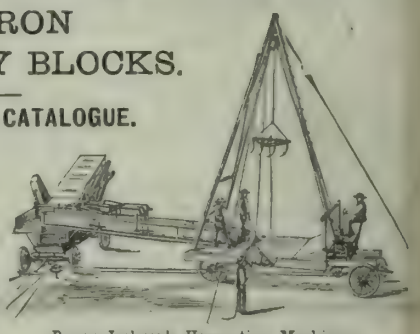
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PACIFIC RURAL PRESS

Vol. XLIII. No. 13. SAN FRANCISCO, SATURDAY, MARCH 26, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Foolish Opposition.

Does it ever occur to those very earnest farmers and others who are attempting to antagonize the Nicaragua Canal project that they are playing directly into the hands of the railroad monopoly of which they complain so bitterly? Do they not know that there is no such foe to railway extortion as water competition? Do they not know that, with the canal an accomplished fact, every article which we import, and in whose value transportation is a factor, will be cheaper than now? Do they not know that every commodity which we export will yield us more money because the cost of carriage will be less? Do they not know that every acre of land in California will be more valuable when every commodity produced from it becomes more valuable? Can they not be made to realize that opposition to the canal project is foolish and inconsistent to the last degree?

What these protestants should do is to cease their absurd opposition to the canal project, and instead, to join in an effort to make the *terms* of the Government's part in it more clear and definite. The ownership by the Government of a majority of the stock should be made absolute and its supervisory authority permanent and unquestioned. This is a point upon which the public cannot be too solicitous; but in urging it, and in standing stubbornly upon it, there is no need to go to the length of opposition to the project itself.

Monopoly of the Soil.

Not for many months has there been so important a contribution to current thought concerning contemporary affairs as the lecture by Mr. Mills on the subject of land monopolization, from which we have made liberal excerpts. The growth of large land-holdings in California has been rapid during the past ten years, and, while referred to now and again as an evil, has never before been roundly denounced as a real and imminent social danger. An alarm, heretofore merely gossiped about, is now sounded from the house-tops in a tone and by an authority that ought to attract public notice. By this discussion, Mr. Mills has done the State great service, for if, as he concludes, "large land-holding deteriorates the character of citizenship, impoverishes the general commonwealth, creates a caste in society, degrades the common people, deprives vast numbers of men of the opportunity of self-support, withholds from the masses the rights of life, liberty and the pursuit of happiness, the acquirement and enjoyment of property, and, beyond this, menaces the stability of free government itself"—if all this be true, as we believe it to be—Mr. Mills has raised up a political question, which, in its importance to the people of California, overshadows all other issues now before them.

There is no question as to the right of a community to preserve itself; and, this being true, there is no doubt as to the authority of the State to enact such legislation as will destroy this giant evil of monopoly of the soil. The plans suggested may not be the best, but they are worth thinking about, and we commend them to the public.

Irrigation by Artesian Wells.

We have had many paragraphs upon irrigation by artesian wells and have given engravings showing the flow of water from such sources, but the one upon this page representing a reservoir filled by a well, it seems to us gives a better idea of the amount of water thus secured from subterranean sources than any picture heretofore presented.



ARTESIAN WELL AND STORAGE RESERVOIR IN THE UPPER SAN JOAQUIN VALLEY.

The scene is in the artesian well region of the upper San Joaquin river where so much has been accomplished by means of well-boring during the last few years. It is a characteristic valley picture of the present day, and is in marked contrast to the preirrigation landscape. The water is drawn from the reservoir into ditches for distribution to adjacent fields or orchards, and in this way a single well of generous flow may render fertile quite a large acreage of valley soil.

To Resume.—It is announced that the affairs of A. Lusk & Co. have been settled and the business will go on the same as heretofore, with the addition on the Board of several local capitalists.

Correspondence.

Correspondents are alone responsible for their opinions.—Ed.

Napa Valley Notes.

Napa, March 17, 1892.

To the Editor:—Our oldest inhabitant is racking his memory to see if he can bring to mind just such a pleasant, delightful winter and early spring as we have this year enjoyed. His memory fails him. Certain it is that a more enjoyable season could never have fallen to our lot. From the first rains in November to the present date, showers have come in good time and generally in just the amount needed; neither too large nor too meager.

There have been no cold, protracted storms, no heavy frosts. Although vegetation made slow growth during December and January, still, since the opening of February, grain of all kinds and pasturage in general, has forged ahead at a lively rate. Consequently, at this writing the prospects of excellent crops are good, could not be better.

The great danger now, is of frost, which has a habit of dropping down on orchard, garden and vineyard, some years as late as the first week in May. We trust this will prove an exceptional year in this respect, but the balmy air of March has caused the fruit to develop at a rapid rate, and our orchards present a most beautiful appearance. It will not be long before the vineyards will be draped in garments of a delicate shade of green. Barring frosts or blighting winds, we shall have a bountiful harvest.

Sunday the 13th inst. a searching norther swept down the valley, drying up, at a rapid rate, all surface moisture. Could we but know the volume of water these winds absorb from the soil during one day even that they prevail, it would most assuredly astonish us. That these winds are very disagreeable no one will deny. Even dumb brutes manifest their discomfort at such times. We hope that at an early date some of our learned meteorologists will make these, in very many ways singular winds, a study, and publish for the edification of an interested public an exhaustive report, embracing among other things the locality where they originate, the cause of their very depressing effects, the eccentricity of their waves—for we often have passed from a hot stroke to one very cool—and other singular ways of the northers which periodically visit us; though we opine they are less severe, and prevail not as often as 20 or 30 years ago. Or are we growing forgetful?

Long ago our farmers disposed of last season's crop of wheat; some at fair prices, some waited for a rise, and got a fall. Large quantities of hay were stored in this vicinity by farmers, on their premises, but of late, several hundred tons have been shipped by water to San Francisco, and sold for mere living prices. When hay brings $15 or $16 per ton, there is some money made in raising it, but where only $8 or $10 per ton is realized, the hard work of harvesting the crop is but poorly rewarded. Take one season with another, hay pays moderately well. Can we wonder that farmers often wish for "the good old times" when hay sold for $20 per ton and wheat for five cents per pound?

"Hard work and poor pay" is the cry of many a farmer, but the thrifty, industrious, prudent rancher, if he does not at once or never get rich, in the common acceptance of the term, does live a healthy, peaceful life, has scores of blessings the rich do not enjoy and acquires at least a competency. When his work on earth is finished and he, willingly or unwillingly, obeys his summons hence, he takes with him just as much in the way of this world's goods as any so-called bloated bondholder, and oftentimes in the way of character, in which consists the true riches, far more. After all, our farmers do not have so hard a time as some of them imagine they do. We never knew a man, in whatever business he followed, to prosper who neglected his interests and acted as if he did not care whether school kept or not. We never expect to.

Our fruit growers especially are interested in the subject of cheap rates of freight eastward, which subject is so much agitating the merchants of the metropolis of late. If only freight charges east were within reasonable bounds, our orchardists would have more courage to increase the number of their trees, and with more zeal and interest, place upon the market their excellent produce. As it is, the grower often receives but little for his labor, while the middleman and the railroads get the lion's share. Speed the day when lower transportation rates shall prevail. Our residents will hail it with joy. It will mean for this valley great enrichment. Speed the day, also, when the Nicaragua canal shall be completed. Then, certainly, if not before, will exorbitant charges give way to cheaper rates.

In this matter of letting our national authorities at Washington know how much the people of this coast desire the early completion of said canal, our Board of Supervisors have taken timely and commendable action by taking the initiatory steps toward holding a State Convention in San Francisco on the 29th inst. The papers of this coast can do the people at large no greater favor than to urge onward, with all their influence, this matter.

The condition of our roads has not been so much criticized this season as during the past two or three winters. In fact there has been no cause. They are and have been, generally, all through the season, very good indeed. Yet this is owing to the lack of heavy rains, in great measure; to be sure our highways are in better condition each succeeding year, but the cost of putting them thus is great; too great, say the taxpayers, who wish for a change in road laws. Who will give the people of this State a perfect road law? That man who will do so will be overwhelmed with thanks; his name will be written in book and newspaper in boldest type and his praises will be sung in every town and hamlet within our borders. Years and years of trial at this, and yet success has not yet been attained. Considering all this, we are tempted to ask; will it ever be?

R.

The Field.

Peanuts.

Oroville, Butte Co., March 7, 1892.

To the Editor:—Tradition or the method followed by others has nothing sacred in the eyes of a Californian, and if he were asked to build a Noah's ark, or superintend the planting of a garden of Eden, he would confidently expect to make some decided improvements upon the originals.

It might seem that the growing of peanuts was a very simple matter and ranked alongside of raising potatoes or peas, but such is not the case. The region of country adapted to peanut culture is limited to Virginia, North Carolina and Tennessee, and during the past 40 years but few changes or improvements have been made in the planting or harvesting of this important crop.

Until recently, the Eastern planters placed the nuts in the ground by hand, which was a slow and laborious process. Now, they are planted with a machine which sows from six to eight acres a day, and is a vast improvement over the hand process. In the East, the old-fashioned method of pulling the nuts from the vines by hand is still in vogue, and this is an enormous expense, requiring the labor of 100 persons for a week or ten days to pick in this manner the crop of 50 acres of peanuts.

A Californian has invented a more expeditious plan for this work, though his device is very simple. A vine is held in one hand and a bit of hoop iron in the other; the vine is then laid across the edge of a board and a few blows with the piece of iron frees the nuts from the vines.

In the East the nuts are shelled before planting, and this is a slow and laborious process, because the work must be done by hand, for if the delicate pink skin of the nut is broken, then the nut is spoiled for planting. As many small farmers in the Atlantic peanut region raise this product, it is customary for them to invite their friends and neighbors to assist them in preparing the nuts for planting. These are called popping or shelling bees, and are as popular in North Carolina and Tennessee as apple bees were at one time in the North. The California planter has learned that it is not necessary to remove the shell, and, if he plants in the field at all, that he need only crush the shell and thus much time and labor is saved. The Eastern planter has to contend against many setbacks, for if the weather is too dry the nuts will not sprout; if too wet, they will rot. Birds of all kinds are greedy for the nuts, and moles make sad havoc of the planter's work. In California, a simpler, more expeditious and a cheaper plan is used in first planting the nuts in a hot bed. This enables the cultivator to confine his attention and diligence, against birds, moles, gophers and other enemies, to a small space. He can irrigate this bed or protect it from excessive rains at pleasure, and thus he finds this the preferable plan for starting the nuts. As soon as the little plants are large enough, they are transferred to the field and set out in the center of long beds about three feet wide. The ground should be a deep, rich, fertile, sandy loam; it must be cultivated thoroughly and kept free from grass and weeds. The vines must be irrigated, yet too much water will kill them. Here the nuts are planted in March and the vines pulled in September, while in the East they are planted from a month to six weeks or two months later. Our Eastern friends pull the vines after cutting the tap root and place the vines with the nuts adhering to them in the sun, so as to dry out the surplus moisture. Here, care must be taken that the sun is not too hot, for it will blacken and spoil the nut. If the heat is too great, then the vines should shade the nuts when hung up to dry.

The vines are used to fatten cattle, while hogs are turned into the field where the nuts were grown and root up every one that is left in the ground. The pork made from peanut food is exceedingly fat, but the meat is soft. After the nuts are removed from the vines they are run through a fanning mill to cast out the light and worthless ones, and to knock off as much of the dirt as possible. They are also turned in a barrel with cracks to let the dirt fall out. In factories they are run through large iron cylinders, kept constantly in motion to scour or brighten the shells. In the city of Norfolk there are no less than nine of these large factories. Here a million bushels of peanuts are cleaned, assorted and packed each year. The salable ones are packed in three grades: extra, 1 and 2. The small ones or those containing but a single kernel, are sent to the confectioner. They average about $1.45 a bushel, it taking 22 pounds of nuts to the bushel.

In 1886, Virginia raised five-sevenths of the total quantity of peanuts grown in the United States, there being in the whole country 3,500,000 bushels, with a valuation of about the same number of dollars. Even in Virginia, the successful cultivation of these nuts is confined to half a dozen counties in the southeast corner of the State. Now in California there is a vast area of land that will grow these nuts successfully and profitably. They have been grown in Shasta, Tehama, Colusa, Butte, Yuba, Sacramento, Lake, Alameda, Orange, Los Angeles, Tulare and other sections.

The profits in California are in most instances satisfactory. We select some instances where the profits realized are given: Twenty acres yielded 400 sacks or 16,000 pounds that sold at six cents a pound or $960, thus bringing $48 an acre. Nine acres yielded 191 sacks, valued at $458.40 or $51 an acre. A third tract returned 200 sacks on eight acres or $480 for the crop which was $60 an acre. A 10-acre tract yielded 400 sacks which sold for $960 or $96 an acre, while a fifth tract of three acres returned 200 sacks which brought $480 or $160 an acre.

One advantage in growing the peanut is that the crop can be produced year after year on the same land without danger from any disease.

The white and red peanuts are both grown, the red nuts being more easily produced than the white ones. The former runs near the ground while the latter is more of an upright bush. The white nuts are treated with sulphur like the walnuts and almonds, to whiten the shells.

The principal peanut regions in California are about Vina, San Jacinto, along the river bottoms in Sacramento county, at Pomona, Santa Ana and near Haywards.

In the United States the bulk of the crop is roasted and eaten, but in Europe it plays a more important part. The nuts are pressed and from them a clear, sweet oil is produced. This oil is good for almost every purpose that olive oil serves. It is a good lamp oil, burning with a bright, full light and a clear flame. The pressed nuts, called marc, is sent to England for manure.

This oil cake also serves for food for cattle. The nuts yield from 36 to 38 per cent of oil. This oil is a rich, sweet and delicate oil that is largely used in the manufacture of oleomargarine. It is one of the best lubricating oils in use and serves a variety of other purposes. Under a fancy French label the common peanut oil is sold largely in the United States for salad and table purposes. The nuts have other uses, for when ground up they are mixed with cacao in the preparation of chocolate. Confectioners buy immense quantities of the small nuts to be used in making peanut taffy, and in nougat being used as a substitute for almonds in the latter. The oil is largely used in the manufacture of soaps, and many a celebrated actress who gives a recommendation for some fine olive oil soap has simply recommended good peanut oil soap, for only an expert can tell the difference. The peanut is thought to be a native of Africa, but it is found wild in Brazil.

Marseilles is the great peanut market of the world, and it is stated that that city uses $6,000,000 worth of these nuts every year. Nuts are shipped to Marseilles from the coasts of Africa, South America and from various parts of Asia.

Vast quantities are also shipped to Antwerp, so that it will be seen the peanut plays quite an important part among the different crops of the world.

In the Southern States peanut flour is manufactured in considerable quantities, while in North Carolina the negroes have a peanut porridge that is quite popular. They also roast the nuts and use them as a substitute for coffee.

The production of peanuts in California is yearly increasing. The price obtained is usually satisfactory to the producers and the market is not easily overcome, so that we may look to see the quantity of nuts produced here largely in excess of the amount grown at the present time.

S. S. Boynton.

Richard Gird on Beet Sugar.

Richard H. Gird of Chino, who has been in the city for a few days, will leave for home this morning. He is probably the largest individual grower of sugar beets in the world. He has 50,000 acres of land surrounding Chino, and this year will have 4000 acres of it in sugar beets. He is under contract to raise all the beets that are required for the beet sugar factory at Chino. His contract requires him to raise 5000 acres of beets next year, and the same acreage the following year. About 1000 acres of this year's planting are up and ready to thin. This is considered a remarkable showing, for the reason that in the East and Europe planting will not begin for about two weeks. Within three or four weeks 400 men will be at work on the Chino land, thinning beets.

In conversation Mr. Gird repeated the oft-published statement of what an excellent field California is for the beet sugar industry, and emphasized his remarks by forcible comparisons. Taking the Chino factory as an average-sized plant, it will require about 750 factories to produce enough sugar for the consumption of the United States alone. There are only five factories in this country, three of them being in California, namely, at Chino, Alvarado and Watsonville. The other two are in Nebraska, one being at Norfolk and the other at Grand Island. The weather in Nebraska is now so cold that the beets in this State will be half grown when planting begins there.—Chronicle.

Entomological.

Applications to Prevent Borers.

Campbell, Santa Clara Co., March 16, 1892.

To the Editor:—In your issue of 12th inst., you gave a remedy, *i. e.*, a "Prevention of Sunburn and Borers." We have been trying to find some remedy by which borers can be prevented from entering the bark of our trees. We have tried many so-called preventives. The result of this trial has not yet been fully reported. I tried three, but one of which I can recommend. It was furnished me by Prof. D. W. Coquillett of U. S. Department of Agriculture, Division of Entomology.

Prof. Coquillett's Advice.

I do not know of any other method of destroying the peach borer in growing trees except that of cutting out the borer with a sharp knife or other sharp instrument. To *prevent their attacks*, the portion of the tree where the borer usually enters should be painted over with a solution of Paris green and soap suds, care being taken not to allow any of this mixture to come in contact with the young fibrous roots. This should be applied to the trees prior to the middle of April of each year. The young borer, when hatched from the egg, will then be compelled to grow his way through this mixture on the bark of the tree, and will in this way eat a sufficient quantity of the Paris green to produce his death. I have never had an opportunity to test this remedy, but I should advise trying a bar of hard brown laundry soap dissolved in two gallons of hot water, and when cold adding to it one-fourth to one-half an ounce of Paris green, first making the latter into a paste by the use of a small quantity of water. This mixture should be repeatedly stirred while applying it to the tree.

Another Application to the Bark.

The other prevention is recommended by S. G. Rodeck,

Secretary Campbell Horticultural Society. He has used it and will use it again. It is as follows :

"Take stone lime, slack and prepare it as for an ordinary whitewash, in an old box or barrel. Take enough at a time to make a bucket two-thirds full of the proper consistency for ordinary whitewashing. Now add one pint of gas tar, one pound of whale oil soap dissolved in hot water, or one pound of potash, or strong lye from wood ashes, then add clay or loam enough to make the bucket full of the wash of the proper thickness to be applied with a whitewash brush. If trees have had the earth ridged up around them, take the earth away from around the collar and apply the wash to the body of the trees from the branches to the roots.

This wash, thus applied, will drive all borers out of the trees and prevent their eggs being deposited on or about the trees. Will also kill the bark louse. Should be applied annually in May (I think it should be applied a month earlier). All who grow apples, pears, quinces or peaches should use this wash. I have known peaches badly infested with borers, on which this remedy was applied but once, causing the borers to leave and the trees soon became vigorous."

I hope these preventions may benefit many of your readers. F. M. RIGHTER.

THE BOTANIST.

Col. Armstrong's Munificent Gift to the People of California.

[S. F. Morning Call, March 18, 1892.]

California is to have a State Botanical Garden—has it already, in fact—for the preservation of her natural trees and the naturalization of foreign species.

Col. J. B. Armstrong of Santa Rosa is the donor. He has set aside 640 acres of the finest redwood timber land in Sonoma county for the purpose. The deeds to the property, and its transfer to the people of California in perpetuity, have all been arranged. The gift is an accomplished fact, and the following five trustees have been chosen to manage the trust and carry out the wishes of the donor: Miss Kate Armstrong, E. J. Wickson, Charles Howard Shinn, Luther Burbank, Robert Underwood Johnson.

These persons have already signified their acceptance of the trust and the duties it will impose, and have agreed to hold their first regular meeting during the coming summer. Col. Armstrong is quite an elderly man, but is still active, and will doubtless remain the nominal head of the institution during his lifetime. Miss Armstrong, the first trustee named, is the daughter of the donor. She is much interested in forestry, and shares her father's fondness for the great trees of California.

Prof. Wickson, the second trustee named, is well known throughout the State for his connection with the State University and as agricultural editor of the RURAL PRESS. The third trustee, Luther Burbank, is probably the leading experimental nurseryman in the United States. His home is in Santa Rosa. Charles Howard Shinn, another of the trustees, is one of the best known literary men and writers on the Pacific Coast. He is prominently connected with the *Overland Monthly* and a voluminous contributor to the Eastern magazines, usually on California topics, and not infrequently on subjects connected with the forestry of the State. His advocacy of the preservation of California forests, and his depth of learning on the subject, were doubtless the considerations which led Col. Armstrong to making this commendable selection.

Perhaps the most notable appointment made by Col. Armstrong was that of Robert Underwood Johnson, the assistant editor of the *Century Magazine*. Col. Armstrong makes no secret of the fact that this appointment was made because of his admiration for the plucky manner in which Mr. Johnson carried on his part of the fight for the preservation of Yosemite and Sequoia Parks, for his great knowledge of trees and the intense interest he has always manifested in the forests of the Golden State.

This is the first public announcement of Col. Armstrong's great gift to the people of this State. The donor is a modest man, who has shunned publicity as much as possible. His sole motive in making the donation has been his great interest in the future of California and his great desire to have her native trees preserved in all their pristine beauty and grandeur. From the fact that it is nearly a year now since the tract was formally deeded to the State by Mr. and Mrs. Armstrong, one may readily believe that the donors were only actuated by the most unselfish motives.

The tract comprises a mile square of redwood timber land on the north bank of the Russian river. Not a tree has been touched since nature planted them there centuries ago, though in the natural clearings several farmhouses and cottages have been erected for the accommodation of visitors and the men constantly employed on the place. Since its donation, Col. Armstrong has himself borne all the expenses of its proper maintenance, and it is fully expected that before long the Colonel will bestow upon it a considerable permanent endowment.

To the north, the tract is backed by a high mountain wall, sheltering it from the cold winds. A large portion of the tract is the bottom land of one of the tributaries of the Russian river, and is thickly covered with some of the finest redwood trees to be found in the State. One corner of the land reaches down to within a mile of the railroad at Guerneville. It is not far from the Bohemian Club's camping-grounds, but is said to excel in point of picturesque scenery and natural advantages even the famous Bohemian ground.

As yet, but little other work than that necessitated in keeping the place in thorough order has been done on the new botanical garden, but as soon as the trustees have met and decided upon the first steps to be taken toward carrying out the purposes for which the land was donated, active work will be begun and carried on aggressively.

The garden is to be thrown open to summer schools like the Chautauquas, and to be made the rendezvous for scientific and literary persons who desire to see something of California's great forests during their summer outings.

Col. Armstrong deserves great credit for his timely donation. He is one of the few men who are disposed to employ their riches for the public good before death has made their possessions worthless. Moreover, by his timely action, he has practically precluded the possibility of his wishes in this direction being miscarried either by the rapacity of near relatives or the law's technicalities. He has chosen wise and prudent trustees, and will have ample time to test their loyalty to the trust. The deed by which the transfer of this valuable land was made was signed not only by the donor himself, but by every member of his family who in after years might have a technical right to question its validity.

The property already has a small but certain income, and there is every prospect that it could soon be made self-supporting should it receive no further endowment. At present, its income is derived from a small prune orchard. That part of the land which is cleared boasts the most fertile of soils, and further orchards will be set out at once. As it stands to-day, the property is worth fully $150,000. It would bring that in the market. Its prospective value, of course, is far in excess of that figure, and those who have seen the ground declare that it will soon be one of the most valuable tracts in the county.

The donor of the California Botanical Gardens—for that will doubtless be its formal title—comes from one of the oldest and most respectable families in Ohio. He wore the blue uniform of a volunteer colonel all through the civil war, and upon its close came to California to live. He was a wealthy man in those days, as he is now, but the failure of one of the first of his California investments made him a poor man for the time being. He brought with him from Ohio an ample fortune of $200,000. Most of this—in fact, all except a few thousand dollars he invested in timber lands—he put in the old Duncan Bank. When this institution failed, Col. Armstrong lost all but his redwood interests. These, however, soon became very valuable.

For several years Col. Armstrong owned and edited the Santa Rosa *Republican*. With the increase of his redwood interests, the Colonel sold his paper and moved to Cloverdale, where he devoted his whole time to the latter industry. He has made a great deal of money from redwood, and aside from the tract donated to the Botanical Garden, he has large holdings in Sonoma county.

Sequoia Specimens for Distant Parts.

In a canyon of the Sierras, 48 miles east of Visalia, a splendid specimen of the Sequoia Gigantea has lain under the snowdrifts during the past few months. It was felled in October, and the task occupied two men 14 days.

Last summer, Prof. Sargent of Harvard University instituted inquiries regarding the best source from which to procure a section of one of the big trees, to be placed on exhibition in Central Park, New York. Subsequently, Prof. Dill of the same institution came to California, and, going first to Visalia, visited the Sequoia Mills. He selected a tree which met his requirements, and engaged the company to cut out a section.

The tree had to be undercut. The outer portion was removed by axes, and it was then sawed in the center, a cut 12 feet wide and 8 feet long being made. To fell this giant of the forest, one side was raised by steel wedges, and when it reached the ground, there was a crash and a vibration like the shock of an earthquake.

The tree fell clear of the stump, was perfectly sound, without fire marks, and the bark was uninjured. At the height of 240 feet it measured eight feet in diameter, and 60 men could form in a circle around the outer edge of the stump.

Near the base of the prostrate monarch of the forest, a section four feet long and 25 feet in diameter, and shaped like a cartwheel, was cut out. So far as known, this is the largest section of a Sequoia Gigantea ever procured from California for exhibition purposes.

Prof. Sargent was so pleased with the specimen obtained that he sent a second order to the mills asking that a section as nearly as possible of the same dimensions should be taken from the same tree, to be sent to the British Museum.

This was done, and both specimens now repose beside the trunk. The advent of winter prevented their shipment in October, but it is expected that by May they can be forwarded to their respective destinations. They will be divided into movable pieces, drawn in wagons to Visalia, and shipped on flat cars, first to this city and then to New York. It is believed that, in the transaction, Prof. Sargent has been the agent of C. P. Huntington, who is the real donor —Call.

SWINE YARD.

Ringing Hogs.

GALT, CAL., March 14, 1892.

TO THE EDITOR :—In the RURAL of Feb. 13th, Mr. H. E. Dye asks for some practical information in regard to ringing hogs. As I have seen no answer so far that seemed practical to me, I will give him my plan for what it is worth.

First, my pen is about 20 feet long and 10 or 12 feet wide at one end and runs to a point at the other for convenience in catching. In the broad end is a small door easy to open and shut. This pen will hold 20 to 40 hogs, according to size, and leave room to work. The operator stands near the small door. If the hogs are small, one assistant will do, but if large two are necessary. They catch the hog by each one taking hold of one of its hind legs and draw it back to the operator, and hold it so that it stands upon its front feet, with its hind legs stretched out straight behind it and held firmly on the ground so that it cannot move backward. The operator steps astride of its neck with his face toward the hog's head, then, placing the palm or heel of the left hand upon the hog's snout with the fingers extended back out of danger, he presses down until he gets a reasonably firm pressure, then carefully closes his hand around under the hog's lower jaw and draws its head up between his knees until it looks him squarely in the face. A hog thus held is powerless to resist and seldom struggles, and you can with the right hand insert the ring in any position that you please. Then, with one hand and your feet, you bring the hog's head around toward the door, which you open with the other hand, so that when released he passes through out of the way. There is no worrying or bruising of the hogs. It is quickly done. Three active men will ring from 30 to 50 hogs in an hour. I use Hill's hog rings and pincers.

C. M. WEST.

FARMERS' INSTITUTES.

The Work in Los Angeles County.

A Farmers' Institute was held in Los Angeles on March 4 and 5, during the Southern Citrus Fair. The sessions were held in the hall of the Los Angeles Chamber of Commerce, and were conducted by Prof. Wickson of the State University, who opened the meeting with appropriate remarks.

The first paper read and discussed was by C. C. Thompson of Pasadena, who spoke upon "Fruit Production and a Market," calling particular attention to the fact that the price received by the grower and that paid by the consumer was altogether out of proportion, and that the rapidly growing fruit industry of Southern California, in order to afford a profitable outlet for its product, must devise ways and means for finding a larger and more remunerative market.

The discussion brought out several instructive points, Mr. T. J. Luccock and other speakers advocating the building of canneries and driers in the different localities upon the cooperative plan. Others contended that the establishment of agencies in the East, that would sell direct to the consumer, would do much toward lessening the margins that are now enjoyed by the middlemen and jobbers.

Time was also given to an interesting discussion upon numerous subjects presented in the form of questions by those present. Prof. Wickson delivered an address on "What Horticulture Has Done for California," showing the financial results, also the effects of horticulture on the development of health, intellect, morality and good citizenship, and he wound up with a description of the educational work now in progress at the State University, urging all to take an interest in the State institution and avail themselves of its benefits as far as possible.

The afternoon of the second day was largely given to a lecture by Prof. Hilgard of the State University on Soils and Fertilizers, which was pointedly illustrated by reference to many studies of Southern California soils, waters, products and fertilizing materials, which have been made in the agricultural laboratories at Berkeley. Direct advice was given in many important matters and the interest awakened was clearly shown by the questioning and discussion which followed.

Mr. C. M. Heintz, proprietor of the *Rural Californian*, also made an excellent address on the Peach Yellows, which awakened much interest.

PERMANENT ORGANIZATION.

For the purpose of arranging for institutes in the future, it was deemed advisable to effect a permanent organization, and a committee for that purpose was appointed, consisting of the following gentlemen: Messrs. Thompson of Pasadena, Luccock of Clearwater, Lee of Santa Monica, Dillon of Long Beach and Kruckeberg of Los Angeles. The report of the committee was adopted, and we publish the articles of association to show how simple they may be made:

PREAMBLE.

The objects of the Farmers' Institute of Los Angeles county shall be to promote agriculture, horticulture, the live stock industry, dairying, and kindred branches of rural life, aiming to advance the business and social relations of the farmers of this section; to show where wear and tear can be diminished, labor saved, methods of cultivation and production improved, and the general welfare of the soil-tiller advanced.

CONSTITUTION.

MEMBERSHIP.—Any person of good moral character over 18 years of age may become a member of this Institute; if a lady, by signing the roll of membership; if a gentleman, by signing the roll and paying in advance the yearly dues of 50 cents; this being for the fiscal year of this Institute, no deduction being made for the first year, though it be for less than 12 months.

OFFICERS.—The officers of this Institute shall be a president, two vice-presidents, a secretary and a treasurer, who shall constitute an executive committee for the transaction of all business that may come before the Institute when not in regular session, who shall be elected at the regular meeting in February of each year.

MEETINGS.—Meetings shall be held in different sections of the county in February, May, August and November of each year, and there shall be a committee of one or more appointed by the president in each township, whose duty it shall be to promote the holding of regular and special Institute meetings in each township, and in connection with the president and other officers of the county organization, make arrangements for holding the same.

DUTIES OF OFFICERS.—The duties of the officers shall be such as generally pertain to such offices, and to render a regular written report of the Institute proceedings pertaining to their respective duties, at the regular annual meeting.

VOTING.—Only members in good standing shall be entitled to vote at the annual election of officers, on amendments to the constitution, or the disbursement of funds.

AMENDMENTS.—All proposed amendments to the constitution must be submitted at a regular meeting of the Institute, and a two-thirds vote of all members present shall be necessary to adopt.

The following officers were then selected to serve for the ensuing year: President, C. C. Thompson, Pasadena; Vice-Presidents, T. J. Luccock, Clearwater; Abbot Kinney, Lamanda Park; Secretary, Henry W. Kruckeberg, Los Angeles; Treasurer, W. R. Barbour, Covina.

PATRONS OF HUSBANDRY.

The Secretary's Column.

[A. T. DEWEY, SEC'Y S. G. OF C., No. 220 MARKET ST., S. F.]

To the Leaders in the Field.

There are several important points to which we wish suggestively to call the attention of the State officers and Lecturers entered for the lecture field for a general canvass throughout the State of California.

First, the Trade-Card system, endorsed by the State Grange and now being patronized by quite a number of Granges, from some of which we learn that much benefit is being derived by individual Patrons. If better understood, we think every Grange in the State would make good use of the privilege of the Trade-Card plan on the part of at least some of its members. It is not as well understood in all its features as it ought to be. For that reason we hope every speaker who has not fully prepared himself to explain the subject and enlighten the members of every Grange, will take all pains to become fully informed, and will impress the importance of giving this system a thorough trial in all parts of the State as speedily as possible.

The Secretary of the State Grange will furnish each Lecturer, and in fact any member of the Order in good standing, on application, with the list of Trade-Card firms in San Francisco and other places, and with sample cards and such other printed matter as is now on hand in his office.

Another important subject for the Lecturers to bring forward in a clear and instructive manner, is that of the Patrons' Relief Association, just organized by worthy and reliable members of the Order, in accordance with the recommendation and authority of the last session of the State Grange at Haywards. Copies of the Constitution, Circular of Instruction and Information, and blank applications for the signature of eligible members under 60 years of age who are willing to join this life beneficiary association, will be furnished whenever desired, as above mentioned.

When the Grange gives its exclusive endorsement, as it has to these two auxiliary undertakings, it is the right and privilege, if not the duty, of each member to do his best to give them a full and fair trial.

It would seem certain that in most, if not all sections of California the privileges afforded through the Trade-Card system and the Patrons' Relief Fund can well be made proper and effective inducements for adding members to the Order, reviving dormant Granges and the establishment of new ones, if the advantages are duly set forth.

Patrons wishing further information on the above, or other matters relating to Grange affairs, should feel privileged to ask the same from their visiting Lecturers.

IN SOLANO COUNTY.

Past Master Overhiser visited Oakland on the 20th, en route for Salinas and the south. He was at Vacaville week before last, and spent several days in Vaca Valley, and reports the sentiment of those visited to be in favor of the Grange. Mr. Webster, Past Master, accommodated him with a ride about the valley, affording an opportunity of explaining the benefits of the Order. On Saturday, March 12th, the Grange met at Vacaville and received six applications. A communication from the U. S. Weather Bureau was read, asking the Grange to suggest the name of some person to receive and distribute telegrams, etc. The Grange selected Past Master Webster. Arrangements were made to raise a flag-staff for displaying signals in accordance with telegrams that might be received.

The horticulturists in the valley have a private telephone system, which is in very lively use in the fruit-harvesting season. Then teams are run during the night, and fruit is loaded into cars ready for transportation fresh and early in the morning. Before long electric light masts will be raised, along the highways in the valley, to accommodate and facilitate travel and night work when the shipping season comes on.

On Monday, March 14th, at a meeting (called not as a special but a general meeting) the first and second degrees were conferred on a class of seven, Mr. O. giving full instructions.

He afterwards visited Woodland, in Yolo county, stopping overnight with R. B. Blowers, who was confined to his house by sickness. Mr. Blowers expressed the belief that, with proper efforts, a Grange could be established at Woodland, and he would be pleased to render assistance in that line.

On Wednesday Mr. Overhiser visited Dixon, and at a called meeting in the evening gave instructions in the unwritten work. He was invited to attend the special canvass meeting on the 16th of April. He considers both Vaca Valley and Dixon Granges capable of being made strong and successful with a little more encouragement. Both are, in fact, in a fair way of becoming large and influential Granges.

Mrs. Peter Peterson of Antelope Valley (Sites P. O.), Colusa county, recently died of an internal tumor. For many years she has been an invalid in mind. She attended several sessions as a representative at the State Grange. Bro. P. and family have the sincere sympathy of many friends.

A. T. D.

QUESTIONS FOR DISCUSSION.—Sister Elizabeth Russell, member of the National Committee for the Pacific States on Woman's Work in the Grange, writes from Vancouver, Wash., March 19th, requesting the Committee on Woman's Work for the State of Oregon to name such questions as they think proper for discussion for the Granges of California, Oregon and Washington, for the months of April, May, June and July, according to previous announcements.

State Lecture Canvass.

Bro. B. F. Walton, Yuba City, March 20th, writes: "I feel well satisfied with the work of Bros. Davis and Coulter in Sutter county last week, and if we continue through our whole series of meetings the way we have begun, much will be done to strengthen and build up the Order in the State. Although somewhat stormy, not an appointment missed." He reports Past Master Flint as wide awake and ready for active work.

Past Master Overhiser writes from Salinas City, March 22d, concerning his belief that nothing can be done in that section short of a farm to farm canvass; in fact, he is decidedly inclined to favor extending that branch of the work generally. He left that afternoon with Hon. George Steele for Jolon, where they were to speak before San Antonio Grange and the public on the 24th. They expect to hold Grange and public meetings according to the following appointments, Hon. J. V. Webster joining them in the work at San Miguel:

San Lucas, Friday, 25th; Bradley, Saturday, 26th; San Miguel, Monday, 28th; Paso Robles, Wednesday, 30th; Creston, Saturday, April 2d; Arroyo Grande, Monday, 4th; Cambria, Wednesday, 6th; Carpenteria, Saturday, 9th.

Several of the lecturers have informed the Secretary of the State Grange that they will be unable to fill all the appointments given to them. Arrangements will be made, however, so that in case one or more of the speakers announced for any Grange are unable to attend, other able speakers will fill their places, and no uneasiness need be felt by patrons or other friends, but that one or more good speakers will be on hand to fill every appointment.

Oregon.

Linn County Business Council met at Tangent March 10th. Business matters were duly deliberated on. Mrs. S. Froman, Mrs. M. Payne and Mrs. M. J. Train were added to the general committee on arrangements for the State Grange. Thanks were extended to the ladies of Tangent Grange for their excellent repast and entertainment. The next meeting is to be held with Harrisburg Grange, April 2d. After adjournment, the following were elected delegates to the State Grange by a convention of Linn County Granges: F. M. Kizer and M. H. Wilds and their wives; alternates, R. A. Irvine and S. S. Train and their wives.

TEMESCAL GRANGE last Saturday indorsed the several memorials to Congress received from the N. G. Legislative Committee lately, and instructed the Master and Secretary to give official notice of the same to National Secretary Trimble. A Harvest Feast will be given, followed by a public meeting, on Thursday, April 14th, at I. O. O. F. hall, Oakland, on occasion of the State Grange canvass visitation of A. P. Roache, W. O. Eden Grange and other Patrons are cordially invited. Bro. Roache will be accompanied by other State Grange speakers, whom we hope to announce next week. They will also speak at Eden Grange, Haywards, on the following day, when the Harvest Feast will again be spread, and the usual liberal invitation extended to all Patrons to enjoy. Thanksgiving every day, you see!

THE NATIONAL EDITORIAL EXCURSION, comprising some 400 or more "eds" and "pubs," will enter California from the South, May 15th, to stay 12 days in the State. Through the Secretary, the Executive Committee of the State Grange is requested to appoint three members to act with like committees from other bodies to act as a General Reception and Information Committee, under the auspices of the Executive Committee of the California Press and Editorial Association. Due attention will be paid to their desires. We hope all hands around will give all worthy visitors a hearty welcome.

EXECUTIVE COMMITTEE MEETING — The Executive Committee of the State Grange of California will hold its semiannual meeting at the office of the Secretary, S. F., at 10 o'clock A. M., Tuesday, April 5th, for the transaction of general business.

FARMERS' ALLIANCE.

People's Party Leaders.

Pen-Pictures by a Bright California Lady Member of the Convention.

There was a wide-awake California woman in attendance upon the People's Party convention held recently at St. Louis—Mrs. Anette Nye— and her observations and impressions of the leaders in that meeting are very interesting, especially to Alliance readers. We print below her notes presented in a paper read before Duarte Alliance, No. 111, on the evening of March 12th:

By request, we give you some of our impressions of the men and women most prominent in the great industrial conference convened at St. Louis, February 22d to 24th. First on the list we will mention one well known to all of you as having been for many years prominent in work for the relief of the struggling masses, also in temperance work—Gen. J. B. Weaver of Iowa: a man whom to see is to respect; whose voice always commands attention; of medium height, well knit and sturdy as any farmer. Earnest purpose beams from a face of much power, yet one bearing evidence that success has not always crowned endeavor. Looking at the man we thought, "Battle scarred, but not vanquished." That he is ambitious there is little doubt, and we believe he is worthy also. Having had much experience in the past, he will undoubtedly be of great service in the struggle just begun.

Ignatius Donnelly of Minn.—Here we have an orator of the Beecher type, quite as flowery and more mirthful. Donnelly is not tall, but broad. A smooth faced, jolly, rollicking man; a good feeder, I should judge; one to make it lively at a picnic or a Fourth of July. He writes well, but talks better. Seeing the funny side of things does not prevent him from realizing the serious and pathetic quite as keenly. He has a gift for arousing both thought and action, and will prove of immense value to this new movement, by waking up the people and setting them to working out their own salvation.

L. L. Polk, of North Carolina.—It seems almost unnecessary to speak of this man to this audience, having met him personally as most of you have, no words of mine could add to his worth or cause you to more highly esteem him. A fine speaker, logical, persuasive and convincing in argument. His level head directs all he does or says so as to accomplish the greatest good, while his great heart beats in sympathy with all mankind. Loving all, he is beloved by all, and stands ever our ideal of an intelligent, noble Southern gentleman.

Ben Terrill, of Texas.—A fine looking man, a good presiding officer, and a good worker when in harness, though he was believed not to be so radically third party in his ideas as some others, yet he swung into line gracefully and will hereafter be found "keeping in the middle of the road."

Herman Tauberneck, of Ill.—Is a young man of fine physique, fully six feet I should think, and fair to look upon. Quiet and earnest in manner, impressing one with a feeling of trustfulness. A clean, straightforward, kindly gentleman, having strong convictions yet not caring to force them upon others; a modest man, yet one who will remain in the service long after many of the dazzling headlights have disappeared from view. We predict he will be heard from by and by.

Streeter, of Ill., and Davis, of Texas, are both striking figures. Able, eloquent and born leaders of men. Tall and impressive in appearance, one can but wish there were more of this type. Davis is witty and brilliant. He would not do discredit to the stage, and is sometimes dubbed "Cyclone Davis." Streeter is more quiet and a very clear reasoner, a polished gentleman.

McCune, of Texas.—This man has been assailed so unmercifully by the press of the country, that we felt curious to see what sort of a person he might be. Evidently he is a power, either for good or evil. Looking at the man, one would not pronounce him a rascal. Those most intimately acquainted with him honor him as much as any other man in this movement. Surely, if the "National Economist" is to be a witness, his works must be good, and as by their works we are commanded to judge men, we shall pronounce McCune one of our best as well as one of our ablest leaders.

The Georgia Delegation.—Alas! No pen can do them justice. Livingston, still believing in the virtue of one of the G. O. P's., has concluded to try it yet a little longer. He carried with him one other delegate, and so they are not "in it." The balance of the gentlemen from Georgia went into the People's Party with a vim. C. C. Post was one of them, and is a popular man among his friends, as is Livingston with his. These Georgia men made it lively at the Conference for an hour or two, but after the storm came peace and all went on again as usual.

(*Concluded next week*)

The Alliance Press

The Georgia Alliance will stand solid on the Ocala platform, and will support no man or party that does not accept these demands.—Southern Alliance Farmer.

There is a good time coming when no foreigner shall presume to own land in the United States. The soil belongs to the toilers, not to the spoilers.—Iowa Tribune.

After the two old parties have made up their platforms and declared against free silver, where will those Democrats and Republicans who believe in free coinage go? The door of the independent party stands open.—Nebraska Independent.

A Government has as much right to defend its people's lives from hunger as it has to defend them from death by foreign bullets. The Russian Government would not hesitate to ask a loan to prosecute a war; it could easily obtain a loan to obtain wheat for its starving people, and the United States could easily supply the wheat, taking Russia's notes for the food supply.—Truth.

What a grand platform we have got—the best ever promulgated in America. Read it carefully, paste it in your memorandum book and carry it along with you—it is good diet for the hungry. Now organize people's clubs in every township and school district. Don't lose any more time; organize at once and begin the fight—plutocracy's forces must be downed this year.—Butler (Mo.) Weekly Union.

IT is expected a number of leading Alliance speakers will address the People's party public meetings to be held at Livermore and Haywards about April 9th and 16th respectively. Some excellent Alliance meetings may naturally be expected in the central part of the State also, about the time of the State Executive Committee sessions.

EXECUTIVE COMMITTEE MEETING.—We understand the Executive Committee of the State Alliance will meet in San Francisco Tuesday, April 12th. No inconsiderable amount of important business is no doubt on the docket. Business Agent J. M. Moore, 221 Front street, can likely state the place of meeting.

A. D. CRIDGE of Lemoore, Tulare Co., offers to give "Plow-handle Talks" on timely subjects, on reasonable terms, etc.

STATE BUSINESS AGENT.—J. M. Moore states that business has been steadily improving the past few months.

A NEW F. A. & I. U. was lately organized by Prof. King, at Liberty schoolhouse, say Tulare citizens.

ALAMEDA COUNTY ALLIANCE quarterly meeting will be announced, probably in our next issue.

The State Fair.

Rules for 1892—Premiums and Purses To Be Offered.

SACRAMENTO, March 23, 1892.

The regular March meeting of the Directors of the State Agricultural Society was held last Monday at the office of the Secretary, at Sacramento, for the purpose of revising the premium list, rules and other preliminary matters for the State Fair of 1892. The following named members were present: Frederick Cox (Pres.), John Boggs, C. M. Chase, W. P. Mathews, Christopher Green, O. W. Hancock, Richard Gird and L. U. Shippee.

The Committee on Premium List presented its report containing many changes and improvements over the list of 1891.

In the Live Stock Department, horses entered in races were barred from competing for premiums except as a sire, or dam, or junior member of a family, and another new provision prohibiting horses that have heretofore been awarded the first premium in any class for four years old and over from competing hereafter. The potency requirement was amended by accepting affidavit that the stallion six years old and over and jacks five years old and over had produced colts within two years.

The Standard Trotter and Roadster Classes were not changed. The Draft Horse Classes were rearranged somewhat. Normans and Percherons were classed together, and an additional class given for Suffolk Punch. Clydesdales and English Shire were made one class. The general sweepstakes class was stricken out, inasmuch as in the opinion of the Board, it is impracticable, owing to the great many breeds of horses and the special uses for which each class are desired. They deemed it unfair to declare any one breed of horses superior to all others.

The Board hopes to be able next year to provide a sweepstakes premium in each class. The premiums in each class for mares have heretofore been scheduled for best four years old and over with colt and best four years old and over without colt. Restriction has been made prohibiting mare that has shown with colt to show again for premium without colt, but the exhibitor may elect which premium to exhibit the mare for, but she cannot be exhibited for both premiums.

The colt, however, can compete for best suckling in its class, as it is believed this is due the sire to permit the colt to compete with the mare and separately.

In the cattle department, the same inhibition for premium stock in the older class was ordered; that is to say, any animal that has received first premium for best three-year-old and over, will not be allowed to compete for the same premium again. This, we think a wise provision, as it enables the younger stock to compete against those near their own age, and not be compelled to compete continually against stock that has prestige of former premiums.

The dairy prizes for butter test, offered by American Short-Horn Breeders' Association, of $100 to first and $50 to second, were again accepted by the board of directors for this season.

In the herd classes, the old herd was designated to consist of stock two years old and over, and the young herd to consist of stock under two years old. This is made plain, so that the breeders may know in which herd a two-year-old must go. It is now definitely settled, that the two-year-old animal must show with the old herd, and those under, with the young herds.

It was also ordered, that upon making entry of cattle, the date of birth must be given with entry. An old and young herd premium was given, for each class of cattle, of $60 to the old herd and $30 to the young herd.

The only additional change made in the cattle department was the striking out of class 9 (graded cattle) and class 11 (milch cows.)

In the swine department, the special premiums offered by the American Berkshire Association in addition to the regular premiums, were accepted by the board. They provide 10 volumes of the American Berkshire Records for the best recorded sow and litter, and not less than five recorded pigs under six months of age, owned and exhibited by resident of the State in which the Fair is held.

In the sheep department, affidavits will be required as to date of lambing and dates upon which sheep were sheared that are exhibited.

In the poultry department, premiums for nearly all the standard breeds bred on this coast were ordered to be given.

The pavilion premium list was amended to a considerable extent, some of the principal changes are here given.

Inasmuch as the sugar beet industry is assuming considerable importance, and as improved methods are necessary in the planting and harvesting of this crop, the board have offered a premium of $250 for a sugar beet harvester of California invention and manufacture that will prove a success; a field trial must be had under direction of this board. For best improved beet seeder $10. Best improved beet cultivator $10.

The conditions of the incubator exhibit were changed completely. The Board believe that it is practically impossible to satisfactorily test the different kinds of incubators manufactured, and award any premium for "the best incubator," as it is certain to cause well-founded complaints of unfairness. No prize will therefore be given for the *best* incubators. Awards only will be made for displays about which there can be no question as to injustice. They have offered for the best display of incubators in operation $25. For the incubator hatching the greatest number of chicks during the exhibition, $10. For the best display of brooders, $10. For the best display of poultry houses, $10. For the best display of poultry fixtures, $10.

A special premium of 100 is offered for the best exhibit of electrical machinery in operation at the State Fair.

A special gold metal is offered for the best general display of brandies and wines. A premium of $20 is offered for the best barrel of wine vinegar exhibited by manufacturer; also a similar amount for cider vinegar.

Additional premiums were ordered for the following articles: Dried grapes, apple cider, clingstone pitters, free-stone pitters, apricot cutters and many other modern implements.

Mr. J. M. LaRue, the Stockton expert, who was appointed by the Board at the annual meeting last Friday to examine the books and accounts kept by the Secretary for the years 1890–91, made a report upon the receipts and disbursements and finances of the Society for the two years named, wherein he said:

"I find the books neat, clean, well kept and correct, with two exceptions, wherein the payment of $53 was made, for which the Secretary neglected to take credit. The system is excellent, and shows correctly at any time the condition of every summarized account. I had free access to all the books and made full comparison with all the Secretary's vouchers for the two years. I found the two balance sheets on file in the office correct and have so certified thereon. The manner in which the accounts are kept is a credit to the officer and the Society."

The Speed Program Committee reported progress and offered the following trotting and pacing portion of the program for the State Fair of 1892.

The colt stakes, closing March 15th, were satisfactorily filled (copy of entry sent herewith).

The following classes were recommended and adopted by the Board:

FOR TROTTERS.

Grand Stallion Stake for 2:15 class, of $150 each; payments divided as follows: $50 to accompany nomination; $50 payable August 1st, and the remaining $50 the day before the race. The Society to add $500 for three starters; $800 for six starters, and $1000 for seven or more starters. Stakes and added money to be divided 50, 25, 15 and 10 per cent. Entries to close April 16th.

Free for All, Purse $1500.
2:18 Class, Purse $1000.
2:20 Class, Purse $1000.
2:22 Class, Purse $1000.
2:25 Class, Purse $1000.
2:27 Class, Purse $1000.
2:30 Class, Purse $800.
2:40 Class, Purse $800.

FOR PACERS.

Free For All, Purse $800 and 2:20 Class Purse $800 were also agreed upon. The running portion of the programme will be formulated later on.

The Board of Directors abolished season tickets, and fixed the rate of admission at 50 cts. at the Park and 25 cts. at the Pavilion during the day, and 50 in the evening, with exhibitors tickets for single persons at $5.

The Directors have concluded that season tickets are a failure owing to the great abuse they are subjected to, and in making the change, the rates of admission were so fixed as to be within the reach of all.

The races given by this Association are of a high class, and in any other State would command an entrance fee of $1.

The expenses of the institution are quite large and the only way the Directors have to meet them is from its resources.

Life memberships were increased from $50 to $100.

After consideration of a few other matters of minor importance, the Board adjourned.

A Plea for California Youth.

The letter from Mr. James C. Kemp, visiting agent of the Boys and Girls' Aid Society of San Francisco, printed on another page, presents a question which ought to interest every citizen of California. Mr. Kemp points out one of the real social disadvantages of the State, namely, the lack of opportunity for boys and girls to gain industrial training. He writes, of course, with reference to boys and girls who have no parents, or whose parents take no heed concerning their future. But there is a much broader side to this interesting and important matter than he presents. It has not passed without notice that the children of California are not, in the mass, growing up to worthily succeed those who have come before them. While of course there are ten thousand exceptions to the rule, still it is the rule that the sons of California parents are not equal to the parents themselves. It is due very largely to the fact that there is here small opportunity to acquire the discipline which is essential to the formation of good character and correct habits of life—a discipline which can only be acquired through a drill of daily, monthly and yearly labor usefully applied. The machine shops and the factories are few. The labors of the farm, under the rule of indulgent parents, are too often without system, and factories there are none. There is in fact no organization of industry among us to provide work for the thousands of young people, who would be infinitely better in morals, as well as in pocket, if they had work to do. This opens up a broad field—too broad for discussion at this time. If public sentiment can be sufficiently aroused to correct the evil of which Mr. Kemp complains, it may be trusted to find a solution of the broader problem so closely related to it.

There is, as Mr. Kemp suggests, a great opportunity for some public-spirited man or association of public-spirited and benevolent people, to do for California industry what Senator Stanford is doing for California scholarship. An establishment such as Mr. Kemp proposes, that would take in one thousand or more boys and girls from fourteen to eighteen, teach them the practical methods of honorable industry, and at the same time give them that discipline, which, if not the basis, is always the complement of good character, would do a work which, in our judgment, would be better in its practical results than all that will be accomplished in those great schools where scholarship alone is promoted. We have in California great numbers of men whose vast fortunes have been acquired here largely through the bounty of Nature. Will not one of them take up Mr. Kemp's suggestion, and endow the industrial school which he proposes?

Agricultural Notes.

CALIFORNIA.

Butte.

GIGANTIC FRUIT TREES.—Oroville *Register*: G. H. Stout visited Bidwell Bar, and while there was shown a gigantic fig tree by I. R. Ketchum that is 108 inches in circumference. Owing to immense spread of limb and the great weight of the limbs, Mr. Ketchum has recently been obliged to prune it back to prevent it breaking down. He measured the famous orange tree which is 37 years old, and found it to be 53 inches in circumference at the base. It is 26½ feet high and very wide spread of limb. He says that the tree blossoms and bears fruit in spiral belts or rings extending around the tree.

IT KILLED THE TREES.—*Register*: An examination of some of the orange trees on which Paris green was used last year to kill grasshoppers, shows that the poison not only killed the insects but also killed the trees. The roots, where they came in contact with the poison, turned black, and the trees sickened and withered in a short time. Far more trees would have been living had the grasshoppers been let alone and no poison been used to exterminate them.

Contra Costa.

GRAPE GROWERS' ASSOCIATION.—Martinez *Democrat:* For a week past B. M. McKenna has been actively engaged in securing the signature of prominent grape growers in the vicinity of Martinez to call for a meeting at which a Grape Growers' Association shall be formed. The object of the association, we are informed, is for mutual protection and cooperation in the grape industry. Of late years our grape growers have had to contend against many things which have been detrimental to their interests, as well as injurious to the name of Contra Costa as a grape-producing county. Other counties have been receiving credit for the excellent grapes grown in this county, and the commission merchants of the metropolis have been reaping the benefit. It is proposed to stop this, as far as the grape growers in this vicinity are concerned. After the organization is effected, a depot for their produce will be secured in San Francisco, and a reliable agent secured to sell and handle all grapes shipped under the association brand. The grapes of this county, and especially those grown in the neighborhood of Martinez, are great favorites with consumers and bring the best of prices, but they should be sold as Contra Costa grapes, and not as coming from other counties which have a name for grape culture but do not grow as perfect and beautiful grapes as are grown in our county. It is very easy to change the grapes from one box to another with another county's label on it, but if the grapes are handled by a representative of the county, and sold in packages properly labeled, the quality of the grapes will speak for themselves, and credit will be given to whom credit is due.

Kern.

SHEEP-SHEARING NOTES.—Bakersfield *Californian:* Great preparations are being made throughout the sheep-raising sections of the county for the shearing of the fleece, and, during the next week or two, those who have never witnessed a shearing on a mammoth scale can see that interesting process by visiting any one of the following camps. At Delano 80 shearers will be engaged by Cuevas & Valencia, with 80,000 head to shear. Just a short distance from Delano, Harry Quinn will have 20 shearers at work on 20,000 sheep. Over at Blanchard's camp at Poso bridge, 50 shearers will be at work taking the winter coats off the backs of 40,000 sheep. And at W. L. Smith's place, near Delano, 20 shearers and 20,000 bleating wool bearers can be seen.

Placer.

EARLY FRUIT SEASON.—Auburn *Republican:* The ranchers in this section claim that the season is at least four weeks in advance of last year. This will prove a boon to the ranchers, as it insures them a top market for their early fruit, as there will be nothing but California fruit offered. There is every prospect at present for an excellent fruit crop in Placer county. Peaches and cherries are setting, and strawberries in almost endless quantities will soon be in the market.

LIGHT SNOWFALL AND ITS CAUSE.—*Republican:* John Spaulding, general manager of the South Yuba Water Company, makes the prediction that the water in the river will be very low this season. He says that years ago it was often necessary to shovel snow during the month of June in order to pass on the road at the summit, but of late years the snow is usually all gone in April. His theory in accounting for the early melting of the snow is, that it is owing to the destruction of timber in the mountains.

San Luis Obispo.

CROP ESTIMATES.—Arroyo Grande *Herald:* The rainfall has not been excessive, but it has come in a succession of warm showers and been all taken up by the earth. Good growing weather has followed every shower, and the grain is well advanced. The hay yield will certainly be phenomenal. In the mountains feed was very backward at the beginning, but it is putting in its best licks, with the result that all the foothill dairies are starting up. The bean crops around Arroyo Grande are not planted, of course, but the soil is ready and shows a mellowness seldom equaled. The area to beans will not be much above last year, but the yield will be fully one-third more if the season continues favorable. The area to hay and grain has been largely increased; every canyon shooting up from the valley shows abundant evidences of this. Hundreds of new tracts have been cleared off and planted. Corbit canyon alone will show an increase of over a thousand acres that have been cleared and put under cultivation. This is especially observable around Verde, where Mr. Beckett is dividing up a large tract and selling it out in small holdings. On the Nipomo, also, there is a large increase, and in the Santa Maria valley it is estimated that the area in grain is enlarged from six to eight thousand acres, but the area planted to beans will show a decrease of about a thousand acres.

Stanislaus.

WHEAT-GROWING.—Modesto *Herald:* We hear farmers assert that wheat-growing has ceased to be profitable in this county, owing to the lack of natural moisture and the low prices that have prevailed during the past few years. It is true that the wheat market, for several years, and until last season, has not inspired a large amount of confidence, but it is evident that bottom prices have been tapped, and prices will be high for several years to come. The moisture trouble is soon to be overcome by artificial application of water, which will be provided by the splendid system of irrigating canals now in process of construction, and which will be in practical operation inside of two years. Wheat can be produced by irrigation, if properly applied, just as well as fruits, vegetables and alfalfa; but these latter are just as important to successful farming as large crops and high prices.

Tulare.

FRUIT NOTES.—Orangeville Cor. Hanford *Journal:* The apricot trees are loaded with young fruit. If Jack Frost does not visit us any more this spring, the crop will be large. Raisin grapes are at least three weeks earlier this season than common. New growth, six inches long, with blooms for grapes, were found on the Richland colony on the 10th of March. I. A. Ritchey has sold his second crop of raisins for two cents per pound in the sweat box f. o. b. at Hanford.

THE HOME CIRCLE.

The Sweetness of Life.

It fell on a day I was happy,
And the winds, and the convex sky,
The flowers and the beasts in the meadow
Seemed happy even as I,
And I stretched my hands to the meadow,
To the bird, the beast, the tree;
"Why are ye all so happy?"
I cried, and they answered me.

What sayest thou, oh meadow,
That stretchest so wide, so far,
That none can say how many
Thy misty marguerites are?
And what say ye, red roses,
That o'er the sun-blanched wall
From your high black-shadowed trellis
Like flame or blood-drops fall?
"We are born, we are reared, and we linger
A various space and die;
We dream and are bright and happy,
But we cannot answer why."

What say thou, oh shadow,
That from the dreaming hill
All down the broadening valley
Lies so sharp and still?
And thou, oh murmuring brooklet,
Whereby in the noonday gleam
The loose strife burns like ruby,
And the branched asters dream?
"We are born, we are reared, and we linger
A various space and die;
We dream and are very happy,
But cannot answer why."

And then of myself I questioned,
That like a ghost the while
Stood from me and calmly answered
With a slow and curious smile:
"Thou art born as the flowers and wilt linger
Thine own short space and die;
Thou dreamest and are strangely happy,
But thou canst not answer why."

—Youth's Companion.

The Bad Editor-Man.

A woman whose years could not have numbered more than 25, and a little girl, sat in the library of a small house in Boston one morning late in spring.

A low fire burned in the grate, although the day was not cold. The child, whose deep violet eyes and cloud of curly, golden hair made a sweet picture, sat on a rug before the fire, and leaned against her mother's chair. Her head rested on her mother's lap, and every now and then the latter stooped to press a kiss upon the golden curls.

The little one was speaking; she was very small and could not have been more than five years old, but she spoke very plainly.

"When you sell all those beautiful stories, Liebchen," she murmured, with a fond upward glance, "what a jolly time we'll have! The story about the knight and the lady was too splendid! At first I was afraid she wouldn't love—" here the shrill whistle of the postman caused the child to spring up hastily from the rug and run to the door.

It was only a few steps from the front door to the library, but the child was unaccountably long in returning.

"Fredrica," called her mother, with an inflection as near impatience in her voice as she ever used toward her cherished child, "bring me the mail."

"Yes, mamma, I'm coming." But it was with slow footsteps that the little maid advanced and reluctantly laid a large, heavy envelope in her mother's outstretched hand.

Mrs. LeCharlton's lips quivered as she broke the seal and took out the contents of the envelope. It was a MS of some length, and the printed "declined with thanks" fluttered out and fell in the grate as she opened it.

She averted her face from Fredrica's anxious gaze, and the child knew she was crying. She sprang into her lap and put her arms around her neck. "Dearest, sweetest, don't cry. I know it is lovely, even if that editor don't. He is a bad, cruel man, and I will tell him so! You shan't ever write any more for him, even if he gets down on his knees and begs for it."

Then the violet eyes overflowed and Fredrica's sobs came fast and faster, and the mother forgot her own pain in soothing the child.

When she was comforted and calm again it was time for Mrs. LeCharlton to go out; so, calling Mrs. Johnson, the one help of the little household, to see after the child, she kissed her many times and hurried away, promising to return early.

Agnes LeCharlton was a fashion reporter for one of the large daily papers in the city.

She had aspirations and talents far above this work, but that was her main dependence; she could not afford to give up the position that brought the necessaries of life while she devoted herself to more congenial literary work, which might not find a ready sale.

Death had divorced her from the man whom she had wedded when but 18 years old. He had proven unworthy her love and had killed the last remnant of it ere he died, three years before our story begins. With what was left of her patrimony, and what her position on the paper brought, she supported herself and Fredrica. The deep, intense love her little daughter bore her was the light of her life.

Fredrica was old for her years. She was her mother's companion, except when the latter was at her work, and sympathized with her in everything. The stories and sketches Agnes managed to write "between whiles" were a source of delight to the child; the story returned that morning, one that really betrayed talent, was her favorite. No wonder the little heart swelled with indignation at the man who had rejected it!

As she thought about it after her mother was gone, Fredrica came to a sudden, bold determination. Running to a closet, she took down her hat. Going to the door and opening it softly, lest Mrs. Johnson should hear and stop her, she stepped out and closed the door very quietly. She ran quickly down the steps and disappeared around the nearest corner.

Almost miraculously the child was saved from accident, and pursued her way along the busy streets, until a large sign on a building opposite her attracted her attention. "That looks like the place mamma told me," she said to herself, stopping a moment on the edge of the pavement to spell the name on the sign. It was laborious work, but when finished she clapped her hands in joy, ran across the street and entered the building.

* * * * * * *

Eric Boynton sat writing a profound editorial at his desk in his private office. Suddenly the stillness of the room was broken by a clear, piping little voice saying: "You are a bad man! A *very* bad man!"

The busy editor dropped his pen full of ink on his half finished page, and looked around in astonishment to find the owner of the accusing voice.

Turning in his chair, he saw a diminutive figure before him; a tiny maid with deep blue eyes, with a halo of golden hair that curled round her head, her dainty white frock soiled by the dust of the city streets, stood gazing up at him.

The small hands were clasped and unclasped nervously as she felt the keen gaze of the editor upon her. Her composure was disturbed and her voice quivered, as, making an effort to be brave, she began again: "Why do you send back my sweet mamma's pretty stories and make her cry? She shant never, no, *never*, send you any more, and I've come to tell you you're a naughty, bad man—a bad editor-man. There!"

The quivering voice had gained strength, and the violet eyes now looked defiantly at the astonished Eric.

"What do you mean, little one?" he asked kindly, trying to draw Fredrica toward him.

But she resisted. "You made my mamma very unhappy; she cried, and she don't *ever* cry?" she said illogically.

"Tell me all about it, dear. I'm sure I'm not the bad, ugly man you're looking for," he begged, smiling down on her mother's brave champion. Drawn irresistibly toward him, Fredrica told her story, and before it was finished she was on Eric's knee, her little hand clasped in his big one, her burdened heart unaccountably lightened. At the end of her recital, the big editor gave a growl that frightened Fredrica greatly, and almost made her jump off his knee; but when she looked up he was smiling.

"I'm not the man who sees the stories, Fredrica," he said, "but we will see about your mamma's story and make it all right. It is high time now you were at home, for somebody will be terribly alarmed if she gets back and finds her Fredrica has mysteriously disappeared. Do you know the way home?"

"Oh, yes," Fredrica replied, "you just go down to the next corner, and the next one, *the same alike*, and another, and *maybe* another, and you're there."

Eric looked grave, but found that she knew their address, although she could not tell very accurately how to reach it. He took the child by the hand and passed out of the building. Fredrica talked gaily on the way, telling about Mrs. Johnson, the twins across the way, and of mamma. Of the latter she could not say half enough of praise and admiration. Her heart was full of joy, for she had the big man's promise that he would "see about" her mother's stories, and she was sure all would be right.

Boynton halted at a florist's and bought a pretty bunch of roses for her, that sent Fredrica into a perfect ecstacy of happiness. Arriving at the house, he rang, although Fredrica desired him to run around to the side door with her.

A lovely young woman, with an anxious look on her face, opened the door before the bell ceased to ring.

"Fredrica," she cried "how could you frighten mother so?" she stooped down and clasped the child passionately to her breast. Fredrica threw her arms around her mother's neck.

"Liebchen," she whispered audibly, "I've brought the bad editor-man with me, all except he isn't bad."

Puzzled and confused, Mrs. LeCharlton arose and looked at Eric Boynton, who stood, hat in hand, his face softened by the scene of mother and child.

"I must thank you," she said sweetly, extending her hand, "for bringing my little Fredrica to me. I had just come home, and had searched the rooms for her in vain, and was terribly alarmed. It is not like her to do anything to distress me."

"Fredrica and I have something to tell you, if you will allow me to come in. It is about a little matter of business your daughter has brought to my notice," said Eric.

Wonderingly, Agnes LeCharlton bade him enter, and he followed her into the little home that was destined to become a cherished retreat to the busy man of the world.

During the talk that followed, Agnes learned that Fredrica's new friend was an editor, and one of the proprietors of the big evening paper to which she had sent the story which was returned. It was not a part of his work to examine such matter, so Mrs. LeCharlton's manuscript had not come under his notice. This he explained as he asked her to show him her work.

She brought out the story and some other sketches with inward perturbation, and gave them to him. Before he had half finished the first, there was the light of approval in his eyes, and Agnes felt that he found something of worth in her writing. His words of praise were few, but sincere, and the criticisms he made were gratefully received.

When Eric Boynton left them, after an affectionate farewell from little Fredrica, he carried the story with him, promising to use his influence in getting it accepted. Within a week's time the story appeared in the columns of his paper. It was a simple, but skillfully drawn picture of life in the South, where Agnes had spent her girlhood. It pleased the public who were satiated with the sensational, unreal tales that were flooding the periodicals.

Thanks to Boynton's influence, Mrs. Le Charlton soon became a regular contributor to the paper. Their business relations—or what Eric Boynton insisted upon *calling* their business relations—brought them together frequently. He became a familiar visitor at the little home. Ere long Fredrica was almost as fond of him as of her mother, and the remembrances of fruits, flowers and bon-bons which he always brought her, did not diminish her affection.

One day when she sat upon his knee in the little drawing room, Eric said to her, "Fredrica, will your 'Liebchen' do what you ask her to do?"

"Yes, indeed, Mr. Eric. Why?" asked the child.

"Then go to her, dear, and ask her to bring you and come and live with me, in my great big, lonely house."

The big editor's voice was full of something which Fredrica could not understand; she looked at him to see what he meant, but his eyes were fixed on her mother's face, which was bent low over some flowers she held in her hand.

Slipping from his knee, Fredrica obediently advanced to her mother's side, and repeated his words. Then Eric followed; kneeling beside her, he took her hand in one of his, and Fredrica's in the other. "Agnes," he pleaded, "let the child be *my* champion, as she was once yours before me. Come with her and fill my life and my home with the light of your presence. My days shall be devoted to making you happy."

As Agnes gave him the answer he longed for, a wave of happiness swept over her. She felt that the man whose heart was large enough to take in her child and herself would be faithful to the promises he made.

Fredrica considerately left them alone, as she rushed off to tell the grand news to Mrs. Johnson in the kitchen. She wound up her recital with: "And so, Mrs. Johnson, mamma and I are all both together going to live at Mr. Eric's house always. Only you must remember, *he* wasn't the bad editor-man after all; only the very nicest and loveliest man in the whole wide world."—*Caroline Stratton Valentine in Womans Work.*

Women as Nail Drivers.

SUMMIT VALLEY, March 1, 1892.

TO THE EDITOR:—In your issue of Feb. 13, 1892, I find an article headed "Women as Nail Drivers," in which the editor of the Detroit *News* has taken special delight in ridiculing the way in which Mrs. Palmer will drive the last nail in the World's Fair buildings at Chicago. I will wager Mrs. Palmer can drive the aforesaid nail with much better grace and not use such forcible language as men usually do when driving a nail—cursing hammer, nail and board, finally ending up with, it was a blamed fool that would use such a hammer, and throwing the poor hammer as far as strength and temper would allow; then holding up a badly mashed thumb, saying to themselves, or nearest person, that cussed nail (meaning his thumb nail) will come off.

For my part, I can't see what good so much swearing does a man, but then he is a *man*, and judging from the way in which he utters the sentence, it does him lots of good.

I have driven a great many nails, and "hit them on the head," too, and did not hit my thumb. Perhaps Mrs. Palmer in childhood lived on a farm, or has done her own housework, where she found if a nail was needed to hang the dishcloth or Mr. P.'s coat on, she had to drive it herself, as the lord and master did not have time or is nursing that sore thumb "caused from the last nail I drove for you."

The Detroit *News* man had better come out to California and stay one season in some lone mountain gulch where no one can hear the little side jokes he gets off on himself, hammer, nail and his *thumb* before he writes any more about Mrs. Palmer's nail-driving. SIERRA MAB.

Spice of Life.

"MY BOY," said the aged poet to the son of a lately deceased publisher, "I owe your father a debt I can never repay. He threw my first book into the waste-basket."—Puck.

RETRACTION CHEERFULLY MADE—"Look here Mr. Editor," exclaimed an irate caller, "you referred to me yesterday as reformed drunkard. You must take it back, or I'll sue your paper for libel."

"Very well, sir," replied the editor. "I'll retract the statement cheerfully. I'll say you haven't reformed."—Brooklyn Life.

HORACE GREELEY, in his "Recollections of a Busy Life," tells the following story:

"A gushing youth once wrote to this effect:

"'Dear Sir—Among your literary treasures you have doubtless preserved several autographs of our country's late lamented poet, Edgar Allan Poe. If so, and can spare one, please enclose it to me, and receive the thanks of yours truly, '———.'

"I promptly responded as follows:

"'Dear Sir—Among my literary treasures there happens to be exactly one autograph of our country's late lamented poet, Edgar Allan Poe. It is a note of hand for fifty dollars, with my endorsement across the back. It cost me exactly fifty dollars seventy-five cents, including protest, and you may have it for half that amount.—Yours respectfully,

'HORACE GREELY.,

"That autograph, I regret to say, remains in my hands, and it is still for sale at the original price."—Life.

THE instinct for beauty is set in human nature as surely as the instinct for knowledge is set there or the instinct for conduct. If the instinct for beauty is served by Greek literature and art as it is served by no other literature and art, we may trust to the instinct of self-preservation in humanity for keeping Greek as a part of our culture. We may trust to it for even making the study of Greek more prevalent than it is now. Greek will come, I hope, some day to be studied more rationally than at present; but it will be increasingly studied as men increasingly feel the need in them for beauty, and how powerfully Greek art and Greek literature can serve this need.—Matthew Arnold.

Reading Aloud.

As a source of pleasure, few employments equal that of reading with some congenial companion. When she lends "the beauty of her voice" to high poetic thoughts or to the instructive volume, or with gay accents brings out the flavor of the humorous and quaint conceits of others, how intensely we enjoy, how thoroughly we appreciate! With little pauses for criticism and exchange of opinion, we go on, page after page, bringing fresh pleasure to our literary tete-a-tete. And, ever after the story or poem has for us an added charm. Years may elapse, yet when we see again the book, our memories recall the scene of its first perusal; the vine-shaded piazza, with the summer sounds and scents; or the snowy day, when a "tumultuous privacy of storm" enclosed us as in a sanctuary; or the long winter evening, when the lamp's glowing radiance and the bright fire enhanced our comfort, and mind and body were equally soothed and delighted.

Some women neither know nor care for this delightful pastime. They fancy that a special training by a teacher of elocution is essential to fit them for the proper rendering of the thoughts of others, and that it is not worth while to attempt to gain the accomplishment, as they have no special aptness for it, ignoring the fact that reading aloud is one of the talents to be secured by a judicious investment of the great talent of time. Clear and distinct enunciation, a well-trained eye and ready comprehension of the author's meaning are essentials easily acquired, and the practice of this delightful accomplishment gives so much pleasure, that it is recommended as an important contributor to that happiness which every loving heart would fain bring into the lives of others. To read to the dear ones who are weak or ill, to the sufferers in hospitals, and to aid those whose eyes are failing as the long shadows of life's afternoon cloud their brightness, these are blessings which we can easily bestow, and by which we are ourselves enriched.—Harper's Bazar.

TRUE culture is the culture of strength, not of weakness. Who cares to bridle and teach the incomplete, the effete, the thin blooded and boned. Do not be deceived. Put your ear down to the rich earth and listen to the vast, gurgling blood of humanity, and learn whether it strives to flow, and what and where are its barriers. This is the culture worth getting, the culture that wins the love and shout of millions instead of the gush and drivel ot tens. Love and hope and strength and good are all in the crowd . . . and not in the diluted blood of esthetic critics.—Boyle O'Reilly.

IT does not disgrace a gentleman to become an errand boy or a day laborer, but it disgraces him much to become a knave or a thief, and knavery is not the less knavery because it involves large interests, nor theft the less theft because it is countenanced by usage. It is an incomparably less guilty form of robbery to cut a purse out of a man's pocket than to take it out of his hand on the understanding that you are to steer his ship up channel when you do not know the soundings.—Ruskin.

YOUNG FOLKS' COLUMN.

Siskiyou Boys.

[Written for the RURAL PRESS by DUANE MORLEY.]

(*Concluded from last week's Rural.*)

Then the boys fell to at earnest hard work, plowed the barley ground for spring-seeding, hauled the cedar rails and firewood from the nearer mountains, gathered the broken rails into a dry place under cover, from both the upper and lower places—as the ranch was divided and designated—patched up the barn roofs and rebattened the cracks, making everything snug for the winter. To do Judson full justice, an incident should be narrated. While hauling the rails, it was his fortune to see several packs or bands of coyotes upon as many different occasions, while the other boys got sight of none. One night he came in with the tale that "he had counted no less than fifteen in one band and twelve in another, and great lusty fellows, too."

"How is it," asked Brad, "that the mountains are full of coyotes for you, and none at all for us. Blest if I can see any when I am out."

Of course Jud had nothing to answer, only that "what he saw he was sure of." The implied doubt of his veracity rankled him a little, and next trip he took his rifle with him. Brad, seeing it, asked what the gun was for.

"Coyotes," replied Judson. "I don't care to be eaten by wolves."

"If you shoot any," said Brad, "just take the pains to scalp them, and for each scalp I'll give you a dollar."

"I don't want your money," was Jud's reply; but if the varmints appear within as easy range as they did yesterday, I'll show you a scalp for certain."

Sure enough, when he came in at nightfall, he reported another band of the coyotes seen at the base of South mountain; and he showed two fresh scalps as proof. What was more, Will Bray was a witness. Brad promptly forked over the two dollars, but could not make Jud receive them.

When election day came, Brad and Jud took Mr. Goodwin in the carriage over to the polls, to vote and talk politics with some of his old cronies. Chet, being under age, did not go; but took Will with him for a scout among the hills. Their route lay across the old placer beds, where much fine gold had once been mined; over the little ridge, unfenced, where traces were still visible of miners' graves; then through a winding gulch northward, to a broad, massive hill covered with hazel and scrub pines. They had brought a gun; but, finding no game, they amused themselves by sitting in the warm afternoon sunshine telling stories.

After awhile Chet said, "If you wish to see a real mine, Bray, I'll show you one." He then led the way a little farther along through the thick brush to the mine. It was nothing but a hole or shaft cut into the solid wall of the hill, large enough for a man in a stooping posture to enter.

They crept in, half donbled up, walking forty or fifty feet. Then Will said, "It's gittin' dark, ain't it, Chet?" Chet's answer was, "Yes; but don't get skeery, Will. I'll strike a light in a minute." A little farther on, they came to a rough wooden box. Chet opened the box, felt inside, got matches and a candle which he lit. Some hundreds of feet farther they kept on, until they came to a corner in the shaft or corridor of the mine. This corner they turned, proceeding at a right angle to their former course for some distance farther to the end of the shaft. There they found a batch of drills, a canteen of water, a miner's sledge, and other tools. Chet showed Will how to mine; Will holding the drill while Chet struck it with the sledge.

"How that rock sounds when you strike it! Don't it, Chet?"

"Yes, Will; it does. It sounds like glass. Stand back a little and hold the candle forward while I hit it an awful blow, just to hear it ring."

Will stood back, and Chet let drive with all the strength he could use in the narrow space. As he struck it, the whole wall of rock before him caved in, the shore timbers loosened and fell in a mass, and the solid rock beneath his feet gave way, crumbling beneath him.

"Back Will! for your life!" sung out Chet; "I've done it," and just as the light was knocked out of Will's hand, he saw Chet going down feet first as into a well, the timbers and rock falling all about him. The disappearance of Chet, the falling of the rock which still crumbled, and the creaking of the timbers nearly dispossessed Will of his wits; but he managed to grope along the shaft toward the opening to get another candle and matches out of the box.

The junction of the main shaft with the lateral one not a little confused him, and it was many minutes before he got to the box; having to grope about in the darkness to find it. He searched it thoroughly, taking every article out of it; but found neither matches nor candles. Then he hurried back as fast as he could, realizing that he should have called out to Chet before leaving the place of the accident. When he got there again, in his haste, he ran against a broken board, which cut a gash in his cheek, barely missing his eye. He very coolly examined his injury, as he only could by the sense of touch, wiping off the blood with a rag he had in his pocket. Then he called as loudly as he could, "Chet! Chet! where are you?" No answer came, and he called again. After a moment he heard a faint answer, but too faint to distinguish the words. Then he set to, to move the timbers and rocks, but he couid not; the timbers and rocks being solidly wedged together. Then he made his way out into the open air, and taking the nearest cut to the highway, ran back to Goodwin's as quickly as he could for help. Judson and Brad had just got back from the voting place with Mr. Goodwin, who then was safely in the house, exhausted by the trip. The boys were taking the horse from the carriage, when their attention was attracted to Will, who came running up and exclaiming: "Don't unhitch, Brad! don't unhitch! Git er pick, an' er ax an' shovel, an' come quick!" Will's appearance was, with the blood all over his face and hands, alarming; exciting greatly both Judson and Brad. "Where's Chet?" cried out Brad. "In ther mine, an' ther mine's caved in. Git er ax an' er pick, an' come right off." An ax, pick, and shovel were handy by, which they put into the carriage; then they got in themselves and drove hurriedly away.

Their excitement had not been noticed at the house, and Brad, thinking it fortunate, cautioned Jud and Will upon their behavior as they passed by. They were not noticed, and the house cleared, they drove rapidly forward toward the place. Arriving at the nearest point by wagon road, Brad and Will got out, taking the tools—Judson driving on toward McDougalls', a couple of Scotch miners who shantied by their claim a mile farther down. Brad and Will hurried across to the mine opening; and no sooner were they there than Will exclaimed:

"Wut a fool I be! No candles and no matches."

"Both," said Brad; "I have them here in my coat. I am something of a miner myself," he said, drawing out a stick of matches and a candle-end.

They crept into the mine as far as the daylight would aid them, and then they struck a light. No sooner was it done than Chet himself called from the opening:

"Come out of that, boys! I am out here."

Brad and Will hurried out, rejoiced to find Chet unharmed. He was disposed to be a little reticent about his experience, or "his discovery," as he called it.

"Tell us about it," said Will, anxious to know.

"Tell or not," said Bradford, a little put out. "We must hurry back to milk and care for the stock. I'm thankful you're not hurt, though you act strangely."

"I'll tell you," said Chet. "Of course I ought to and must, but the mine is mine."

"It is not," said Brad; "Mr. Kirkson will be back again next week, when he will resume his mining again. You fellows were very presumptious in going into his mine in his absence."

"I mean the old mine," was Chet's reply. "You see, I burst right through into an old, old mine, no knowing how old."

Just then Judson came up with the McDougalls, whom he had met on the road. Chet started in afresh with his narrative, giving what the reader already knows. When he said that the floor crumbled and fell, taking him with it, one of the McDougalls exclaimed:

"Wonder it didn't kill you!"

"So I thought," was Chet's reply. "The fall stunned me for I do not know how long, and when I came to myself again I was in a large chamber—cut at the end of an old mining shaft—nearly as large as our kitchen."

"How could you see in the dark?" asked the other McDougall.

"Plain enough." I had taken the matches and candle-ends which were in the box in this mine, and I struck a match and looked about me, making an examination of the caving to see how it was that I was not killed outright. You see the—"

"Why not show us?" said one. "We'll have to see it."

"All right," said Chet; "but remember the mine's mine."

Then he led the way to where he had come out, about half way around the base of the hill, where there was a very dense growth of small timber in a little cove of the gulley, the hill shouldering closely against it. There had been much old-time prospecting there, and the drift of the hills had accumulated for years. Chet guided the way in, where he had pierced and dug his way out, showing them the long iron bar he had found inside, with which he had managed to break through the debris and tree branches, The shaft was low, so they had to stoop very low in going in; but at the end of the shaft, which ran quartering into the hill, they found the chamber into which Chet had fallen, cut well under and above the shaft of the more recent mine, where Chet took Will in the first instance. What saved Chet was the falling of the long shoring timbers, one end lodging upon the floor of the new mine and making a protection from the crumbling rock.

Quite a number of niches were found in the walls, a small iron stove and an iron kettle; and in one corner of the chamber a rude bed and some mildewed blankets, coats and overalls. They also found an old hardwood chest, small but heavy and portable, having handles at each end. Chet took possession of it, saying, "We'll take this home with us."

At home the contents of the chest were found to be a bunch of drills, a few old knives and forks and a butcher knife, also an old wallet, with nothing in it but some musty, stained papers, torn and illegible; and two much faded ambrotypes—one evidently of a man and the other of a woman. On close search there was found upon one of the papers, the name—as nearly as they could make out any name—"Burton." They referred it to Mrs. Goodwin, and rack her memory how she would, she could stir no recollection of such a miner.

Next day a more thorough search at the mine revealed, hidden away in a deep niche by itself, a small black, japanned tin box, in which were a rusty razor and a greasy bill book containing a roll of old-time bank bills, the value of which could only be determined by their shipment back East. That was all. They fully cleaned out the opening to the mine, tacked up the proper miner's notice and went away. To this day—and that was ten years ago—the mine bears the name of the "Chet and Will" mine.

Both boys, when I last saw them, were mine partners, and hoping some time to strike "pay rock" and make a fortune; but how they were to arrange matters with Mr. Kirkson, whose claim conjoined with theirs, I do not know.

DOMESTIC ECONOMY.

Care of Flatirons.

Any one who has attempted to iron with sticky, rough irons will appreciate these remarks from the *Housekeeper:*

Where there are many starched clothes to be done up weekly, it is a good plan to wash the irons once a week, but where plain clothes and only a few starched are to be done, once a month is often enough. Take some clean ammonia soapsuds, and with a cloth wash the irons well, afterward wiping with a dry cloth; then put them on the back part of the stove to dry thoroughly. To clean the irons, always have a piece of coarse sand-paper, or a handful of coarse table salt, or a piece of wrapping paper in which to rub them. Always have the top of the range perfectly clean before putting on the irons, and never allow them to get too hot. If such a thing does happen, cool them by setting up on edge on the hearth. Some women, when in a hurry, cool them by plunging them into cold water, which will very soon spoil them. Don't keep the irons on the stove when not in use, for it is sure to harm the temper of the iron, and don't have irons on the stove when cooking, more particularly when the article cooking is one that is apt to flow or boil over, or while frying. After taking an iron from the stove, when wanted for use, first rub it over a piece of heavy wrapping paper kept for that purpose, then rub the smooth part with a cloth in which is encased a bit of wax. Rub the iron well over a clean cloth, and then it is ready for the clothes. In ironing starched clothes, if any of the starch sticks to the iron, always scrape it off with a knife before placing it on the stove to heat. Irons should be kept in some closed, dry place. If kept on a shelf they are always dusty when wanted.

BREAD CAKES.—Stale bread may be profitably disposed of in griddle cakes. For half a pound of bread use one egg, a tablespoonful of sugar, a teaspoonful of salt, two teaspoonfuls of baking powder, one pint of flour, and sufficient milk to make a smooth batter. Take the crust from the bread and put it to soak in some warm water; do not leave it too long in the water—just long enough to become soft, then squeeze the water from it, mix with the mentioned ingredients, and bake on the greased griddle. I find a pint of milk sufficient for thinning the cakes properly, but all do not favor the same thickness in cakes; a few trials will decide one's own need. The sugar may be omitted if desired. Sometimes I use brown sugar instead of white. For those who like sugar on cakes, they may be sprinkled with powdered sugar as they are taken from the griddle, and buttered also.

COLD BOILED POTATOES.—There are many possibilities lurking in a dish of cold boiled potatoes, says *Good Housekeeping.* The descent of company need cause slight uneasiness when these are already in the pantry. A good way is to reserve some before mashing those wanted for dinner. Get a wire potato masher; it will seem like mere play after having used an old-fashioned wooden one, and a flaky, creamy mass will reward dexterous handling.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 26, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Harvesting Machinery—Frank Brothers.
Sale of Trotting Stock—Killip & Co.
Sale of Mares and Fillies—Fred W. Loeber, St. Helena.
Gas and Gasoline Engines—Palmer & Rey.
Sheep Dip—Catton, Bell & Co.
Electric Belts—Dr. C. B. Judd, Detroit, Mich.
Trees and Plants—Oreodaphne Garden, Cloverdale.
Oakland Home for Sale—John F. Byxbee.
Agents Wanted—J. W. Jones, Springfield, Ohio.
Salesmen Wanted—Centennial Mfg. Co., Chicago, Ill.
Coffee Mills, Weather Vanes, Scales, Etc.—Howe Scale Co.
Assessment Notice—Gordon Orchard and Vineyard Co.

☞ *See Advertising Columns.*

The Week.

More rain; more sunshine; more confidence and buoyancy in anticipation of exceptional production and prosperity—such are the cheery notes of the week, and under such inspiration one could write volumes, and yet hardly needs to write a word. There is no call to whistle up courage when every shoulder has a chip on it, nor to exhort to contentment when every face carries a smile. Love's labor is not lost when one captures an heiress, and such promises to be the result to all who have wooed the Californian Ceres or Pomona in this God-blessed season of 1892. It bids fair to be a year of great things in every way. See to it that no neglect or slothfulness of yours sacrifices your share in it.

Municipal Corruption.

On Monday of this week, seven members of the Chicago Board of Aldermen were arrested on charges of accepting bribes, and it is declared that the evidence of their guilt is positive. This is the third exposure of the kind in Chicago within two years, and other cities—including our own San Francisco—are not far behind in municipal corruption. No way has yet been found under our American system to secure good municipal government, and our delinquencies in this regard are the more pronounced when we compare the administration of our cities with those of Europe, notably, Edinburg, Dresden and Berlin. In view of the iniquities almost daily brought to light, we can almost pardon the recent assertion of a magazine writer that there are some good things in a monarchy not attainable under a Republican form of Government.

If the consequences of municipal corruption were confined to the cities; if they did not flow out and afflict the country, there would be less cause to complain. Then, the damage would be with those whose indifference and want of spirit permit it to thrive; but as it is, the country is made to support a grievous burden which it has no share in creating and no power to destroy. All the evils which afflict California politics, and through politics the administration of public affairs, have their origin and continue to exist through infamous corruptions of the ballot in the city of San Francisco. And the worst of it is that there seems no way to bring about a better condition of affairs. The only chance of reform lies through the revival of a public moral sentiment, and that seems hopeless.

Rural Prize Letters, No. 1.

The RURAL PRESS has always been strong in its voluntary contributors, who have freely written the results of their experience and observation, for the aid and instruction of others. Such direct contributions from the field of actual practice have given the RURAL an enviable reputation as a practical adviser of those who undertake different branches of agriculture under the peculiar conditions which prevail on this coast. But not to beginners alone has benefit come: even those of greatest experience have learned much by comparison of methods and experiences. It is our desire to greatly develop these sources of benefit in our publication.

The offering of prizes to induce effort in certain specific directions is a time-honored practice: even ancient and honorable institutions of learning employ it to stimulate honorable effort. We desire to employ similar means to interest RURAL readers in preparing for publication descriptions of their experience and observation in certain phases of agricultural production. If the results warrant it, we design to follow the plan until all leading departments of productive effort are covered.

Just at this season the hay product is uppermost in the minds of many of our readers, and we choose it as a theme for correspondents. We offer the following

Prizes for the four best letters on Haymaking on the Pacific Coast:

First Prize	Cash, $10
Second Prize	Cash, $5
Third Prize	RURAL PRESS, one year
Fourth Prize	Map of the U. S., and Chronological Chart of American Political History.

By "haymaking" we include all the acts which enter into the outturn of hay as an agricultural product, viz.: Choice of seed, soil and location; method of putting in the crop; condition of plant at cutting and methods of haying, including curing, gathering up, stacking, stowing away or baling; marketing, including hauling to local markets or to shipping point; cost of product per ton or acre, and customary prices.

We offer prizes for *letters* embracing personal experience in haymaking as thus defined. We say "letters" rather than "articles" or "essays," because we do not desire labored compositions or compilations, but plain, straightforward statements from practical men and women. Many such would hesitate to undertake an essay, but all can write letters telling plainly what they know about hay. If you have only grown one kind of hay, whether barley, wheat, oat, alfalfa or wild grass or clover, tell us how you proceed to secure the best results; and if you have used different plants, write of them all.

We do not place any limit upon the length of these letters. Write as long as you have anything to say which seems to you important in connection with haymaking. Writers' names need not be published with their letters if they desire otherwise and so state to us.

We desire letters competing for these prizes to be mailed to us *not later than April* 15, 1892. The method of awarding the prizes will be announced later.

The University of California.

Twenty-four years ago this week the legislature of California passed an Act which embodied an organic law for the establishment of a State University and thereby furnished a charter which gave it a right to exist. It required a decade or more of self-denying and devoted effort on the part of a number of citizens to create a popular sentiment favoring the establishment of an institution of high class and to acquire certain valuable property which was included in the equipment of the University. These pioneer works become of greater honor as the institution which proceeded from them attains greater breadth and depth and takes a firmer hold upon the respect and affections of Californians.

As the University enters this week upon the last year of the first quarter-century of its existence, it is timely to present a brief statement of its condition and attainments. Its early years were marked by hesitation within, and misunderstanding and misrepresentation without. It has largely outlived its own adolescence, though it is still a child among great institutions. It has won popular interest and approval in a marked degree. It has enjoyed most tangible evidence of public approval in the form of a regular and adequate income from the public treasury. Under these favoring influences, it has grown most gratifyingly; it has improved its facilities and methods; it has arranged and extended its work, so that, though but fairly of age, it is counted as among the great educational establishments of the country. This being the general fact of its condition, a few statements in support thereof will be appropriate.

First as to its educational scope: In the departments of instruction there are offered to the students of the University by lecture, by recitation, by laboratory practice or by field work: 6 courses in philosophy, 18 in history and political science, 2 in philology, 15 in Greek, 20 in Latin, 24 in English, 8 in German, 5 in French, 2 in Spanish, 1 in Italian, 22 in mathematics, 6 in physics, 2 in astronomy, 10 in chemistry, 4 in botany, 4 in zoology, 6 in geology, 3 in mineralogy, 7 in mechanical engineering, 7 in civil engineering, 4 in mining, metallurgy and assaying, 7 in drawing, 6 in agriculture, horticulture and entomology, 2 in military science, 3 in physical culture, 10 in law, 14 in medicine and surgery, 12 in dentistry and 8 in pharmacy. These together make a total of 238 courses in the University.

Second, its equipment: The library now contains over 47,000 volumes. The museums contain important collections in fine arts, classical archæology, ethnology, botany, zoology, palæontology, structural geology, economic geology, mineralogy, petrography, metallurgy, agriculture, models, and cabinet woods. At Berkeley, the following laboratories are in operation: 1—Physics. 2—Chemistry (occupying a new building to cost, when fully equipped, about $90,000). 3—Biology. 4—Mineralogy. 5—Petrography. 6—Mechanical engineering. 7—A students' observatory. 8—Assaying. 9—Metallurgy. 10—Agriculture. 11—Viticulture. At San Jose there is the Lick Observatory with its world-beating appliances.

Third, its student body: There have been in attendance during the present academic year 30 graduate students (including 16 candidates for higher degrees), and 517 undergraduate students, making a total of 547 students in the colleges at Berkeley; 4 students in the Lick Astronomical Department; 96 students in law; 89 students in medicine; 98 students in dentistry, and 107 students in pharmacy. Deducting for five names counted twice, there remains a total of 936 students in the University. In the attendance of students, there has been steady increase from year to year, the present number being almost double that of six years ago.

Fourth, University extension: There has, during the last two years, been a strong feeling among the regents and faculties of the institution to extend its work in such a way that some benefit may be derived by others than those who are able to enroll themselves as students in any of the established courses. The idea is to bring the University as close to the people as possible. The University has conducted during the present year in San Francisco, courses of instruction in philosophy, history, English, and mathematics. Many persons, especially teachers, have availed themselves of these privileges. Certificates of record will be issued for the work accomplished in these courses; and this work may be placed to the credit of such of the attendants as may subsequently become students of the University.

By special provision of the regents, extension of the agricultural work has been carried on by the holding of Farmers' Institutes wherever local interest has demanded them, and these meetings have, as a rule, proved both popular and profitable.

Such are a few facts of the growth and attainment of the University of California. It does not appear that the establishment of another great institution by private munificence has injured it, but rather has benefited it by the new impulse toward higher education which has been spread abroad by the equipment of another means thereto. The fact is that the Stanford University has secured a large student support and the University of California has increased its student list about 20 per cent at the same time. It seems to us that such a wide-spread culture desire has been created by the new stir which has been given to the body politic, that neither institution need fear the endurance of its pupil supply so long as it does good work and meets the demands of a discriminating and intelligent public. Rather is it likely that, spurred on by friendly emulation, each institution will help the other well up to its work and equipped therefor with the best talent and appliances attainable. In this educational activity and progress, the State has everything to gain.

As we go to press on Wednesday the University of California is celebrating at Berkeley the 24th anniversary of the granting of its charter. It is an interesting fact that President Eliot of Harvard University, the oldest University of the United States, comes by special invitation to participate in the charter-day celebration of the University of California. The greeting of the extreme East, now hoary with age as American affairs go, to the extreme West, youthful, strong and ambitious, will be a notable and happy event in our educational history.

TOO MANY POTATOES.—Potatoes are again in excess on the wharves of this city, and receivers have been informed that they would have to remove the potatoes from the dock, otherwise the Harbor Commissioners would dispose of them without delay. The potatoes are fast decaying, and fully 300 sacks will have to be thrown overboard, unless they are hauled away.

The State Press.

Merced *Express:* "The San Joaquin river and the Sacramento river should be converted into navigable canals, a task which could be performed at a cost that would be trifling in comparison to the benefits that would accrue to the State."

San Diego *Union*: "There is something wrong when a poor man who steals a coat gets five years at San Quentin, while Bernard Reiss, a rich man of San Francisco, pleads guilty to theft and perjury in defrauding the Government out of $100,000, is sentenced to pay a fine of only $5000."

Ventura *Unit:* "The transportation companies have thus far been very short-sighted in not aiding the producers by giving them a rate reasonable enough to insure them a profitable return for their products, and thereby aid them in the general prosperity of the State. They have always been of the opinion that it pays them better to handle our products at higher rates, and thereby limit the production and a demand for it, than an increased production at cheaper rates. Neither can they be made to see the rapid strides and growth of our industry, which is being impeded by the exorbitant rates charged."

Stockton *Mail:* "The poll-tax season is again at hand, and while the *Mail* hopes that the collectors of this iniquitous tax will be treated courteously by all those upon whom it is their duty to lay the unjust burden, it nevertheless seizes the occasion to again draw attention to a form of taxation which is the very worst that could be devised. The poll tax is a tax upon the privilege of being alive. The poor devil who has but $2 in all the world, having the misfortune to be alive under a system of government, which in this one respect is as bad as the very worst in the world, must yield up his last cent or suffer the consequences."

Tulare *Citizen:* "Whether the Nicaragua canal would be a benefit to this country or not is not the question at issue. If the canal is worth $100,000,000 to this Government, let the Government build and own it. The greater the Government's interest in the canal, if owned by private parties, the greater the evil results, as proved by our subsidized railroads, that, owing to their vital importance to the people, has resulted in their corrupting legislation, controlling elections and demoralizing the people. Such enterprises, of vital importance to the people, should be owned by the people or in time they will own and control the people. Which shall it be?"

San Diego *Union:* "An able Eastern writer, in discussing the road question, takes the novel but entirely reasonable position that the great railways should assist in the maintenance of fine highways, holding that, inasmuch as the business of railroads depends upon the productive activities of the country, the roads should aid in making the transport of agricultural products easier and more rapid. "Railroads need better wagon roads for feeders; farmers need them for access to the railroads; manufacturers need them for access to less populous areas, and for less cost of portage and transportation; merchants need them as an element in the cheapening of their wares; the people need them for the reduction of the expense of satisfying their wants, and for the more efficient distribution of the product of their activities."

The Kern County *Echo* has a plan to secure competition in transcontinental freights. It "would have the Government foreclose its mortgages on the Union and Central Pacific railways, sell off the rolling stock to the highest bidder for cash or good notes and then open these roads as public highways or toll roads; grant no exclusive privileges for the use of this iron way, but let every transportation company, either great or small, and every individual who wanted to, run trains over it by paying the fixed toll. This, the *Echo* declares, will put a quietus on the Pacific Mail subsidy, and give the country competition in transportation. The *Echo* does not favor paternalism in government; but it recognizes the fact that governments have certain functions to perform and believes that one of these functions is to provide highways over which the people may travel and move their products."

Better Roads.

We are in receipt of a new illustrated monthly publication, *Good Roads*, issued at New York by the League Roads Improvement Bureau. The plan and scope of the magazine is outlined in the following excerpts from the first number published:

Each monthly number will be illustrated by pictures carefully prepared to accompany the text, and designed to illustrate with special force the value of better roads and better streets. The general aim of this magazine will be to stimulate the interest of the public concerning the advantages of good roads and streets, and the best methods of constructing and maintaining them. In pursuance of this object we shall publish from time to time the best articles obtainable relating not only to the economic features of the movement, but showing also, by both text and illustration, the most approved methods of improving the public streets and roads. Special attention will be given to the subject of road laws and legislation, including outlines of existing laws and suggestions for local and general acts looking to the better making and maintaining of public highways.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

To Help the Young Men.

SAN FRANCISCO, MARCH 14, 1892.

TO THE EDITOR:—One of the great overshadowing wants of California is some positive means of giving her honest, sterling but poor young men of 16 years a practical, industrial education that at maturity will place them in complete consonance with the great agricultural, viticultural, dairy and stock-raising resources of the State. Her school system is of the highest order, while her colleges, the State and the Leland Stanford Jr. Universities, are among the best on earth.

What is now needed, however, is a comprehensive grain, fruit, dairy and stock ranch upon an immense scale. I say immense, because at least 4000 acres of good land would be necessary, where 1000 young men at a time could be taught in the most practical manner anything and everything connected with the four branches enumerated, to go forth at maturity an honor to the school and State, each qualified to make his way in the world and to become independent.

Fully one-fourth of the boys of California are growing up in idleness and utter demoralization. No one wants their services because they are not qualified, and to-day, if a boy of 15 or 16 years desired to go upon a ranch for a couple of years to learn the business, I do not hesitate to say emphatically that it would be next to impossible to find such an opportunity for him. I know whereof I speak, because my particular business for the past ten years has taken me into close consultation with thousands of distracted and heartbroken parents in every portion of California who, after having done all that fond, loving fathers and mothers could do for their boys' education, now see them going headlong to destruction, and all for the want of simple, honest, manly employment.

We spend millions in an effort to reform criminals; the State, too, gives $200,000 annually for the support of orphan, half-orphan and abandoned children under 14 years of age, while nothing whatever is being done to help an earnest, honest but poor boy of 16, who would gladly learn some way of making his living, in order that he may become a man among men. There are millions for the aid of the vicious and criminal classes, but not one dollar for the good, and if an honest young man or woman desires assistance, *he or she must first commit a crime*. Having done this, friends will rise up in every direction, as if by magic, their number being in exact proportion to the magnitude and wickedness of the offense committed.

Does the reader think I exaggerate, then allow me to cite a case in point. About a year ago, a boy of 18 years, more or less, was pardoned by the Governor from out one of the State prisons. He was sent to a well-known charitable institution but a couple of days after, told the superintendent that he preferred his old quarters—in substance, he said the prison was a fine place, the fare first-class, that he was well satisfied there, and he did not see why the Governor pardoned him, or why anybody, in fact, interfered in his behalf. As he had been pardoned, he could not be received again, and so the Warden made a statement of the case, which was published in the daily papers, whereupon at least 75 persons, all eager to help him, visited the home of the society referred to, and for a week afterward letters continued to arrive from distant parts of the State eager to help him. He was permitted to go with an exceedingly humane individual, who paid his fare to the interior and expended more or less in his behalf, but on the following day he ran away.

It is safe to say that, had the boy in question been good in every respect, not so much as one friend in all the State would have come forward to assist him.

A grand opportunity is now presented for some noble man, some second Leland Stanford, to do a deed good enough to cause the angels that stand around the throne of God (if possible) to shed tears of joy, and as one who has made this subject a study for a full decade, whose daily life for that period has been in the very midst of families bowed down with grief from the causes I have given, I ask why it is that nothing is done, or even attempted to be done, for the vast aggregate of good, sterling, honest boys of 15 to 16 years who have nothing but their two hands to help them. They cannot get work unless they are qualified to do it, and in God's name how and where are they to obtain the opportunity? A fearful state of things exists in this State in the direction I have outlined, and every minister of the gospel, every newspaper, every well-wisher of the race, should take the matter up and agitate it. Here is a living subject, and yet no one seems to have a word to say, and in the meantime that which should be the very bone and sinew of the State is going headlong to ruin. Will not all who read this revolve the matter over and over in their minds, and perhaps an abler person than the writer can elaborate on what he has written, and thus help the matter onward toward a most devoutly to be wished for consummation?

In what I have written in the foregoing, I wish it to be distinctly understood that I do not mean to infer even that nothing is being done for good and unfortunate children, as we have our various orphan asylums, Boys' and Girls' Aid Society and Youths' Directory, all of which, as well as very many others, are doing a grandly humane work; but, so far as I know, nothing whatever is being done for honest boys and girls of 15 to 16 years, especially the former, who have no chance whatever to qualify themselves so as to be able to get a living when they shall have reached maturity.

We have schools, academies, colleges and universities, but no such an industrial university as I have outlined, that, in my humble opinion, should take precedence to all others.

JAMES C. KEMP,
Visiting Agent Boys' and Girls' Aid Society.

California Land Holdings.

Conclusion of Mr. W. H. Mills' Discussion of a Great Evil.

Last week we printed an extract from a lecture by Mr. W. H. Mills of this city on the evils of large land holdings in which he set forth the rapid progress of land monopolization in this state and particularly in the Sacramento valley. We now give further extracts from the same lecture in which Mr. Mills treats briefly of causes and remedies:

The question arises as to the details by which this aggregation of land has been achieved. The answer is not far to seek. It was through the facility with which land may be made the basis of security for the repayment of money borrowed. If you have followed the statistics you will observe that the increase of the holdings made the greatest progress between 1883 and 1890. The aggregate amount of the mortgages found on the assessment roll in 1882 was $82,953,826. In 1890 the amount had increased to $168,097,325. This, of course, included the mortgages upon city and country real estate; but a still more remarkable fact remains to be noted. In 1882, when the volume of mortgages reached but $83,000,000, the value of the property mortgaged was set down at $446,319,940. In 1890, when the value of the mortgages had reached $168,097,325, the value of the property affected by mortgages was set down at $200,000,000. Thus the value of the equity of redemption had decreased from 1882 to 1890 $246,000,000. A mortgage is treated as an interest in land affected thereby. The value of the mortgage is assessed to the mortgagee, and the value of the land to the owner thereof. In 1882 the full valuation of the land was given in to the Assessor, but eventually the owner of the mortgaged real estate had learned the art of narrowing the margin between the value of the mortgage and the value of the land affected; thereby and hence, whereas in 1882 about $83,000,000 of the mortgages affected $446,000,000 worth of real estate, in 1890, $168,000,000 of mortgages affected only $200,000,000 of real estate. The facility, therefore, with which land may be used as the basis of security and a low rate of interest are the actual levers by which countries are depopulated and monopoly of the soil is effected.

As the land is monopolized the value of the improvements declines. An appeal again to the actual statistics in this State will establish this fact. During the period of the greatest progress in the direction of aggregating lands in California, to wit: from 1883 to 1890, the value of the country real estate rose from $231,000,000 to $388,440,000, and the improvements thereon from $37,000,000 to $53,000,000, an increase in round numbers of $16,000,000. In the same period of seven years the value of the city real estate arose from $183,000,000 to $295,000,000, and the value of the improvements from $100,000,000 to $153,000,000. Thus, while the improvements on $231,000,000 worth of real estate in the country increased but $16,000,000, the increase on the city real estate assessed at $183,000,000 was $52,000,000, or more than three times the aggregate amount, and more than 400 per cent on the increased value of improvements on country property. If the improvements on the country realty had kept pace with those on the city real estate, at the end of the period of seven years we reach an astonishing disproportion between the value of the improvements on country real estate and that observed in the cities. The figures are as follows: The value of the country property in 1890 was $388,440,000, improvements thereon, $53,951,000. Value of city real estate, $295,229,000; improvements on the same, $153,000,000. The relation of the value of improvements on country property to the whole value of the property is but 14 per cent, while the improvements on city real estate is approximately 52 per cent of the value of the real estate.

For a long time both population and wealth have been congested in the cities and towns. Absentee landlordism impoverishes a country. The money distributed back from the products of the land goes chiefly to a single family. That family resides in the nearest town if the holding aggregates three or four thousand acres; in the nearest city if the holding aggregates from five to ten thousand acres; and in the metropolis of the nation if the holding reaches fifty or a hundred thousand acres. Some of our largest holders reside in the cities of New York and Washington. These are men holding from fifty to two hundred thousand acres. A still larger number reside in San Francisco, the metropolis of the coast. These hold from ten to forty or fifty thousand acres. The annual wage bill of agriculture is paid to a labor which is not in any respect attached to the soil or identified with the country. As soon, therefore, as the crop is made and the money obtained from its sale distributed back to the labor and to the owner, the former disappears to the villages and towns where their only savings bank is the saloon; the latter deposit their surplus in the banks or use it for the purchase of more land, and their families spend their money in the city. Thus it is that the rural districts are impoverished while the great commercial cities are overcrowded.

AS TO THE REMEDY.

The rights of property are the creation of legislation. While men have the natural right to acquire property, the exercise of that right is subject to regulation. It is absurd to say that society has no right to protect itself against ultimate destruction through the regulation of the right of ownership. My investigation of this subject has led to two general conclusions: First, the lands are being aggregated through the rapidly increasing accumulation of wealth and the constantly augmenting volume of idle capital. This capital seeks safe investment. An acre of land that will pay $2 per annum is better than a Government bond for $100 with a two per cent coupon attached, and such a bond would be at a premium if issued for a fixed period of time. The land itself is preferred security. Loans are easily effected upon such

a basis. Values in land therefore become a preferred savings deposit, while the constantly decreasing rate of interest makes the acquisition of land more desirable. Legislation designed to prevent the mortgaging of land as security for the repayment of money and the interest thereon, would be a death blow at once to its further accumulation in large quantities. Limitation and restriction, as to the extent to which land may be mortgaged or used as a basis of security for the repayment of loans, would retard the process, as, for example, a law declaring that no mortgage should be collectable out of land for more than 25 per cent of the assessed value of the property would have the effect of raising the assessment on the land and limiting the power of its owner to make further accumulations. Next, a regulation that the interest accruing upon a mortgage should not go to the accumulation of the mortgage, nor be collectable out of the equity of redemption, for whatever amount it might be, would be exempt from execution in the collection of the interest on the mortgage. This would prevent the accumulation of land by landowners and withdraw the surplus idle capital from investment in that direction. The tendency under these regulations, would be to place the lands in the hands of men who will actually cultivate and use them.

The second conclusion derived from the statistics is that the death of the proprietor does not subdivide the landed estate. I suggest, as an appropriate remedy, a forced subdivision after the model of the code of Napoleon to the heirs of decedents. But all these suggestions of limitation and regulation are temporizing at best. I am in favor of a law absolutely prohibiting any man to devise in his will more than 1000 acres of land, and declaring that all in excess of that acreage shall be sold for the benefit of his estate, and in such a way as not to inflict loss; say one-fifth in each year for five years, and that the sales shall be directed by the court.

I would not have such an act take effect immediately, but rather gradual in its operation; for instance, let it take effect within five or ten years from the date of its passage. The slave trade was extirpated in this country by an ordinance enacted in 1787, which declared that the slave trade might be tolerated until 1808, when it should be regarded as piracy, punishable with death. This measure did not meet with the opposition of those engaged in it, chiefly because the date fixed gave them time to adjust their property to the new condition of things. Fearing the actual enforcement of the provision, no new capital was embarked in the enterprise, and the capital already engaged in the trade prepared to withdraw. In short, every traffic is kept up by the profit it affords to those engaged in it. The ordinance of 1787 gave those engaged in the traffic a practical monopoly during the period of toleration. It prevented others from entering upon the enterprise, and so for the season of great profit, the slave traders consented to the ultimate extinction of the traffic in which they were engaged.

THE RIGHT OF SOCIETY TO AVERT A DANGER.

But beyond all this, whenever a great danger threatens society, it has the right to avert it. That cannot be lawful in any true sense which destroys society, because laws are enacted for the good of the social compact. In a state of civilization the absolute freedom of men must be surrendered to the good of the body politic. This is the fundamental conception of all law. I find this so clearly stated in a decision rendered by the late ex-Chief Justice of this State, Silas W. Sanderson, that I choose to quote in preference to anything which I could myself present. Judge Sanderson said:

"Governments are formed for the purpose of securing and protecting men in the enjoyment of their natural rights, and they would fail to accomplish that object if the power to regulate or prescribe the mode in which such rights are to be exercised be not lodged in the law-making department. In short, there could be no government without such power, for without it all men would be in a state of nature; that is to say, without any restraint upon their conduct, except their own wills and the forcible opposition of their fellows. Hence, when men who come together for the purpose of adopting a form of government and establishing a system of laws, stipulate that the rights of life, liberty, property, and the pursuit of safety and happiness are inalienable, or shall remain inviolate forever, they are not to be understood as meaning that those rights shall not be at all interfered with by the law-making power. On the contrary, their language is to be interpreted in view of the object which has called it forth, or as meaning that those rights are not to be interfered with, except so far as the ends and objects of government may require. This section is not to be read by itself, but as a part only of the Constitution; and thus read, the obvious import of the whole is, that in order that these rights may be made secure, and that we may be protected in their enjoyment, we agree that the government about to be established may pass all needful or reasonable rules and regulations for their security and enjoyment, without any power, however, to destroy or unnecessarily restrict or impair their reasonable exercise. Hence, this provision of the Constitution is not to be understood as putting life or liberty entirely beyond the reach of the Government, if from misconduct, the general welfare of the community demands its sacrifice or restraint; or as allowing every one to acquire, possess and enjoy property after his own unregulated manner, and according to his uncontrolled will, but in such manner and by such means as the general welfare of the community may require him to observe; or as allowing every one to seek safety and happiness in his own way according to his own notion, but by such ways and methods as the general good may demand. In short, while the exercise of these rights cannot be denied to any one, it may be regulated. The Constitution recognizes them as inalienable, and provides that they shall remain inviolate, but at the same time declares that they must be exercised according to the maxim, *Sic utere tuo, ut alienum non lædas*, which lies at the foundation of the social compact. While every man is free and independent, and may enjoy and defend life and liberty, still he must do so in a way which does not interfere with the same right in other persons; while he may acquire, possess and protect property, he must do so in a way and by means which will not prevent others from doing the like; while he may pursue and obtain safety and happiness, he cannot be allowed to do so in a manner which may endanger or unreasonably impair the safety and happiness of others; or, generally, while every one is to be secure in the exercise and enjoyment of all these rights, he may be restrained or prohibited from exercising them in any manner which will interfere with a reasonable exercise of the same rights by other persons. Hence it is that the Legislature is not only allowed, but required, among other things, to pass laws for the protection of life, liberty, property and the pursuit of safety and happiness. * * * Instead of being repugnant, such legislation is indispensable to the preservation and inviolability of the very rights in question. Every act which may tend to impair their exercise beyond what is needful for the general good may be prohibited. Of these there are some which, by the common consent of mankind, are bad and mischievous in themselves—the *mala in se* of the common law—and others which may become so under certain relations and conditions, and which, therefore, the Legislature may prohibit as necessity or occasion may require—the *mala prohibita* of statute law. It is not to be supposed that the entire field of public offense has yet been covered by apt legislation. Vice is ingenious, and disguises itself in a variety of forms, for the purpose of evading existing laws. Things once regarded as harmless become vicious when contemplated from the level of a higher civilization, and legislation, if not in advance, must keep even pace with public sentiment, and to that end the requisite power is not denied to the Legislature."

The doctrine announced in the foregoing, that men cannot be allowed to acquire, possess and enjoy property after their own unregulated manner and according to their own uncontrolled will, but in such a manner and by such means as the general welfare of the community may require him to observe, is a clear statement of the whole situation.

Large land-holding is an evil which must be eradicated. Nor is it an unreasonable restraint of the natural liberty of men to declare in law that land cannot be made the subject of private ownership in a single individual beyond a certain quantity.

The concluding sentence of the quotation from the eminent jurist puts a broad sky above the whole subject. It deserves the perspicuity of repetition:

"Things ones regarded as harmless become vicious when contemplated from the level of the higher civilization, and legislation, if not in advance, must keep even pace with public sentiment, and to that end the requisite power is not denied to the Legislature."

NOTICE.

The Annual Meeting of the Stockholders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

CHARLES WOOD, Secretary. J. C. STEELE, President.

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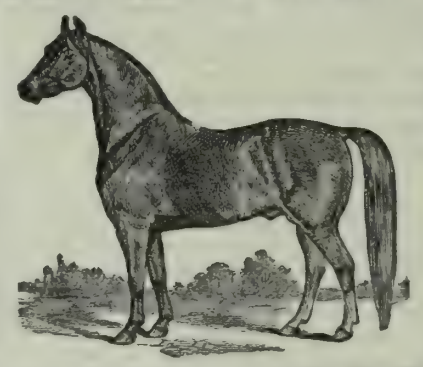
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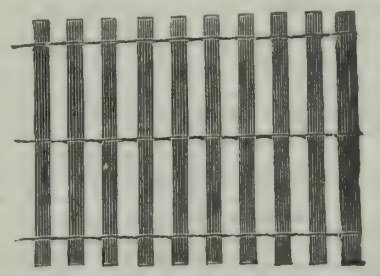
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Are the Most Beautiful,
Are the Most profitable of all Fowls.

Choice Selection and expensive purchases for ten years make my fowls equal to any, excelled by none.

Eggs, $2.50 for 13.

E. H. SCHAEFFLE, Murphys, Cal.

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The Only German Farmers' Magazine on the Pacific Coast,

AN ILLUSTRATED MONTHLY — ONLY $1.00 PER Year. Sample Copy Free. Address THE J. C. JENS CO., 1196 Treat Avenue, San Francisco, Cal.

BUSINESS CHANCE, FOR MAN OR WOMAN. Address, O. B. OROUTT, Orcutt, California.

FOLDING

Sawing Machine.

9 CORDS IN 10 HOURS,



Send for free illustrated catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket-knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 42,000 in use. We also make larger sized machine to carry 7 foot saw.

Order from the general agent for California.

The machine will cost you less than by single shipment direct from the factory at Chicago.

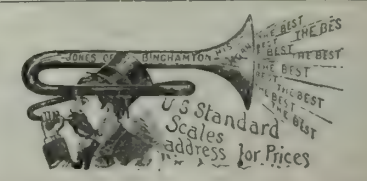
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37 Market St., San Francisco.

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400,000 ACRES

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Choice Fruit Lands for Sale, All Level and Ready for the Plow.

ALL UNDER IRRIGATION.

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THE COMPANY OWNS EVERY ACRE OF THIS LAND. NO MORTGAGE. TITLE PERFECT.

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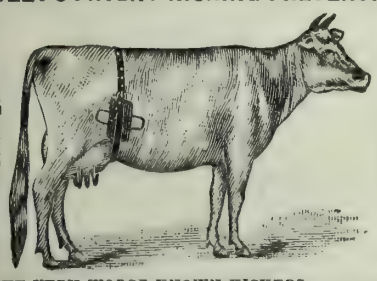
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SWEET'S PATENT KICKING PREVENTIVE

Sure Preventive Against Kicking.



Simple, Easy to Apply, Practical.

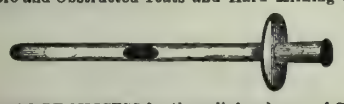
THE VERY WORST KNOWN KICKERS permanently cured. Keeps the animal from stepping about.

A Grand Success for BREAKING IN HEIFERS

Will GUARANTEE SATISFACTION or Money Refunded. Price of Harness Complete for Use, $3.00.

SILVER MILKING TUBES.

For Sore and Obstructed Teats and Hard Milking Cows.



AN ENTIRE SUCCESS for the relief and cure of Garget or Stoppage of Milk, or when from any cause the teat cannot be handled in the usual way. Will quickly give relief and permanent cure in all cases without the slightest injury to the animal. Single tube answers for entire herd. Cheapest insurance possible against loss. Don't be caught without one; order at once. Single Tube, postpaid, 75c. Set of four, postpaid, $2 00.

Also SURGICAL INSTRUMENTS FOR DAIRY USE.

G.G. WICKSON & CO., 3 & 5 Front St., San Francisco. 346 N. Main St., Los Angeles. 141 Front St., Portland.

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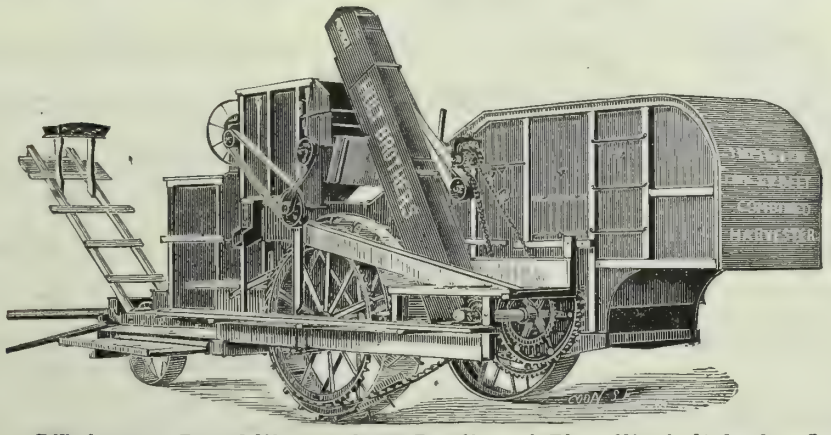
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A bright, energetic man or woman wanted to take the **sole agency** for an article that is **needed in every home and indispensable in every office. SELLS AT SIGHT,** in town or country. **$700** in 90 days and a steady income afterward. A "Bonanza" for the right person. **Good jobs are scarce and soon taken.** *Write at once.*

J. W. JONES, Manager, Springfield, Ohio.

HOLT BROTHERS' Improved Combined Harvester.



For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. or, HOLT BROTHERS CO., 30 & 32 Main St., San Francisco.



BREED'S UNIVERSAL WEEDER and CULTIVATOR

Every farmer in our territory wants one. Every practical farmer will have one as soon as he learns its merits. T. B. TERRY writes: "I must have two next season. While my man was hoeing one row, my son cultivated with the WEEDER and one horse, and more thoroughly 36 rows." Which method do you prefer? Send for illustrated pamphlet, "GROWTH AND CULTURE OF CROPS."

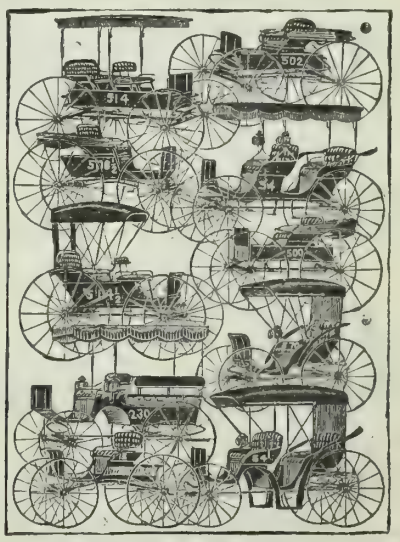
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To Learn Book-keeping When you can learn it AT HOME without a Teacher. Send 2c Stamp for particulars. Mention this paper.

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We have the Finest and Largest Carriage Repository on the Pacific Coast.

For prices and full particulars, address

TRUMAN, HOOKER & CO., San Francisco and Fresno.

MOTIVE POWER

HERCULES Gas and Gasoline ENGINES

Have fewer parts, and are therefore less likely to get out of order than any other gas or gasoline engines now built. Just light the burner, turn the wheel, and it runs all day.

MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark,

For Simplicity it Beats the World.

It Oils itself Automatically,

No Batteries or Electric Spark.

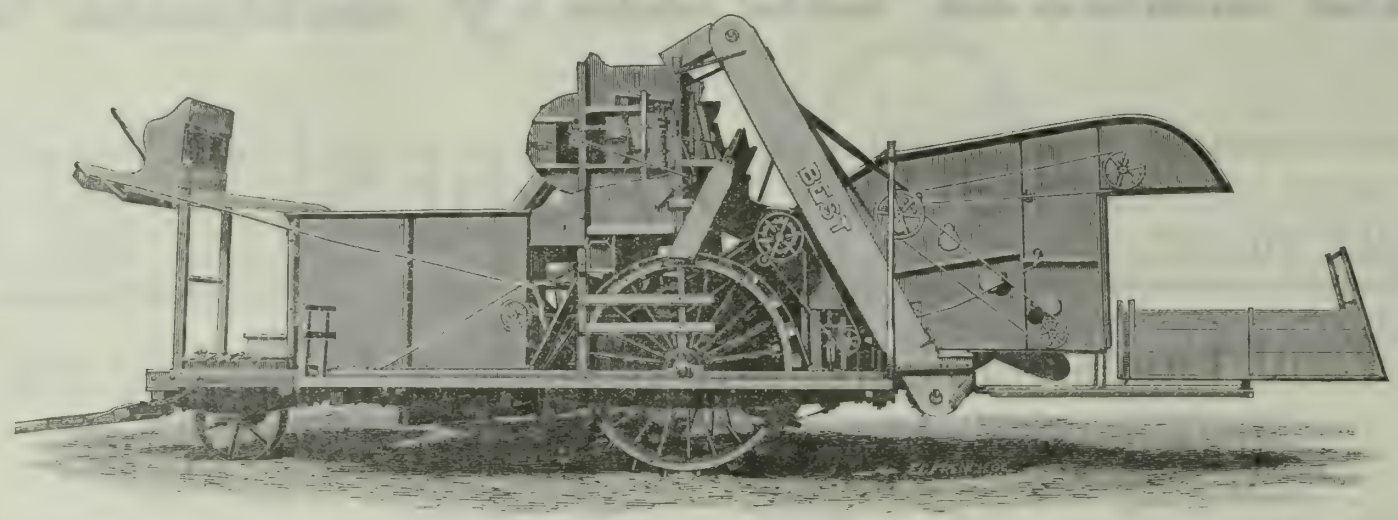
It runs with a Cheaper Grade of Gasoline than any other Engine.

FOR DESCRIPTIVE CIRCULARS APPLY TO

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AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED DRIVING WHEELS, DIAMETER 5 FEET 4 INCHES, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, ONLY ONE BELT FROM THE DRIVING WHEELS TO CYLINDER, BUT ONE COUNTERSHAFT, DOING AWAY WITH THE EXPENSIVE CHAIN AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

STANDARD MOWER

ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.

Cutter Bar

Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving u per side of cutter bar perfectly smooth surface.



NO SIDE DRAFT as CUTTER BAR is carried entirely on Main Wheels.

7-FOOT mower will do as much with one team as two 4-foot machines, SAVING half the corners.

MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED. THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

Stanton, Thomson & Co.

SACRAMENTO, CAL

AGENTS FOR NORTHERN CALIFORNIA.

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Newell Mathews,

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AGENT FOR SOUTHERN CALIFORNIA.

LITTLE'S CHEMICAL FLUID NON-POISONOUS SHEEP DIP.

BEWARE OF CHEAP IMITATIONS.



One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Also

Little's Patent Powder Dip.

(POISONOUS). Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

CATTON, BELL & CO.,

(Successors to FALKNER, BELL & CO.)

No. 406 CALIFORNIA STREET, SAN FRANCISCO, CAL.

Tiresome

To read long advertisements about things you do not want. We will only speak of one or two items which nearly everybody uses every day and we think you will appreciate the offer.

Ladies' Fine Kid Shoes, $1.25, $1.35, $1.50.
Ladies' Kid Shoes, Extra Quality, $1.75, $2, $2.25, $2.50.
Tipped or Plain Toe, from $1.75 up.
Oxfords Beautiful Style, Tipped, only $1 00.
Misses' Fine Oxfords, Tipped or Plain, $1 00.
Misses' Neat Sandals, 11 to 2, 50c.

Shoo!

Shew!

Shoe!

Infant's shoes, 1 to 3, 25c up; Infants' 2½ to 6, at 50c up; Child's 5 to 7½, at 75c up; 8 to 10½, at 75c up; Boys' or Girls' 11 to 2, $1 up; 2½ to 6, at $1.25 up; Men's Sunday or every day shoes, $1-50 up. Every day boots, kip, at $1.75 up. Ask for full list, free, and save 50 per cent on Shoes at

SMITH'S CASH STORE,
416 & 418 Front St., S. F., Cal.

AMERICAN EXCHANGE HOTEL,

SAN FRANCISCO.

CLEANLINESS AND HOME COMFORTS.



OUR AGENTS MEET YOU ON ARRIVAL AT SAN FRANCISCO.

Rooms and Board by the Day, $1 to $1.50; by the Week, $6 to $10; by the Month, $25 to $40.
Good Rooms and Elegant Table. Meals, 25c. Single Rooms, 50c. Free 'Bus.

DEWEY & CO. { 220 MARKET ST., S. F. / Elevator, 12 Front. } PATENT AGENTS.

Propagating Olives.

The various methods of propagating the olive, are by seed, or more properly "pit." This can only be done successfully by freeing it from oil, which prevents both air and water penetrating to the kernel. This may be done by caustic soda, which readily combines with the oil, or by cracking the pits and removing the kernel, which, being carefully treated and properly planted, will readily produce trees, but they will be as various in description as will apple trees. Grown from seed it is an unsatisfactory process, for only about seven or eight pits in a hundred contain any kernel, and consequently cannot produce their kind.

To produce trees that will bear the desired kind of fruit, take limbs of any size, or the trunks of the trees which produce the kind you want, cut in pieces ten inches long and plant in a vertical or in an oblique position in either nursery or orchard, and nearly cover with earth well packed around the cutting from top to bottom, or the trunk or limb may be cut in any length and planted horizontally about three inches deep; these will send up canes all along the cutting, in some cases not more than six inches apart. After the canes have reached a height of one or two feet, remove the earth between the canes and saw the cuttings off, leaving a section on each cane, or the canes may be removed from the cutting by taking a sharp chisel, or what is better, a gouge, and severing the connection, but taking care to leave all the roots on the cane, which secures an entirely independent tree of the desired variety, in bearing years quicker than if grown from seed. The cutting may still remain in the ground, another set of canes will be produced from dormant eyes which failed to start the first year, and even this may sometimes be repeated.

With artificial heat it is easy to secure a vast number of trees by taking the growing tips of twigs three or four inches long and planting them in moist sand; oftentimes these herbaceous cuttings will bring 90 per cent of trees suitable to plant in the nursery. And still another mode, the spherical protuberances, which are formed just above or below the collar of large trees, may be cut off with a chisel or gouge and planted in nursery or orchard; these make beautiful trees. Olive trees grown from pits may be changed to any variety by grafting or budding, which is done in many ways, all of which have been illustrated in a small pamphlet published by the California State Board of Horticulture, in which are also illustrated all the most desirable sorts of olive trees now produced in the State.—Frank A. Kimball, in San Diego Sun.

Veterinarians' Society.

The State Veterinary Association held its quarterly meeting at the Baldwin Hotel and in the absence of President W. D. Morrison of Los Angeles, Vice-President W. F. Egan of San Francisco presided.

The following were declared to be elected members of the association: Thomas Maclay, Petaluma; A. M. McCullum, Sacramento; H. A. Spencer, San Jose; R. T. Whittlesey, Los Angeles; J. G. Blackington, Los Angeles; Ward B. Rowland, Pasadena; F. E. Pierce, Oakland; W. J. Oliver, Los Angeles; C. Masnero, San Francisco; W. E. Wadams, Santa Clara; C. B. Orvis, Stockton; P. C. Davenport, Santa Rosa; P. P. Parent, Ukiah; Peter Burns, San Francisco; H. F. Spencer, San Jose; R. A. Archibald, Sacramento; D. F. Fox, Salinas; W. Davidson, San Bernardino.

After the transaction of routine business a general discussion on the treatment of glanders was indulged in. Dr. Maclay stated that in his opinion every city should have a veterinarian employed for the treatment of glanders in horses. He characterized the disease as being not only fatal to horses, but dangerous to humanity as well. He pointed out several cases of the death of persons in the upper part of the State from glanders, which might have been averted had proper veterinary precautions been taken.

Dr. Maclay reported a prevalence of pleurisy and pneumonia among horses, but that the indications were that the disease would be short-lived.

Chairman Egan announced that a veterinary college was to be established in this city in the near future, and that the project was one of considerable importance.

W. G. Layng also announced that a veterinary department was soon to be established at the Stanford University.—Chronicle.

$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California Street, San Francisco.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING MARCH 15, 1892.

470,972.—FEED WATER HEATER—Jos. Bell, Troutdale, Or.

470,655.—SASH BALANCE—W. Berry, Angel Island, Cal.

471,066.—DEVICE FOR DISPLAYING MANUSCRIPT, C. C. Bowen, S. F.

471,067.—MANUSCRIPT HOLDER—C. C. Bowen, S. F.

471,002.—INKSTAND — J. H. Hamill, Globe, A. T.

R 11,230.—SASH FASTENER—D. O. Livermore, Los Gatos, Cal.

471,009.—LOCOMOTIVE—J. B. Mahana, Freewater, Or.

470,765.—GAME APPARATUS—A. W. McArthur, S. F.

471,058.—COOKING UTENSIL — G. W. Merk, S. F.

470,714.—SOLUTION OF LACTIC ACID—A. Sommer, Berkeley, Cal.

470,715.—DISSOLVING LACTIC ACID—A. Sommer, Berkeley, Cal.

470,853.—ADJUSTABLE PICK POINT—H. Welisch, San Diego, Cal.

21,401.—DESIGN FOR GAME BOARD—Augusta M. Warner, S. F.

The following brief list by telegraph, for March 15 will appear more complete on receipt of mail advices:

California—Julius Finck, San Francisco, cash and package carrier; Taylor W. Heintzleman and T. C. Noyes, Sacramento, valve gear for compound engines; Merrill A. Howe, San Francisco, insertable saw bit; Joseph J. Lifebvre and J. O. Cessna, Redding, bar fixture; Charles W. Metcalfe, Santa Paula, centrifugal honey extractor; Rebecca E. Mills, Porterville, churn; John F. Myers, San Francisco, attachment for ranges; Edward North, Newhall, check or order book; James M. Thompson, San Francisco, arc concentrator; Jas. Tulloch, Angels Camp, concentrator. Oregon—Chas. Dickinson, Portland, paper weight

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A Fruit Exchange in Santa Clara County.

CAMPBELL, SANTA CLARA CO., March 19.

TO THE EDITOR:—The committee appointed by Campbell Horticultural Society to take in hand the matter of organizing a Fruit Exchange in this county, has decided to invite the growers, dryers and canners to meet the committee at Campbell, Saturday, March 26th, at 1:30 P. M.

The committee desire all those interested in the fruit business to be present and present their views.

We are united in the belief that a Fruit Exchange would prove a great benefit to all of us.

As your paper will reach your subscribers in this county in time to notify them of this meeting, we hope you will publish the above notice. Committee: F. M. Righter, Benj. Campbell, Gilmore Duncan, Frank Buxton, Geo. W. Gardner.

Is Jersey Butter Colored?

Of course it is!

That is, at this season, and by progressive dairymen. Such people as George Jackson, formerly editor of the dairy department in the Jersey *Bulletin*, assert that "colored butter is more enjoyable and sells more readily at a better price, than white."

Mr. Jackson's experience with coloring preparations is thus summed up: "Wells, Richardson & Co.'s Improved Butter Color is far superior to any like preparation I have ever used. It gives winter butter the tint of Jersey butter in June, and does not affect either the taste or flavor, nor color the buttermilk."

Use this color in your dairy, and satisfy yourself in regard to the truth of Mr. Jackson's statement. If your experience is similar, and there is no reason why it should not be, you will find a gain in quality and price of your butter.

Great Horse Sale.

We would call especial attention to the sale of horses by Fred. W. Loebe, St. Helena, advertised elsewhere in the RURAL. The list of horses and the showing of their stock and breeding, makes this sale a tempting one to farmers, who should take particular notice of Whippleton's great qualities as a sire of carriage horses, the kind to be sold, without training or expense, at large prices, and the kind that are the best for the average farmer to raise.

The catalogue contains several noted producing brood mares, such as Madonna, dam of Alcona Jr. 2:24, sire of Silas Skinner 2:17; Del Rey 2:20, and the mare Vineland Maid, dam of Lookout 2:25, and others.

Herndon Stock Farm.

J. R. Sellers, Mgr. of above farm, Clarksville, Tenn, says: "I used Quinn's Ointment with good results and am highly pleased." This is the universal expression. For Curbs, Splints, Spavins, Windpuffs, Bunches, takes the lead. Trial box 25 cents, silver or stamps. Regular size $1 50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

COFFEE MILLS. For the Cheapest and Best **SCALE** **GRAIN & STORE TRUCKS.**

WEATHER VANES. Of any Style known to the trade, address **GROCERS' FIXTURES.**

HOWE SCALE CO.,

75 Front St., Portland, Oregon. 411 MARKET ST., SAN FRANCISCO, CAL.

VINELAND CLOSING OUT SALE

— OF —

MARES AND FILLIES!

The Greatest Sale of Brood Mares and Fillies Ever Held in California.

FIFTY-SIX HEAD

Of Brood Mares and Fillies by such sires as Whippleton (sire of Lillie Stanley 2:17½); Woodnut 2:16¼; Alcona (a sire and grandsire of 2:30 trotters); Grandissimo 2:27¾; Director 2:17 (sire of Direct 2:06); Naubuc (full brother to Thomas Jefferson 2:23); Secretary; Alcona Clay (brother to Alcona Jr. 2:24, sire of Silas Skinner 2:17); Cassius M. Clay Jr. 2:22; Noonday; Mountain Boy; Milton Medium 2:25½, and others

The greatest lot of mares in California to cross on Electioneer and Wilkes stallions.

THIS SALE WILL TAKE PLACE AT

THE NAPA FAIR GROUNDS, MARCH 30, RAIN OR SHINE.

In case of rain the sale will be conducted in the Society's large tent.

THIS SALE IS ABSOLUTE, NO RESERVE OR BY-BIDDING. It comprises all the trotting stock I own, jointly and separately, except stallions.

If you want mares to raise trotters or carriage horses; if you want fillies for the track, road or harem, don't fail to come to this sale.

WHIPPLETON never had an equal as a carriage horse sire in California; he was known as the POOR MAN'S HORSE; good size, solid color and great general qualities.

Send for Catalogue.

FRED W. LOEBER, Proprietor.

Short time only I will send my Electric Belts and Trusses **DR. JUDD'S** On 6 Months' Trial

If You Wish Health, Address DR. C. B. JUDD, Detroit, Mich.

ELECTRIC BELT

WILL CURE: RHEUMATISM, LUMBAGO, CONGESTION, LAME BACK, HEADACHE, LOSS OF MANHOOD, LIVER COMPLAINT, KIDNEY COMPLAINT, NERVOUSNESS, DYSPEPSIA, PARALYSIS.

Lye-peeling Peaches.

SAN BERNARDINO.

TO THE EDITOR:—Can you give me the names of persons in your part of the State who practice dipping peaches to take off the skin; and do you know whether it is a success financially? If you can give me their names please do so. T. A. MAGEE.

[The practice of lye-peeling of peaches has, we understand, been largely abandoned. Perhaps some reader who succeeds with the method will write to our correspondent on the subject.—ED.]

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
GEO. WILSON—Sacramento Co.
J. H. CROSSMAN—San Diego and San Bernardino Co's
SAMUEL B. CLIFF—Creston, Cal.
A. C. GODFREY—Oregon.
MRS. BRUCE B. LEE—Tehama Co.
Don E. ABBOTT—Santa Barbara and Ventura Co's.
M. H. TRUETT—Alameda and Contra Costa Co's.
W. H. STORMS—Nevada Co.
THOS. OSBORN—Santa Clara Co.
WM. R. SELKIRK—Placer Co.
L. J. SELLON—Sacramento.
H. A. LEHNDORFF—California.

Roots Patent Spiral Seam Riveted Pipe.

This material possesses qualities which make it without exception, the cheapest, most durable and altogether most desirable form of pipe procurable, for town waterworks, hydraulic mining, irrigating purposes, stock ranch water supply systems and all other uses of pipe. The Pacific Coast office is at 23 Davis St., San Francisco.

$3,250,000

TO LOAN ON MORTGAGE ON RANCHES AND CITY REAL ESTATE below market rates. HOWE, BANDMANN & CO., 508 California St., S. F.

NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY. Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2.00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.

Office, 111 Front Street, San Francisco, California.



OUR NEW

76 page, Illustrated Pamphlet on **Rupture**, issued Jan'y, 1892, will be mailed to any address, on receipt of 4 cts in stamps. ☞Mention this paper. Address: MAGNETIC ELASTIC TRUSS COMPY., Dr Pierce & Son, San Francisco, Cal. or St. Louis, Mo.

TWENTY ACRES

CHOICE FRUIT LAND!

Near Haywards, Alameda Co.

TEN ACRES IN ORCHARD.
TREES FOUR YEARS OLD.

Cheap and Easy Terms. Will exchange for Oakland or San Francisco property.

JOHN F. BYXBEE, 42 Market St.,
SAN FRANCISCO.

A CHOICE HOME
IN EAST OAKLAND.

SIGHTLY AND CHEERFUL, EASY OF ACCESS. Corner lot, 50x100. House, ten rooms, nearly new. Price, $6500, or will sell the quarter block, 140x150, including house, fine barn, etc, for $12,000. JOHN F. BYXBEE, 42 Market St., San Francisco.

OFFICE OF THE

GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892 to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.

FRANK McMULLEN, Secretary.

Second Edition—Now Ready.

CALIFORNIA FRUITS AND HOW TO GROW THEM. By Prof. Edward J. Wickson.

A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price $3, postpaid. Send for circular. DEWEY PUBLISHING CO. Publishers, 220 Market Street, San Francisco, Cal.

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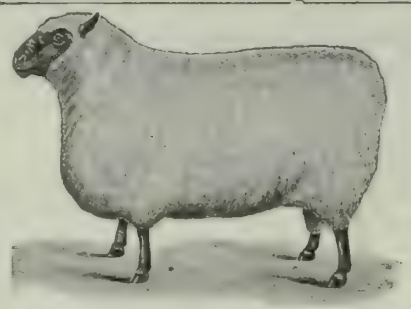
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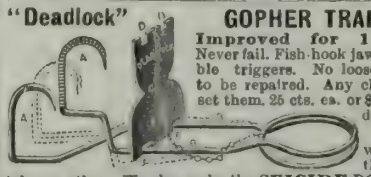


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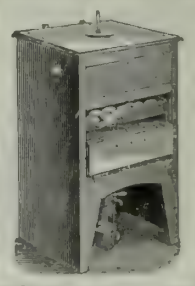


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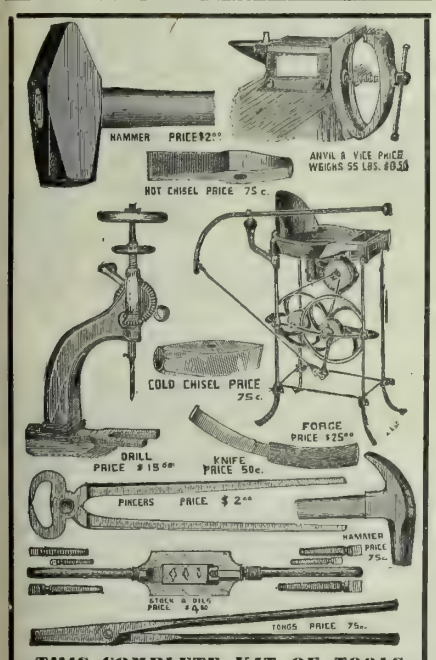
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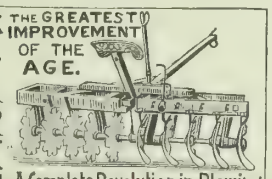
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 23, 1892.

The better feeling reported in last week's PRESS is not only continued, but appears to be more pronounced in all products outside of wheat. Prices are no better, but the market cleans up better. There is a growing impression that the season of 1892-93 will be one of, if not the most prosperous that has been enjoyed for many years. This opinion is emphasized in the fact that the various lumber camps have arranged to increase their cuts, so as to meet an expected enlarged demand for lumber, for improvement purposes. Mr. Filmore, general superintendent of the South Pacific Coast Railroad, says that his line will probably handle all of from two to three times more lumber in this year than they did in last year, and that the increased demand will come chiefly from the agricultural districts.

In the local market, money continues cheap.

Foreign Grain Review.

LONDON, March 21.—Mark Lane *Express* says: English Wheats are stronger. The average advance in London was 9d and in the provinces 6d. Foreign Wheats are exceedingly depressed by continued arrivals. The sales of California have been pressed at 38s 6d Flour is 6d lower. Corn is down 3d. Imports of corn since January aggregate 1,671,000 quarters, against 1,016,300 quarters for the corresponding time last year. Barley weak.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June	July.
Thursday	7s 9 d	7s8 d	7s8¼d	7s8¼d	7s8 d
Friday	7s9 d	7s8 d	7s8½d	7s8 d	.....
Saturday	.....	7s8 d	7s8 d	7s8½ d	.....
Monday	.....	7s8 d	7s8½d	7s8½d	7s8½d
Tuesday	7s9 d	7s8¼d	7s8 d	7s8 d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	39s3d	38s6 1	38s9 1	Steady. Weather warm.
Friday	39s6d	38s3d	38s6d	Weaker.
Saturday	38s6d	38s3 1	38s6d	Steady.
Monday	39s3d	38s d	38s6d	Easier—Weather colder.
Tuesday	39s d	38s d	38s d	Heavy—Cold and wet.

To-day's cablegram is as follows:

LIVERPOOL, March 23. WHEAT—Easier. California spot lots, 7s 9½d; off coast, 38s; just shipped, 38s; nearly due, 78s; cargoes off coast, very slow; on passage, very dull; Mark Lane wheat, inactive; English country markets, mostly turn cheaper; French very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	163¾	163¾	160¾	157¼	154
Friday	164	164	160¾	157⅝	157⅛
Saturday	163¾	163⅝	160	156⅝	156⅝
Monday	162⅝	162½	159	156	156⅛
Tuesday	162½	161⅝	158⅝	155⅝	155⅝

Th following is to-day's telegram:

NEW YORK, March 23 – WHEAT- 95½c for May, 93½c for June, 93c for July, 90c for August, and 91½c for September.

CHICAGO, March 23.—WHEAT—83½c for May and 84c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	166½	165¼	....	....	14 3	14 3
Friday	164	166½	....	....	1 3½	143⅝
Saturday	164¼	163⅝	....	....	143⅝	143
Monday	164	163¾	....	....	143⅜	143¼
Tuesday	162¼	161⅜	....	....	142⅝	142⅜

The following are to-day's recorded sa'es on Call:

Informal Session.—Buy-r season –100 tons, $1.61½; 500, $1.62; 500, $1.62½; 1,000, $1.62½ ₱ ctl. Regular Session, Buyer season – 500 tons, $1.62½; 300, $1.61½; 600, $1.61¾ ₱ ctl. Afternoon Session. Buyer season – 300 tons, $1,61; 300, $1.60; $1.60½; 100, $1.60⅝; 700, $1.60¾. Seller 1892 100 tons, $1.42½ ₱ ctl.

BARLEY.

	Buyer Season. H.	L.	*Buyer Season. H.	L.	Seller 1892 H.	L.
Thursday	99	98½	....	....	....	....
Friday	98½	97	....	....	....	....
Saturday	100	99½	....	....	....	....
Monday	99½	99	....	....	....	....
Tuesday	99	97½	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

Regu ar Session.—Buyer season – 100 tons, 98c; 100, 98½c; 200, 98½c; 300, 98⅝c; 300, 98¾c ₱ ctl. Afternoon Session.—Buyer season—100 tons, 98¾c; 200, 98¼c; 300, 98.c ₱ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, March 18.—*Bradstreet's:* Manufacturers continue to take wool quite freely and stocks are being rapidly reduced. Concessions have been made to induce manufacturers to take hold, and from the fact that they have bought so heavily when the goods market has been rather against them it is evident that they regarded present quotations as the bottom of the market. The mills, as a rule, are busy, and a large amount of wool is going into consumption. There has been more doing in fleeces, and about all of the choicest lots have been taken. In quarter and three-eighths blood wools there is a good steady demand. Delaine wools are selling slowly. A fair movement is noted in both Texas and California wools, but prices have been made to suit the views of buyers. It is too near the new clip for dealers to hold off for prices. Territory wools are more active; the supply of Montana, Utah and Wyoming wools has been greatly reduced within the last few weeks, but there are still ample stocks of Colorado wools. Australian wools, especially lots of light shrinkage and strong fiber, are in good demand and sell readily on a scoured basis from 67c to 73c.

Eastern Dried Fruit Market.

NEW YORK, March 21.—Unpeeled peaches are reduced to several carloads; sacks, 7@8c; peeled, 20c Prunes—Four sizes are freely offered at 7¼c; some grocery trade pays 8c for 60s and 70s, the fanciest now here, and 7⅜c for finest. Raisins—Buyers will pay 5@5½c for selected bags; other grades are neglected, though offered low. Apricots—Common to prime sacks range from 6½@7½c; boxes of Moorpark quality, 9c.

Miscellaneous.

NEW YORK, March 21.—Honey—Quiet and unchanged.

Lima beans—Spot is steady at $1.65@1.70 per bushel. Your reports of reduced acreage this year on account of recent unsatisfactory prices have been credited sufficiently to cause a speculative tone and some action here.

California mustard seed advanced during the week to 4¾c. It is not now as strong in price, as the ship San Joaquin has added to the supply.

Eastern Hop Markets.

Sales of hops continue unimportant. Malt spot business was for such grades as 20@22c would buy. The feeling among holders, however, is pretty strong as the trend of the market ought to be favorable with the reappearance of the brewers, who can hardly stay away much longer. The stock of the State and Pacific in London is only 4300 bales. Exports for the week, 235 bales. The range of common to choice 91s is 20@25c; best Pacific is half a cent above State 80s, 13@18c; olds, 6@9c; sales, 300 at 6@7c. Option deals were almost blank, bidding and asking being wide apart.

General Remarks and Statistics.

Cereals.

The exports in bushels of breadstuffs from the United States, for the seven months ending January 31, 1892, compare as follows with the like time in 1890-91:

	1891-92.	1890-91.
Barley	*2,012,268	326,442
Corn	33,086,378	20,005,057
Oats	6 878,897	847,750
Oatmeal	†13,861,386	6,140,008
Rye	8,771,679	332,912
Wheat	111,145,278	27 826,993
Flour	‡8,489,679	6,317,925

* Chiefly from California. † In pounds. ‡ Bbls.

The export value of the above aggregated as follows: In 1891-92, $193,549,034; in 1890-91, $67,634,073. This is the most remarkable gain within the history of the country.

In futures, trading on Call has been light in both wheat and barley. The absence of any degree of activity is accepted as indicating that the future of the markets is dependent largely on the weather abroad. So far, it is claimed that everything has favored the growing plant in Great Britain and on the Continent; but any change in this favorable condition will be met by renewed activity, with better prices for wheat futures, in which barley futures will sympathize.

Crop prospects in this State for all kinds of cereals are of the most favorable character. The only danger to be feared at this writing is that the plant will have too rank a growth in many sections, which will not only cause many fields to lodge, but will also cause a lessened yield of grain to the head. Up north, all advices point to a favorable season.

An iron vessel was taken the past week at 16s. 6d. spot to load wheat for U. K., H. A. or D. This is the lowest charter ever before reported at this port. The tonnage in port is large, while the list on the way begins to show signs of increasing. Vessels for new crop loading, it is said, are not obtainable under 30s. for U. K. f. o. b.

For wheat the local market continues to rule heavy, with a gradual settling in prices. The very low price ruling for silver enables English importers to supply their wants from India and other silver-using countries at low figures. Any advance in the price of silver will make itself soon felt in the wheat markets of the world. The extraordinary large available supply of wheat in the United States combined with heavy shipments afloat, and also good growing weather abroad, are also against the wheat markets in this country and abroad.

The barley market has exhibited slightly more activity, but with no improvement in prices. The activity is due chiefly to a free demand for the more choice grades of bright brewing for shipment to England, where the supply of these grades is light. Low charters favor outward shipments.

Under lessened receipts and depleting stocks, oats are hardening. While quotations remain nominally unchanged, yet it is generally understood that a slight advance is obtainable for the better grades. Poor grades of oats continue to favor buyers.

The movements in corn are slow, yet the light stock causes a firm market.

Rye is fairly steady.

Feedstuff.

In ground feed, the market is lower for both bran and middlings, but steady for feed meal and ground barley. The demand for the latter is said to be exceptionally free, considering the improving pastures. Exports to the Hawaiian Islands are fairly free.

Straw is barely steady. Hay is said to be easy, yet the light available supplies and free feeding are against much shading in prices. The present outlook warrants the assertion that this year's crops will be quite heavy.

Fruit.

For the seven months ending with January 31, 1892, there was exported from the United States 17,710,335 lbs. of dried apples, against 2,392,281 lbs. during the like time in 1890-91. The export value of canned fruits compares as follows: 1891-92, $1,269,855, against $498,109 in 1890-91.

Apples are slow and easy for poor to good, but choice to fancy are firm. Receipts continue free for the season of the year.

Strawberries are coming in slightly freer. To-day's receipts were placed at from 25 to 35 cts. a basket.

Limes and lemons are essentially unchanged. The weather is against a free demand.

Oranges are cleaning up better. Receipts of choice to fancy continue light and fetch good prices. Poor continue slow.

Raisins are getting into better shape for sellers. This, of course, does not apply to poor grades. It now looks as if the season will go out with the market fairly well cleaned up of good to choice grades.

The market for dried fruits is in a fairly healthy condition. By this, it is not to be interred that prices are higher, but that supplies are being worked off which will admit of new crop dried fruits coming on fairly hungry markets, both on this coast and at the East.

Live Stock.

The market is a shade easier for both bullocks and mutton sheep, under more selling offers and a falling off in consumption. Cheaper vegetables and the near approach of fruit season keep slaughterers from anticipating their wants. Hogs appear to be easing off, with feeders and stock quoted lower.

Vegetables.

Garden truck is coming in more freely, causing some shading in prices, although the large demand from up north keeps prices for asparagus and rhubarb from moving down fast as yet. Green peas are lower. The season is all of three weeks earlier than was that of 1891.

Onions continue weak. This is largely due to the poor keeping quality of those received and also the advanced condition of the growing crop. Choice good keeping onions are fairly firm.

Sweet potatoes are scarce and high.

The potato market is weak, and easy for all kinds except choice Burbanks, from Oregon. The weather is against potatoes keeping long. New potatoes are coming in more freely, with quality showing a slight improvement.

This afternoon rhubarb sold at from 75 cts. to $1.25 per box, green peas 1¾ to 2½ cts., and sweet peas 2½ to 3⅛ cts. The market closed weak. New potatoes sold lower. Very choice sold at 2 cts. It now looks as if new potatoes will soon be a drug in the market.

Dairy Produce.

Butter is fairly steady, due to heavy shipments up north. The superior grade of this year's butter makes it attractive, and, therefore, causes it to force its way into the demand markets, which have been supplied by Eastern creameries. The cut-throat policy, inaugurated by a new institution to gain patronage, is not so pronounced—greatly to the relief of the trade, and to the benefit of dairymen.

Cheese is coming in more freely, and as available supplies are said to be large, dealers look for gradual shading prices; particularly when the demand from up north begins to slacken.

The receipts of eggs continue large, as does the demand. It is generally claimed that present prices will obtain until after Easter, when a lower range may set in.

Overland Produce Shipments.

The following is the official statement of Eastern overland shipments of California produce and the points from which they were forwarded during the month of February, 1892, via the Southern Pacific Co., and total shipments from Jan. 1, 1892, to March 1, 1892:

Produce, Tons.	San Francisco.	Oakland.	Sacramento.	San Jose.	Stockton.	Marysville.	Total.
Beans	470	.....	32	.....	10	.....	1303
Canned goods	417	24	186	157	27	121	2117
Fruit dried	376	.....	174	459	34	122	2467
Fruit citrus	.....	.....	.....	.....	.....	.....	869
Honey	16	.....	.....	.....	.....	.....	72
Hops	13	.....	38	.....	8	.....	232
Raisins	140	.....	61	7	452	5	1979
Vegetables	391	.....	.....	.....	10	.....	687
Wool grease	294	7	.....	.....	.....	.....	1263
Wool pulled	19	.....	30	.....	.....	.....	109
Wool scoured	107	.....	.....	.....	.....	.....	277

The shipments in February from Los Angeles were omitted, or else they are included in the shipments from other points.

Miscellaneous.

From reliable advices up to March 23, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	208,006	254,583	*†145,334	80,624
San Diego	17,522	10,905	3,084	.....
San Pedro	3,434	11,000	.....	.....
Oregon	22,773	23,964	24,432	21,874
Puget Sound	11,717	26,1 4	.....	.....
Totals	263,452	326,496	172,850	102,498

*Engaged for wheat, 1892, 23,46 ; 1891, 74,624 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1 th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,488,210	8,989,850
Flour, bbls	745,436	787,313
Barley, ctls	786,338	208,535

Bags are strong at 7¼@7¾c.

Hens and roosters are weaker, but other poultry is firm, with geese wanted at an advance.

Beans are steadier, with a hardening tone reported.

Alfalfa is quoted at 1¼ cts. This is the highest quotation for years. Short grass seed crops in England are said to have caused heavy shipments from the United States of both alfalfa and clover.

Nuts are easy, but not quoted lower.

Hops are essentially unchanged. For new, the contract price is quoted at 13 to 15 cts. as the range.

Wool is coming in quite freely, yet it is hardly safe to give quotations. Probably by next week we will be able to quote the market for 1892 wools.

Produce Receipts.

Receipts of produce at this port for 7 days ending March 22, '92, were as follows:

Flour, qr. sks	41,573	Bran, sks	5,969
Wheat, ctls	70,854	Buckwheat "	.....
Barley, "	52,02	Middlings "	3,016
Rye, "	4,256	Chicory, bbls	265
Oats, "	.....	Hops, "	223
Corn, "	1,768	Wool, "	1,363
*Butter, "	1,12	Hay, ton	2 306
do bxs	968	Straw, "	24
do bbls	.....	Wine, gals	154,685
do k gs	5	Brandy, "	11,440
do tubs	1	Raisins, bxs	370
do ½ bxs	55	Honey, cs	.....
†Cheese, ctls	82	Peanuts, sks	203
do bxs	121	Walnuts "	220
Eggs, doz	66,040	Almonds "	7
do " Eastern	.....	Mustard "	.....
Beans, sks	6,537	Flax "	.....
Potatoes, sks	12,605	Popcorn "	.....
Onions, "	1,38	Broom corn, bbls	371

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '9 to March 21, '91.	July 1, '91 to March 19, '92.
Flour, ½ sks	227,295	368,438
Wheat, ctls	1,149,277	1,185,022
Barley, "	26 ,1 8	39.229
Oats, "	3 1,229	355,976
Wool, bales	5,917	5,978
Hops, "	392	431
Rye, sks	.....	3,352
Potatoes, sks	65,722	106,500

San Quentin Grain Bag Statistics.

W. E. Hale, Warden, State Prison, San Quentin, furnishes the following interesting statistics of the State Prison jute mill:

Replying to your request, I submit the following statement of the output of bags from the jute mill during 1891:

No. of bags on hand Jan. 1, 1891	1,021,800
" " " manufactured during the year	2,289,621
Total	3 311,421
No. of bags sold during the year	2,829,221
" " " remaining on hand Dec. 31, 1891	482,200
Probable output to end of coming season, say Aug. 30, 1892	1,500,000
Available for sale during the season	1,982,200

The prices of our bags during the past year ranged from 6½ to 7 cents.

T. T. Hooper.—In Memoriam.

Again has Alhambra Grange been called to mourn one of her number, one who was ripe in years of labor and of quiet thought. Three score years and ten is the allotted span, but when in the course of time almost another score is added, then ought the harvest to be ripe, and bend cheerfully as well as gratefully to the reaper Death, while brother and sister workers in the field should mourn not, but rather rejoice that an aged, full-rounded earth life is ended, and like unto the perfected sheaf is garnered and in kindness and mercy taken into our Divine Master's care, where is prepared a heavenly fitting for the withered, harvested and gathered sheaves of humanity.

Brother Thos. T. Hooper, once Master of Montezuma Grange, and Steward of State Grange, and, later, member of Alhambra Grange, No. 230, has gone to his long home. In the State Grange, as well as in the subordinate Grange, are vacant chairs, for in their councils 'twas his delight to be, but our loss is his gain. For this great change, his friends were prepared, for his feeble, tottering frame has long admonished us that the end was near.

To his daughter-in-law, grandchildren and adopted daughter, the Grange extends all sympathy and mourn with them in their bereavement, bidding them follow in his footsteps to the home of the faithful. Committee—MRS. M. B. LANDER, MRS. H. RAAP, JAMES KELLY.

Martinez, March 5, 1892.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 23, 1892.

BEANS AND PEAS.			
Bayo, ctl	1 80	@	2 05
Butter	2 40	@	2 80
Pea	2 50	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 20	@	2 45
Lima	1 60	@	2 00
Wid Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nles	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	20
Do good to choice	21	@	—
Do Giltedged	—	@	22
Do Creamery rolls	—	@	22
Do do Giltedge	—	@	22½
Eastern	15	@	—
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	15
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	16	@	17
FEED.			
Bran, ton	15 50	@	16 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 00
Middlings	18 50	@	19 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oat	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	93½	@	1 02½
Do Choice	1 03½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 21½	@	1 26½
Yellow, large	1 23½	@	1 26½
Do small	1 23½	@	1 26½
Oats, milling	1 42½	@	—
Feed, Choice	1 38½	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 50	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 47½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling, Gilt edged	1 70	@	—
Do Choice	1 67½	@	—
Do fair to good	1 67½	@	—
Shipping, cho'ce	1 62½	@	—
Do good	1 60	@	—
Do fair	1 57½	@	—
Common	1 55	@	—
Sonora	1 55	@	1 67½
FLOUR			
Extra, City Mills	4 90	@	5 25
Do Country Mills	4 90	@	5 25
Superfine	3 00	@	3 45

HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	2	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	90	@	—
Fair to Good	75	@	—
Cut	40	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	45
Do do Oregon	50	@	1 05
Do Humboldt	40	@	75
River Reds	25	@	40
New	1 00	@	2 10
Sweets	4 00	@	5 00
POULTRY			
Hens, doz	6 00	@	7 50
Roosters, old	6 00	@	7 00
Do young	8 00	@	10 00
Broilers, small	4 00	@	—
Do large	6 00	@	—
Fryers	6 50	@	—
Ducks	9 00	@	12 00
Geese, pair	2 50	@	3 00
Turkeys, Gobl'r	14	@	16
Turkeys, Hens	15	@	18
Do Dressed	16	@	21
Manhattan Egg Feed ₱ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1¾	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL			
SPRING, 1891			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	16	@	—
Cala'v & F'th'll	16	@	—
Oregon Eastern	18	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	13
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring, 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	2	@	4
Do unstemmed	1	@	2½
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	5	@	6
White, sun-dried	4	@	6
Do evaporated	6	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap. unpe'l'd, choice	7	@	—

Do do fancy	8	@	—
Sun-dr, pi'd, prime, bl.	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap, peeled, in boxes, choice	15	@	—
Do do fancy	16	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap. sliced, in boxes	6	@	8
Do ring do	10½	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, unграded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₱ bx	1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₱ bx	1 25	@	—
Loose Muscatels, common, ₱ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₱ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₱ 30-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes			

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 23, 1892.

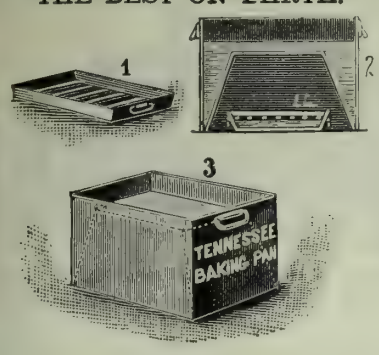
Limes, Mex	4 00	@	5 00
Do Cal	60	@	75
Lemons, box	1 00	@	3 00
Do Sicily	5 50	@	6 50
Oranges, Seedlings	—	@	2 25
San Bernard'o	2 25	@	2 50
Riverside	1 75	@	2 50
Los Angeles	1 25	@	2 00
Do Navels—			
San Bernard'o	3 00	@	4 50
Los Angeles	1 50	@	3 00
Riverside	3 00	@	4 50
Duarte	3 00	@	4 50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Apples, box	75	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	2 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	45	@	—
Garlic, lb	2	@	3
Squash, Mrft, tn	3 00	@	6 00
Do Summer, lb	—	@	—
Tomatoes, box	50	@	1 00
Asparagus, box	1 00	@	—
Do choice to ex	1 50	@	2 00
Peas, green, lb	2	@	4½
Rhubarb, box	8	@	1 25
String Beans	10	@	15
Cucumbers, doz	40	@	—

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Second quality	6	@	—
Third quality	5½	@	—
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VEAL.			
Range, heavy	5½	@	6½
Do light	7	@	8
Dairy	7½	@	9
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Wethers	10	@	10½
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Do Spring	14	@	16
HOGS.			
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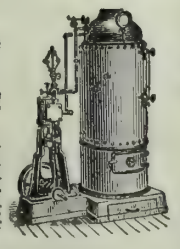
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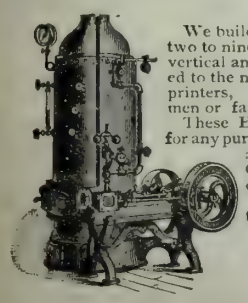
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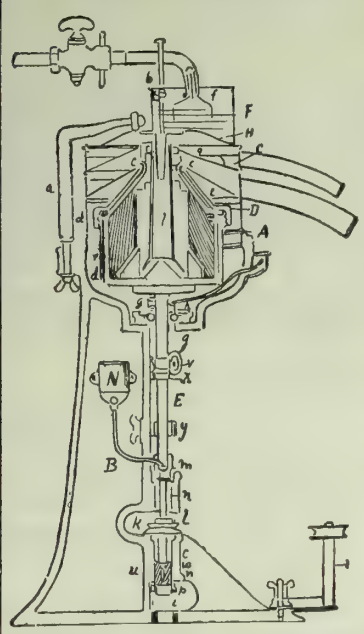
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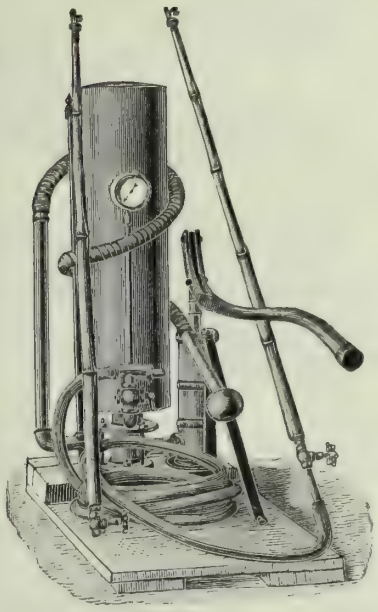
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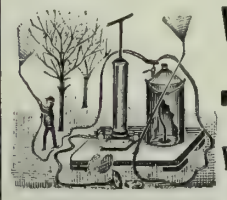
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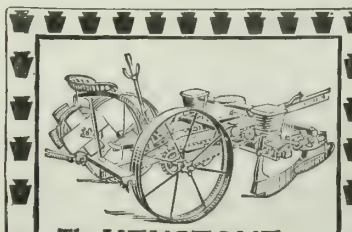
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Santa Clara Valley—West Side.

SAN JOSE, March 10, 1892.

TO THE EDITOR:—Can you make use of a few notes made on a ride from San Jose to the foothills on the west of this glorious valley?

As we pass O'Conner's Sanitarium and chapel we note their solid foundations and lines of beauty and realize what help, wealth can offer to the sick of body and soul; God bless our capitalists who use their wealth in his service.

Frank Shafter's drying and packing plant, wears an air of dreamy repose that suggests a young giant gathering vigor for the fast approaching days of activity. Fields of grain between San Jose and the western hills are not numerous, but what there are, are looking more than usually well for the season, yet all depends on the future rains for a paying harvest.

The orchards and vineyards are a surprise to even old orchardists. This is called the "off year" for apricots, but I see no signs of the "off" in the bloom or vigor of the trees. We are told that "we have the world for a market" for our prunes and other fruits; from the strength of the old and numbers of the new orchards it would seem that we could supply our market.

This side of the valley has a large proportion of warm loamy soil and many plows are now turning under a heavy growth of clover and other juicy plants; this seems a logical thing to do, and I know no other country where green manuring can be so easily practiced. Weeds or "thorns and thistles" treated in this way may be a great blessing rather than a curse, to the soil; they are one of the many curses that enlightened labor can change to blessings. Even heavy soils worked fine at the surface, to receive not only the first rains but the plant food ripened by the sun will often grow a crop of green manure well worth planning for.

Green manuring seems the only available remedy for many "soil impoverished" orchards. Our means of transportation and the high value of the land prevent the gathering of sufficient barnyard manure, and I expect the time will come when suitable seed will be sown (before the rains) in orchards for the express purpose of plowing it under for manure.

The orchardist's work may well be called a continuous experiment, and a notably successful one in this valley. The demand of our canneries and dryers for "the best" is showing in the large number of old trees that are grafted. In many cases the whole leaf-bearing top is taken off and a dozen or so of scions are inserted to furnish the leaf, or lungs of the tree.

Has the proportions of new or leaf-bearing wood, to the amount of root, as well as size and quality of fruit, been sufficiently experimented upon? I wish some of your readers who are close observers as well as active workers, would give us some of their experience in this matter.

CHAS. A WYMAN.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1; 10 mos., $2; 15 mos., $3 Extra copies mailed for 10 cents, if ordered soon enough. If already a subscribor, please show the paper to others.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos. A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco

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2,288 sold in '89
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60,000 will be sold in '92

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The Aermotor Pneumatic Water Supply System enables you to supply every part of your house with water without an Elevated Tank.

Though sold we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable part of the globe.

Are you curious to know how the Aermotor Co. in the 4 brief years of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?

1st. We commenced in a field in which there had been no recognized experiment for 20 years, and in which there seemed no talent or ambition, and nowhere yet was slow except in close imitation of our inventions.

2d. Before commencing the manufacture, exhaustive and laborious investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, the reactions in the wheel such as heavy wooden arms obstruction before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods in every way, and pays freight both ways, and to these points we owe the facility and ability to furnish the best article at less than the poorest sell for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

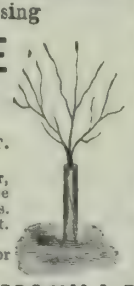
If you want a strong, still, Steel Fixed Tower—or if you want the tower you don't have to climb, the Steel Tilting Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor, or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one $100, write for catalogue, illustrated printed matter, showing every considerable phase of windmill construction and work, to the AERMOTOR CO., 12th and Rockwell Sts., Chicago. 12 Main St., San Francisco.

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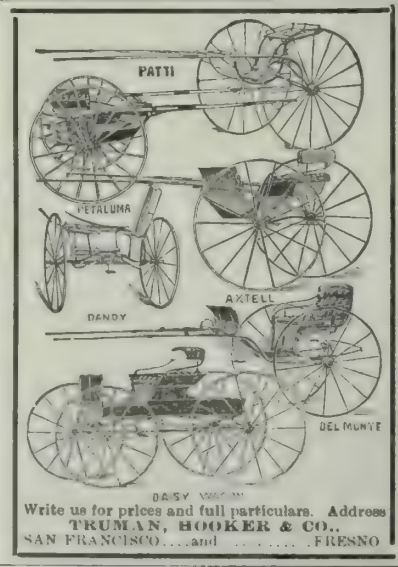
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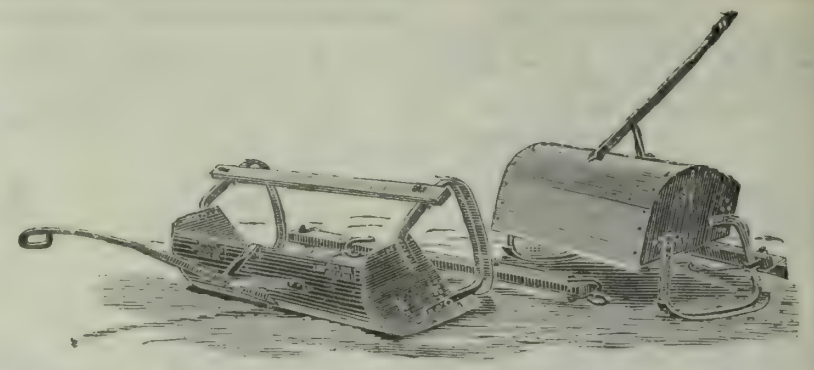
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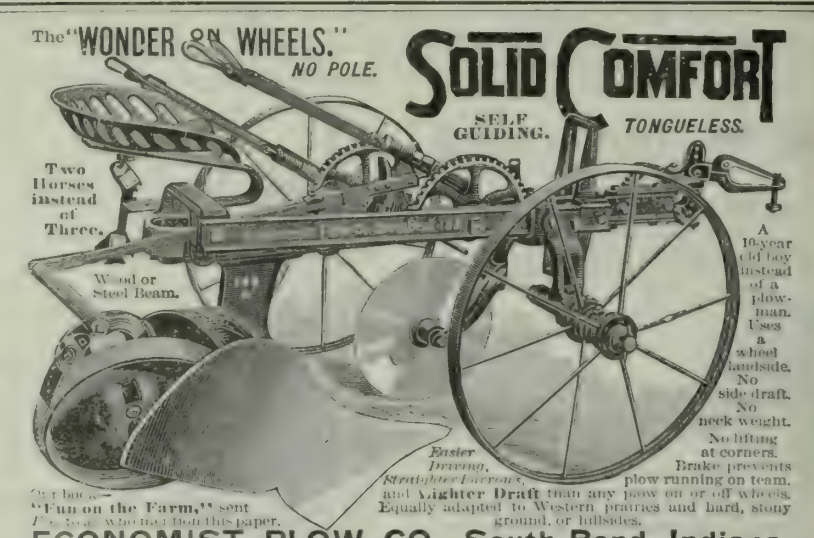
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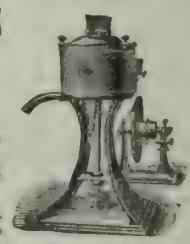
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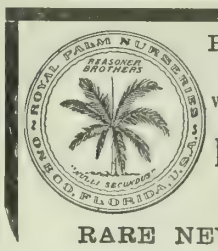
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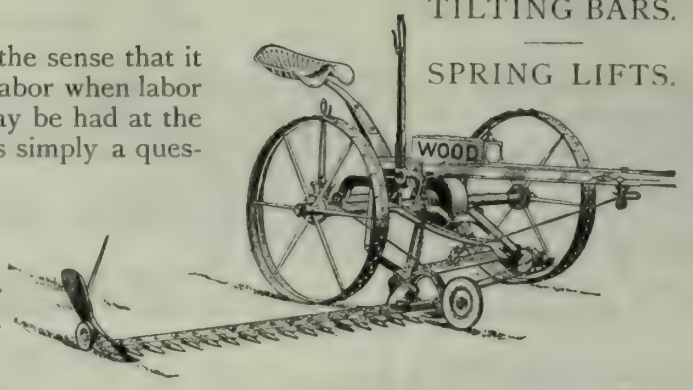
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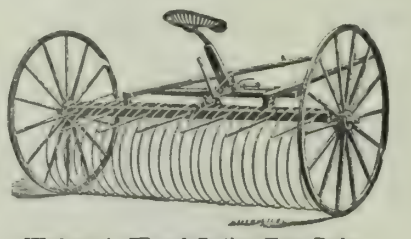


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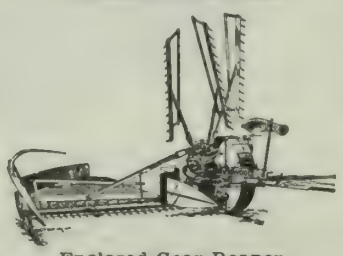
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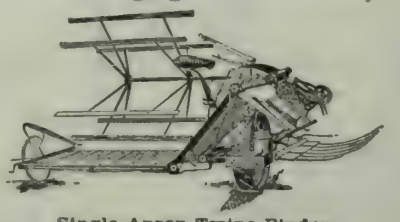
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TESTIMONIALS.

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Yours truly, H. H. CLARKE,
Formerly Supt. and Manager of the "Oothout Orchard and Vineyard," Fresno, Cal.

FRESNO, Cal., Dec. 19, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: The "Morgan Spading Harrow" which I purchased last season I am well pleased with and I can recommend it as being a first class implement for orchard and vineyard work.

Yours truly, A. V. MORSE.

FRESNO, Cal., Dec. 10, 1891.

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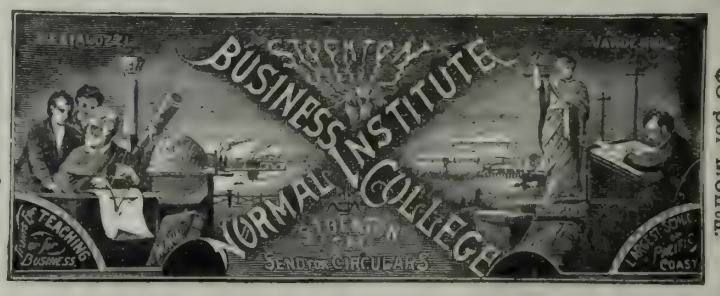
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PACIFIC RURAL PRESS

Vol. XLIII. No. 14. SAN FRANCISCO SATURDAY, APRIL 2, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St

Artesian Wells.

We gave last week a picture of an artesian well which was allowed to flow fountain like in the midst of the reservoir in which its waters were stored. It is not always feasible or desirable to create such a reservoir—in fact it is customary to lead away the water without such storage. When, then, the planter has to deal with a well of great flow, and disposed to project its waters into the atmosphere, there comes a necessity to repress and divert the flow; indeed, as one may say, to harness the well down to strong quiet work devoid of display. The engravings on this page, which are made from photographs of wells in Kern county, show the various ways in which the flow from wells is repressed or diverted, or simply led away by gravity to lands on which the water is needed.

The upper left-hand corner of the composite plate shows a well handsomely equipped with a cement curb and a cap against which the water expends its upward force and quietly falls back and runs away into the ditch. The cement curb prevents the pond which exists around a well which is merely capped and allowed to gather in a hollow around the casing. Below this is a well of moderate flow, which is merely allowed to pour out of the top of the casing and make its pond below.

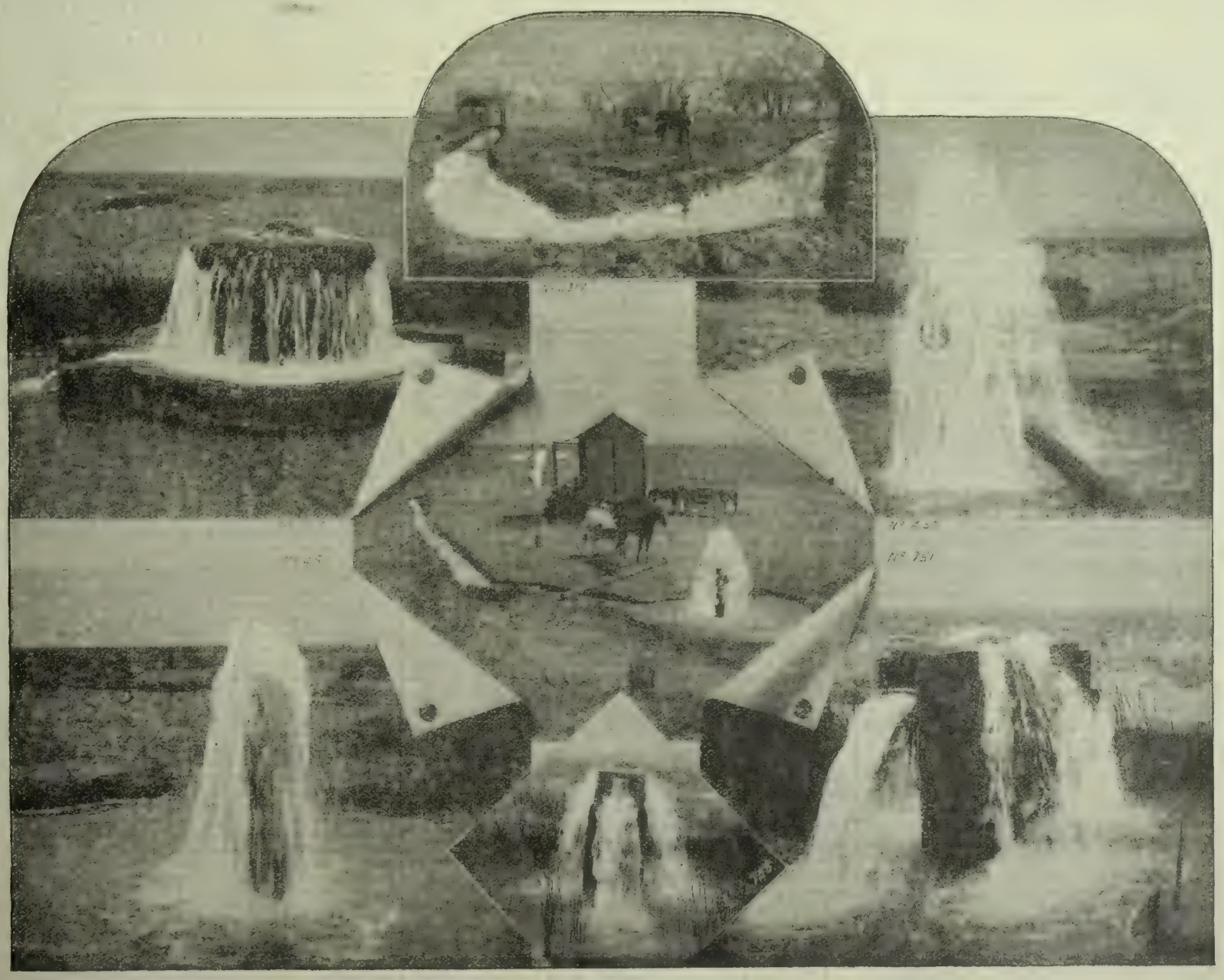
The upper central picture shows a large stream from a well flowing away in a ditch for distant use. Below it is a similar scene showing a longer ditch and a small cabin, which, at the time of the photographer's visit, was apparently the scene of a sort of a social reunion, for there are more people on the steps than could be possibly accommodated within, and the horses feeding from the wagon give additional indications of a friendly visit.

The three other sketches on the plate show arrangements for closing in wells with planks also, in the upper right hand corner a well fitted with a good valve, by which its flow may be reduced or stopped. The handling of an artesian well is much like handling of any other agricultural agency; it may be done with some style and neatness or it may be done rudely and carelessly. The water is just as wet in one case as another, and will in both cases make an acre fruitful or quench the thirst of a band of steers, as the owner desires. And yet one who likes to have everything around him neat and tidy and no slopping over, will see to it that his flowing well does not turn his place into a marsh or a malaria incubator.

There is another very important point which people are apt to forget. The following statement of it is condensed from a recent bulletin of the Colorado Experiment Station:

It is a rule, rather than an exception, throughout the artesian basins of this State to meet with wells whose pressure is decreasing. This is due either to too many wells or to defective construction. Indications point to the latter as the cause in the majority of cases. Many wells are improperly cased, and some not at all. Such methods of false economy may result in disaster in the future, not only to individual wells, but to the whole basin. This will be readily seen when one stops to consider the principles upon which artesian wells are based. The water is confined under great pressure between two impervious layers of earth. If the upper one is punctured, the water escapes to the one above or to the surface soil and wastes, thus reducing the pressure. This shows the necessity of thoroughly packing the casing at the impervious strata. The law should require every well sunk to be completely cased, and abandoned wells to be plugged.

The same state of affairs exists in this State. The more wells sunk into an artesian reservoir the less the flow from each. Long ago, this State enacted a law requiring the capping of wells when their flow was not being properly utilized. Not only was this to stop unnecessary draft upon valuable subterranean supplies, but to prevent excess of water in surface strata and the raising of the water level upon lower lands. We need wise use of water as of other natural resources.



VIEW OF KERN COUNTY ARTESIAN WELLS WITH ARRANGEMENTS FOR DIRECTING THEIR FLOW.

Agricultural Engineer

Good Roads—A Prime Necessity.

Oakland, March 22, 1892.

To the Editor:—In all the discussion of the question of adequate returns for his products, the farmer has generally overlooked one vital point. That is the facility of the first movement of the crop—how most readily to place it in the hands of the dealer or transportation company. Much has been said of the necessity for cheap railroad rates, and the protests against the present exorbitant tariff have been both earnest and well-founded.

When profoundly impressed by a more remote evil, are we not in danger of overlooking the one lying near our own doors? Is the farmer altogether without fault in the high cost of realizing upon his products? The presumption seems to have been that the cost of placing his fruit, hay or grain on board cars or boat is a legitimate part of the necessary expense of production, and as such, not worthy of close scrutiny. And what is the result? The almost invariable use of four horses where two ought to be ample and a largely enhanced cost for labor, and "wear and tear," as well as perpetual delay and disappointment as to time.

In point of fact, the work of "getting the crop to market" is a giant factor in running up the bill for incidentals and in standing in the way of quick returns, and this is the case by reason of the fact that, with few exceptions, we have no good roads in the country. Because the farmer performs the work himself, it has seemed to him of small moment whether the facilities be less or greater. True, he reasons in a general way upon the advantages of nearness to depot or landing, but does he sit down and figure up the actual difference in cost to his own pocket of hauling small loads over a dirt or mud "right of way"—which is all that most of our country roads are—and the easy traction with a big load over a macadamized or telfordized roadway?

The difference is so immense as to amount to poverty in place of wealth, distress in place of comfort, and continual worry instead of ease of mind. Give every ranchman today the difference between his present situation and the result I have hinted at, which is in effect a railroad at his own door, and you ensure him a desirable income at once.

The truth is that, outside cities, there are very few roads in this country. What are called roads are simply public rights of way, maintained in execrable condition, at an annual cost which is simply ruinous to rural communities. The net result is an apology for a road—a travesty upon the name highway. Wherever by chance a decent road exists in any section, the resultant growth and prosperity are marvelous. It is possible, or will be when our legislature permits counties to issue long-time bonds, for every county to construct good roads.

One county in New Jersey issued bonds for $300,000 to build only 30 miles of road, and the effect upon the real estate values has already justified the expenditure. A similar movement wisely inaugurated in every county would be equally fruitful of compensating results. Contra Costa county has commenced the work in the right way by listing and naming all her roads, preparatory to the application of the ten-block system of numbering country residences. It is to be hoped that other counties will adopt the "Contra Costa plan."

The State of California has a population of 1,200,000. The nine leading cities of the State number 500,000, showing that about one-half the population of the State is agricultural, or in small communities dependent thereon. The State debt is about $2 per capita. Four of the nine cities of the State, with a population of 390,000, have a bonded indebtedness of $3,100,000, or nearly $8 per capita.

The bulk of this expenditure has been to secure facilities not more essential to the urban population than are good roads to the suburban. Indeed, the actual wealth of the State is in its productions—the commodities to be moved, and ease and economy in handling these is a primal necessity.

The assessed valuation of the property of the State has very nearly doubled in the last 11 years, and there is every reason to believe that the ratio of improvement will not be much less in the future. At least, our ability in the coming years to meet obligations incurred for necessary improvements will be ample, and increasing with each year.

An approximate estimate of the weight of the leading products of the State shows that the farmers have to cart to market, or to cars or boat, each year, not less than eight million tons, or an average of 50 tons to each family. The average distance this load has to be hauled, I leave for the reader to estimate, also the weight of all the farmer consumes at home, the lumber he uses, etc.

The cost of fences has been estimated at the East as equivalent to the cost of buildings. This tax the people of California are seeking to escape. But they are following the old, not beaten track, but muddy net of the Eastern States in the slip-shod method of road-making and repairing. What is needed is a sweeping revolution in the way of handling roads. The best ability should be engaged, and all market roads be reconstructed upon the basis of a permanent roadway, all repairs to be made under competent superintendence and paid for in cash.

Next, the wagon tires should be broadened in proportion to the load to be carried, and the absurd plan of front and hind wheels tracking be abandoned. Mark the difference between a 2 or 2½ inch tire, both wheels running in the same narrow groove, and a 4 to 6 inch tire with a tread for both wheels of 8 to 12 inches! The one is necessarily destructive, the other essentially preservative, and the same team will handle 25 per cent heavier load with equal ease.

Let me close as I began, and suggest as a suitable theme for every Grange—How to make and keep good roads—and thus lessen this first and heaviest burden, the cost of getting our crops to market.

C. M. Plumb.

Meteorological.

Pacific Storms.

San Francisco, March 19, 1892.

To the Editor:—The natural trend of storms advancing toward the Pacific Coast from the ocean is eastward and north of Washington. The territory north of Washington and Idaho shows by its denuded aspect that the fierce gales and rains to which the middle and southern coasts are but rarely subjected here have full sway. The excessive precipitation on the extreme upper coast of Washington, caused by the counter-currents of warm and cold air and the extreme wind velocities at the most northwest station of the Weather Bureau (Tatoosh Island) which sometimes blow at a velocity of 100 and more miles per hour, are a proof of the violence with which storms strike that coast. Such storms, if they were to strike the middle coast with any degree of frequency, would rapidly depopulate that district.

A storm advancing from the ocean and not hampered by mountain ranges, sweeps eastward; but meeting air currents with different temperatures as the land is approached, the deposition of moisture begins. The conditions over the land at such a time, whether there is a wave of high air pressure banked up over the Northwest territory, determines the period of the check in its eastward career. If the barometric conditions are favorable, *i. e.*, if the barometer is comparatively low over Montana, Idaho and over the Northwest, there is but little delay; but if the barometer is high over these districts, such fact, with the high lands to be traversed, oftentimes delays the storm on the upper coast, where its motion continues until either a falling pressure to the eastward permits, or a wave of air from the westward, forces it over its eastern path with greatly diminished energy, or it may move southward along the coast and rebound from here to there until its energy is wasted or finally find an eastward exit over the upper country, or be lost or filled up in the southern country.

A storm striking Washington, Oregon or Northern California differs decidedly in its effects on the weather on the coast, for with such a depression there is always a tendency for the winds to go to the southward, which direction, in the majority of cases, gives rains to California; and if the storm is decided in its character, it may cross to the southeastward and join the general low air pressure that hangs over Southern Nevada and Southeastern California, where it will remain until it is filled up by the winds from some wave of air that sweeps toward the interior.

In but very few cases do storms cross the Rockies between the British line and Mexico, and when they do cross it is with such diminished energy that unless reinforced by favorable conditions east of the Rockies, they retain but a remnant of the force with which they affected the Pacific country.

Storm frequency is variable, but a general average will place them at one in every five or six days, and when so-called weather prophets speak of a storm that is expected in a certain region between certain dates, ranging from four to six days, it is known that such "prophets" have just sufficient knowledge of meteorological affairs to forecast according to nature. That the severity of storms can be determined in advance is out of the question. There is a kind of a general rule that a very low pressure of air is followed by a comparatively high pressure, but either of such low or high pressures may be formed by merging of two storms or of two high areas.

There are no well-defined laws governing the movement of storms on the Pacific Slope. East of the rockies storms move from west to east with remarkable regularity, but west of the Rockies it is a question from the moment that the barometer begins falling on the upper Washington coast to the time of the disappearance of the storm as to what may result. At times the air pressure will begin to fall in the western portions of Washington and Oregon, with every indication of a storm that will sweep California, or at least give general rains. In less than 12 hours after such conditions have been noted, there will be entirely dissimilar conditions existing. Situated on the coast as we are, there are but few rules applicable to storm movements, and such few are embodied in the following:

A rising air pressure over the southern country and a falling over the upper country, indicates southerly wind and rain.

A rapidly falling pressure along the upper coast and a general slight fall southward to San Francisco will give a south to southeast wind movement and probable rains, even though the interior country (Idaho, Utah, Western Nevada and Northern Arizona) has fair weather with a high air pressure.

A high air pressure advancing from the ocean toward the California coast, south of San Francisco, will give rains to the upper country, and very likely to the Southern California coast.

A high air pressure advancing toward Northern California or Oregon and Washington, and settling over the upper country, will give fair weather with rising temperatures.

Fair weather signs during the winter season on the Pacific Slope are foretold by a generally high barometer over Utah, Idaho and the contiguous country, and with a lower pressure over Southern California and Arizona. Should a high pressure show an inclination to move southward and then westward to reverse the conditions (giving high pressure over the southern country and a low pressure over the upper country), general rains would result, since all winds would move in rain-bearing directions.

A fact worthy of remembrance to students of the weather charts of the Weather Bureau, is that when the isobars, or lines connecting places having an equal air pressure, are drawn from west to east, and the highest barometer readings are in the south, rains invariably follow, since the general air movement would then be from the southward.

Reverse the positions of the highest and lowest pressure, having the highest over the upper country and the lowest over the southern country, or if the isobars run longitudinal, fair weather is the rule.

Our cool or cold waves are very frequent, but when we do have them they result from an overflowing atmosphere from a great bank of air overhanging the Rocky mountain region, or immediately east, that is held in check by untoward circumstances from pursuing its usual eastward path, or it may be that a wave of cold air that is advancing southeastward from the British country splits on the main chain of the Rockies and a portion of such wave swoops over the eastern portions of Washington and Oregon, Idaho, Nevada, Utah, and probably Northern Arizona, before it is sufficiently warmed to lose its original frigidity and assimilate with our otherwise mild temperature. The greater the portion of the cold wave of the air that passes to the westward of the Rockies the greater the area that it will spread over. Waves of air advancing from the ocean toward the coast are tempered by contact with the surface water of the ocean, and when they strike the land north of Central California are forerunners of warm waves, since in such cases they are accompanied by cloudless conditions; north to west winds rule in California and the sun heat is the greater in consequence of no cloudiness intervening.

DEFINITIONS OF TERMS USED IN FORECASTS.

"Rain, general rain, scattering rains, local rains," etc., indicate that .01 inch or more rain will fall during the period for which rains have been forecasted.

"Fair, generally fair," etc., indicates that no appreciable rain will fall, but such terms do not indicate that there will be no cloudiness or fog. A day may be either cloudy or foggy and yet be fair, in the sense that the term is used by the Weather Bureau.

"Clearing weather" indicates that rain may fall, but will be followed by fair weather.

"Slight temperature changes, stationary temperature," or absence of a temperature forecast, indicates that there will be less than a difference of six degrees from the maximum or minimum temperature of the observation on which the forecast was based. If the P. M. forecasts are used, the difference applies to the maximum temperature. If the A. M. is used, it applies to the minimum temperature. "Warmer, slightly warmer," etc., indicates that the temperature will be one or more degrees higher than at the time of observation, and cooler, colder, falling temperature, etc., indicates that the temperature will be one or more degrees lower.

Robert E. Kebkam,
Chief of Pacific Coast Division,
U. S. Department of Agr. Weather Bureau.

The Stable.

Educating the Horse.

The horse is an intelligent animal and is capable of being educated to a considerable degree. In fact, he must necessarily be educated by the treatment that he receives, although the education may not be that which would be best for him, and may have been of such a kind as to have spoiled him. Much of the horse's usefulness and value depend upon whether he has been properly educated. If he has been well educated and properly trained, he will be trusty, kind and useful. If, on the other hand, he has been badly educated and spoiled in the "breaking," he will be untrusty, vicious and endanger the life of any one who has anything to do with him.

Educating is all-important for an animal like the horse, and should be properly conducted. It should be begun early in life and carefully conducted all the way along. He should be made to regard man as his friend, and not as his enemy, as he too often has good reason to regard him. Abusive treatment is never called for and should never be tolerated. Abuse stops all good education for the time. The horse when enraged by blows and kicks is not in condition to learn anything. He is in too great excitment to understand what is wanted of him. Yet many managers of horses seem to act as though they thought they could beat something into their horse's understanding—in fact, appear to think, judging from their actions, that everything useful had to be beaten into the horse, in order to teach him anything. To such persons the lash seems to be the ever ready means of opening the understanding of the horse, and of showing him what is required of him. If the horse sees anything that he is afraid of, the whip is applied to make him understand that he is to go along and not be afraid. Does it make him so understand it, or does he associate the frightful object with the whipping received? If the latter, he will be more afraid of the some object next time, because he will expect the whipping to came with it, and it generally does come. The result is that instead of becoming accustomed to such objects, and ceasing to be afraid, he is really more afraid of them, and becomes what is called a "skittish" horse. Now if, instead of whipping the horse when he is afraid of an object he be given time to look at it, approach it carefully and smell of it, so as to be assured that it is really harmless, he will cease to fear it, and the next time he sees it will not be afraid. He has been educated so far as to know that the object he supposed was frightful, is harmless. The same remarks will apply to many other instances where a horse is abused, greatly to his injury. Kindness and gentleness should characterize the process of training and educating the horse.

The education of our horses, even when it is otherwise unobjectionable, is generally defective in regard to a few things which it is highly important that a horse should be well taught. Every horse should be taught to stop at the word "whoa," and stop instantly, right in his tracks. The word should only be used when it is intended to stop the horse, and not, as oftentimes, when it merely desires to steady him. By a little practice, any horse can be taught to stop at the word "whoa," and it will be well worth the trouble to any horse owner to teach this thing thoroughly. If thoroughly taught, it may be the means of saving whoever should be the driver from severe injury or even death, perhaps, sometimes, in case of accident. In case of accident, a horse which will stop at once when the word "whoa" is pronounced, is worth more than two or three horses which would start and run under like circumstances. So important a matter as this should never be neglected in any horse's education.

Another important matter for a horse to learn is not to be frightened by the pressure of the carriage from behind in case a hold-back breaks and lets the carriage upon him in going down hill. Probably seven-eighths of the horses in use would be frightened under such circumstances and run, yet they could be easily taught to stop and hold the load even under such circumstances. Every horse should be trained to do this. In

backing the horse into the shafts, let him look back gently till the whiffletree presses against his legs. Then, when he has become accustomed to this sensation, let some one take him by the bits, and you go behind and gently press the wagon against him without any holdbacks hitched to keep the wagon off. Get the horse to resist the pressure, and that is what you want. Soon he will hold the whole weight of the carriage against him, even going down hill. He should learn that the carriage pressing against him from behind will not push him, and then he will not be frightened. After he has learned this, he will not be frightened nor run in case a strap or an iron should break in going down hill, and let the carriage on to him. This bit of education will save a runaway and a smashup.

Any horse which has been educated to stop promptly at the word "whoa," and not to be frightened by the carriage coming upon him from behind, is worth a third more to any one than he would be without this training, yet comparatively few of the horses are taught these things, although it requires only a little time and patience to do it. Let us demand a better education for our horses.—H. Reynolds, M. D., in Mass. Ploughman.

The Stock Yard.

Domestic Live Stock and Its Relation to General Farming.

[Read by D. C. Stewart at Forest Grove, Oregon, Farmers' Institute.]

As much as in any other profession, farmers have need to be thinkers as well as to be workers. Many questions looking to the success of our calling offer themselves for consideration. We must solve these questions largely for ourselves.

Scientific advancement in agriculture has done much to assist us, and we may safely expect it to do much more in the future, but we have much to do, each for ourselves, that we may make intelligent and profitable application of the many principles given to us by the effort of others. Any question that appears to involve the maintaining of the original fertility of our soil, can but be of the greatest importance to every farmer.

We have been favored in the possession of a soil made by nature rich in the elements that contribute to the growing of a great variety of the most generally required agricultural productions of the earth, and that are demanded for the maintenance of its vast and rapidly increasing population.

The climatic conditions also are such as insure to us the greatest possible resistance to the necessary wear of our soil, arising from the constant use we are accustomed to make of it. Notwithstanding these natural advantages of soil and climate, that may as yet give a comparative feeling of security against future trouble, we can but know that a continuance of our present system of farming must soon begin to impair the present richness of our soil. We of course all know that when we have taken from our fields a crop of whatever kind, we have taken up and carried away therefrom a certain portion of the fertility of the soil. This makes a steady drain that must sooner or later impair its productiveness, and a drain for which nature has only in part provided a remedy. These conditions, too long continued, must in time seriously deplete the richness of the soil, and finally must quite ruin it for agricultural use. Already can we begin to see that our fields are many of them yielding more or less to the yearly draft made upon them. If all conditions of season are favorable, we may yet feel assured of a good crop. But recently it has been stated that certain land in this valley had been farmed to grain for 50 consecutive years without fertilizing in any way, and without perceptible wear; but this is undoubtedly an exceptional piece of land and cannot, I think, be safely considered as illustrating the durability of our land in a general way. All experience in all time has taught that whatever is grown and taken from the soil takes with it some portion of the fertility, and argument is unnecessary in this line. Something should be returned to the soil to replace what has been taken away, and the sooner we begin in this line the less difficulty will be had in the future. Some one has truly said that a worn-out farm is the worst possible inheritance that we can leave to our children. In older settled countries than our own the same conditions have existed, with perhaps in most cases but one difference, viz., that the farmers have had much less fertile soil to begin with and hence much sooner than we realized, the necessity of some means looking to the arrest of the gradual but sure wear of the soil.

To fully realize the great importance of this question, we may with profit look to the experience of farmers in the earlier settled portions of our own country. There we find farms that were once entirely worn out by the same conditions, too long continued, that exist with us to-day. And now we find these farms again producing good returns in the various agricultural lines and yet being yearly improved. It has required long years of persistent toil, and in most cases very material expense, to bring about this improved condition. In view of these facts, as related to us in the experience of others, would it not be well for us to begin in time to save and retain the original quality of our land, rather than to continue as we are now doing, until finally compelled to reclaim our worn-out land the same as they have done? Intelligent action is needed; without intelligent consideration none of the different requirements of life are successfully met. We should be able to increase the fertility of our soil and not lessen it. I believe it possible that every farm in this great valley might be annually increased in fertility. And this can best be attained by the keeping of domestic live stock in connection with, but not to the supplanting of, our general farming. Some means must be devised to return to the soil what has been taken away, as we have said. Commercial fertilizers may answer a good purpose in some degree, but are not in a general way well adapted to use in general farming. The expense and difficulty in procuring them would, with us, prevent any general use in our more extensive lines of agriculture. But, as said already, we have a remedy within our reach in the rearing and keeping of domestic live stock. No farmer is entirely ignorant of the value of barnyard manure when judiciously mixed with our soil, and the sooner we all learn to estimate its full and true value, the better for us and for our farms. Whenever we are willing to give credit to the barnyard, and compost that which should belong to it, then, and perhaps not until then, will we be able to figure in our farm accounts a profit in keeping of live stock on the farm.

We are wonted to say, that it does not pay to raise cattle or hogs or sheep, or to produce milk, butter or cheese at usually prevailing prices; but whether this be so or not, can we, I ask you, in view of the facts stated, afford to run our farms without them. The question for our consideration, in this connection, should not be as to whether or not the amount received on sale of an animal, or what may be produced from the sale of the same when kept for use on the farm, will serve to strike a profitable balance in our favor, but we should also carefully consider the reasonable estimated value to the farm arising from the rearing and keeping of the same. We agree, then, that in order to maintain the fertility of our farms, we must have manure. The keeping of live stock will be valuable to us and our farms in such degree as we can add to the productiveness of the soil, and this we must principally determine of our own experience. The question as to what particular class of animals may be made to effect the most for us in this line must also be decided, each for ourselves. Location and other conditions are necessary to be considered. Largely, I think, however, we should look to the dairy cow as the best means to the desired end. There are some good reasons, as I believe, why this should be so. The profits that may be directly derived from the production of milk, may be made an important item in meeting necessary expense of the farm. The degree of success in this must, of course, depend largely on the means, favorable or otherwise, we adopt in our management. We should have cows of the best quality, well supplied at all times with good, comfortable quarters, and a plentiful supply of feed or pasture, the best conveniences and appliances for handling, with a view always to economy and saving of both feed and labor. Add to these conditions a study of how to produce the very best article for market, to the end of procuring the best prices, and satisfactory results will be attained.

Cows on the farm are made to pay in many localities less favorably adapted than our own, and the better success may be largely accredited to a more economical and intelligent management on the part of the farmer.

The necessary conditions that will insure the successful management of dairy cattle are best calculated to maintain the fertility of the farm. More feed is necessarily consumed, and this must be of the best quality; and this implies more manure for the farm, and that of the best quality. It should be remembered that if all the stronger and richer productions are carried from the farm, and only the straw and unsalable portion is kept to be fed, we have retained but comparatively little of value to our land.

These, and many similar considerations, are of the greatest importance in the consideration of this subject.

The Vineyard.

Economy in Tying Vines.

It is surprising how much of the best material for this purpose is wasted annually which can be had for the asking and gathering. The leaves of the Druna Draco, or Dragon tree, erroneously called palm by some, are much better, if soaked in hot water for a few hours, than bale rope or grape twine, now generally used and for which thousands of dollars are spent annually by our vintners. The tree sheds its leaves annually, or rather, most of the old leaves remain on the branches dry, while new leaves take their place, and the dry leaves dropping continually are anything but ornamental in the garden or lawn, while the tree itself, if kept clean and tidy, is a beautiful and stately object anywhere. It can easily be propagated by offsets from the base of the tree, and every vintner should plant some of them. Even now, there are a great many scattered about in our lawns and gardens, and the owners are generally very glad to get rid of the dead leaves. I pulled enough from one large tree this winter to furnish all the material we needed in our vineyard, for each leaf torn into strips furnishes ties for several vines, and is stronger, more pliable and easier to tie than grape twine. All the drunas and yuccas, as well as the *Phormium tenax*, or New Zealand flax, furnish good material, and are among the most beautiful objects on a lawn. Now is the time to plant them, and though the tying in vineyards is done for this season, they will make good material to tie up grafts and for other purposes.

Another very cheap material is No. 16 annealed wire, cut into the proper length, to go around the cane and stake, and both ends simply hooked into each other by a twist of the finger and thumb which is done very quickly, more so than tying twine. It holds the vine very firmly, and in pruning in winter we simply unhook it, prune the vine and then use it again, pruning and tying at the same time. In our vineyard there is wire still which has been used for six years in succession. We thus save both time and money, quite an object when both are so scarce.

The golden willow (*Salix Nura*) is used very extensively in Germany and France, and is also very ornamental and easily grown from cuttings in some moist place. There is a willow growing wild along many of our creeks and streams which is just as tough and pliable, and is at the same time a beautiful weeping tree. I mean the silver willow (*Salix Glauca*), which is an object of beauty anywhere, and will furnish an abundance of good tying material in its long, slender branches.—George Husmann in St. Helena Star.

Horticulture.

Figs at the Culture Station.—Tulare *Register:* Persons interested in fig culture may get some interesting information at the Culture Station now. There were something over 40 varieties growing last fall, and these have been variously affected by the winter's frosts. Some have been killed at the top, some have been touched at the tips of branches only, while others are as sound as they were last September. These trees grow under about the conditions they would in the average orchard. They are away from buildings, other trees of size, and outside the smoke of town. Hence, frost had no opportunity to do its best, or its worst. The trees were irrigated but once, early in the summer, with a bucket. There are no ditches near, consequently there was no surplus moisture to make the trees unduly sappy late in the season. The various Smyrnas have proved most hardy. Other kinds, not generally grown here, came through in good condition. The White Adriatic suffered most. One tree three years old that had made a fine growth was nipped back to the trunk. These facts are good to know before extensive investment is made, loss thereby being avoided. This past winter has been unusual for continuous frosts, and that is why trees failed this year that passed through other seasons. It is just as easy and as cheap to plant any one of a dozen or more good varieties known to be reliable, as to experiment with doubtful kinds.

How to Plant Orange Trees.—J. Curtis, of Palermo, in Porterville *Enterprise*: First, have your land in the finest condition possible, all grading done, as to do this afterward is all wrong; second, don't dig your holes till you are ready to plant your trees within 15 minutes afterward, unless it is cloudy weather. Don't expose the roots to the sun or north wind a moment, as this is death to the small fibrous roots, and often to the tree. After the hole is dug the surface earth should be put in the bottom and center of the hole, filling it up nearly to within six inches of the top, then make a small hole in the center for the tap root, letting the laterals spread out as they were in the nursery, tamp the earth tight around the tap roots, then put some fine earth on top of the laterals, also tamp or press this down firm, then your trees are ready for some water, after which some dry earth on top of that. Your trees thus planted will grow. I would advise all those who plant orange trees to have a vessel—a tub is a good thing—to carry the trees out to plant, half full of water, and wash the puddle off the roots, as most trees are puddled in nurseries before shipping. I prefer this method to balling them, as you save more roots, as most nurserymen only sell their trees and not their soil at the same time, and the freight counts a little.

Poultry Yard.

Eggs and How to Get Them.

Lodi, San Joaquin Co.

To the Editor:—One would say, naturally enough, that to get eggs one should get good hens and take good care of them, which would be right; but taking good care of them is a very comprehensive phrase and means more than just giving them plenty of food and water. It means watching them closely and studying their requirements.

Climate and location being favorable and the range new, fowls will do well with comparatively little care, for they find what they want for themselves; that is, in the way of gravel, animal food, grass and grass seeds, and things of that nature, and their range being fresh, or not having been used for fowls for some years at least, and consequently free from impurities caused by the constant or continued occupation by fowls until the soil has become more or less impregnated with the odor from their droppings, and has become also exhausted of worms, bugs, gravel and things of that nature that they find for themselves on a suitable range. In saying this, I am considering the keeping of fowls on unlimited range and not in the confinement of yards, although the same conditions must obtain in greater or less degree also in the latter case. The frequent turning over of the soil sets free much of the impurity, but not all, and after a year or two of this it ceases to be effective. The same soil having been turned and returned, becomes so thoroughly impregnated and to such a depth that nothing will do then but moving them to new yards or new range, or at least where fowls have not been kept for several seasons, and which has meanwhile been cultivated and used for crops, and so purified and restored to freshness and suitable conditions.

So much for their helping themselves, and in a more satisfactory way really than in any other manner, I think, for I have observed that, as a rule, fowls kept in this manner are brighter, brisker and more healthy-looking than fowls which are dependent on their attendants for the supply of their natural requirements, and are consequently more productive. This, perhaps, leads up to the consideration of the much discussed inquiry "whether hens lay more in confinement or on open range."

As it has been so much discussed, and no satisfactory solution of the problem been arrived at, I will simply say, without further showing, that my hens have given me more eggs on free range, when we have been sufficiently active and careful in looking for the eggs at noon and at night, than when yarded and supplied with everything. True, they get any amount of fruit, both green and ripe, principally grapes, figs, apricots and berries, as well as watermelons, any or all of which I had heretofore been led to believe as altogether destructive to any hope or possibility of eggs.

The principal requirements to be observed, in my opinion, in order to get good supply of good eggs, is to keep your fowls in fine condition by the use of a requisite supply of good, rich, clean food in proper variety, and clean, fresh, pure water, together with a proper care for the cleanly, well ventilated condition of their houses or roosting places. Hens that are not properly cared for in these respects, and which have to "make their living" as best they can, with no very good show for doing it, cannot be expected to either lay good eggs or many of them or to furnish good meat for the table.

The flavor, richness and size of the egg, as well as the size, flavor and juicy tenderness of the carcass, are largely dependent upon the quality and supply of proper food and water and proper care otherwise, and not altogether on the breed of the fowl; that is, an inferior fowl, with proper treatment, may give more satisfactory results in the above particulars than a fowl of superior breed improperly cared for and simply allowed to do the best they can with what food and water you may give them.

I believe that one may impart a certain flavor and richness to the egg and meat of the fowl by a certain course of feeding. For example, where fowls, either wild or tame, feed largely on fish, both their flesh and their eggs carry a distinct fishy flavor, and birds are known to carry the flavor in their flesh of the vegetable matter they feed mostly upon, as the reed bird or rice bird.

I saw in an issue of the *Cackler* an article bearing on this point, and think that the writer has the right idea:

"It is suggested that a new industry might be created in the raising of poultry and various domestic animals upon certain kinds of food which will impart to their flesh new and palatable flavors. It is well known, for instance, that the exquisite flavor of the canvas-back duck is due to the wild celery it feeds upon in the southern marshes, and the delicious Congo chickens owe their superior excellence to the pineapples they eat. The grouse of the far western plains is aromatic with the wild sage; wild ducks and other sea fowls have a fishy flavor, and the fish fed to swine may be said to be eaten over again by the consumer of their pork. Milk is especially affected by whatever is eaten, as every farmer can testify whose cows give bitter milk whenever they eat the leaves of burdock, etc.

"There can be no doubt that the nature of their food modifies the taste and quality of the meat of most animals."

I think he is right; the egg that is laid by an insufficiently fed, half-starved fowl, "making its living" from the dumpheap and what grass it can pick, certainly cannot at all compare in flavor, richness or size with the egg of a properly fed and well cared for fowl, nor can they, for the same reason, lay as many of them in a certain given time.

The position taken by many, that if it does not cost much of anything to produce a thing, one can afford to sell it for less and realize as much profit, has, I think, to every one who desires to be a successful man in all respects, very little to recommend it. It certainly is more satisfactory to all rightly thinking minds to strive for and attain to excellence in whatever they may be engaged in, whether in the raising of fowls and eggs or in any other pursuit—the more especially as one cannot hope to be successful finally without it.

If one desires large rich eggs and a constant supply of them, the first requisite is to procure hens of an undoubted egg-producing breed; then, with clean, nourishing feed in proper variety and in needful supply and no more, clean, fresh water in clean vessels, odorless, well aired, comfortable quarters, and always a watchful care to keep them in fine condition, one may reasonably expect his desire satisfied.

Such eggs should be sold by weight (as should all eggs), as an egg of this kind contains really more substance, and of a richer quality, than what are commonly known as store eggs even when the size is the same.

The influx of Eastern eggs has had an effect on the prices of our own eggs, but for all that I do not think that there is any branch of industry that pays a larger return for the amount invested than does the production of eggs and fowls for market. Properly cared for in any favorable locality, they will pay readily $1 per head a year, and have been known to pay as high as $2.50. The keeping of fowls for profit I do not consider at all a lottery, as many contend that it is. Like all other pursuits, if there is not given it full attention, the results will be unsatisfactory.

T. B. Geffroy.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

SWIMMING TANK FOR HORSES.—Haywards *Journal:* Gilbert Tompkins of San Leandro has attained prominence by the introduction of his celebrated swimming tank for the benefit of his horses—this is the first one in use in this country. The practice of swimming horses to improve their condition for racing has been in vogue for many years in Australia and in parts of the United States, where the animals were swam in rivers and in the ocean, but Mr. Tompkins was the first to create a swimming tank. The tank is made of cement, with a gradual slope at the upper end, and is 90 feet long 20 feet wide and 8 feet deep. An engine pumps the water into the tank, and ocean salt is used to make it as near the strength of salt water as possible, the temperature being at a uniform heat. Over the tank is erected a light shed, and in the center extends a wooden platform, around which the horse swims. The effect of this swimming system upon the horse is quite apparent; it takes out all the soreness, keeps his skin in fine condition, and even cures rheumatism in many instances. It has just about the same effect on a horse as a salt water bath has on a man. It is the greatest thing to reduce flesh, and saves one-half the hard training necessary to put a horse in condition, as Mr. Tompkins said it is like putting in a charge of dynamite. We witnessed one or two horses take a swim, and it was astonishing to see how keenly they enjoyed it, and every one seemed to be natural swimmers, and when they came out they were at once blanketed, walked around, and it was not long before a sweat was started and the horse scraped, and when he next appeared he looked fit to make the race of his life. It would have taken many laps around the track to have produced the same sweating, but here the horse comes out invigorated and as active as a kitten. It greatly helps to develop their muscles and lung power. It is common sense treatment, and in time many other horsemen will follow his example.

Butte.

AN ORANGE SHIPPER.—Oroville *Mercury:* Oroville is destined to become one of the largest orange-shiping towns in California. Only five years ago we began to plant orange trees as a business, and to-day there are several thousand acres near the town. The trees, generally, are growing most luxuriantly. As the old ones that were set as ornaments years ago bear large crops annually, it is reasonable to suppose that those now coming to maturity will do the same. This being the case, it is easy to believe, that our shipments of oranges will increase annually, until we number the carloads by the thousand.

FINE PROSPECTS AT PALERMO.—Oroville *Register*: Eben Boalt says that the prospects for a big crop of fruit in that colony are excellent. He says that the peach and apricots are well filled with young fruit, and there is every indication that there will be a fine crop for the age of the trees. The orange trees are blooming very profusely, and promise large returns next winter. The grapevines are showing up well, and the prunes and cherries look finely. Taken as a whole, Mr. Boalt regards the fruit outlook in Palermo as very encouraging.

NEW IRRIGATION SCHEME.—Palermo *Progress:* Capt. J. W. Smith of Oakland has formed a corporation called the Smith Construction, Land and Improvement Co., with a capital of $1,000,000, divided into 20,000 shares of $50 each. Capt. Smith is the general manager and president and largest stockholder. The company has acquired title to a large tract of land, and in addition has surveyed and located a line for a ditch to take water out of the middle fork of the Feather river. The right for 10,000 inches of water has also been secured. It is proposed to sell enough stock of the company to raise money sufficient to begin operations on the ditch and to bring water down as soon as possible to cover not only the tract of land already acquired, but also to cover all the land between Oroville and Marysville and between the Feather river and the mountains. This, when put through, will make thousands of acres more of orchards, and this country will be the richest and best portion of all California. Palermo, already established, will be in the heart of all this new development and will be the railroad center. We heartily welcome all this new development, for it will benefit our colony wonderfully.

ANOTHER CREAMERY.—Hanford *Journal:* The Lakeside Cheese and Butter Co. has filed articles of incorporation. It will at once erect a factory and begin the making of cheese. The directors are E. J. Dibble, Frank Frazier, G. W. Clute, T. E Howe and P. Bondson. The officers are: G W. Clute, Pres. and Business Manager; E. J. Dibble, Vice-Pres.; Frank Frazier, Sec'y; P. Bondson, Treas. This is the third cheese-making company organized in the Lucerne Valley, the home of "lucerne" or alfalfa, which is one of the greatest dairy feeds known.

Fresno.

WEST SIDE CEREAL AND FRUIT NOTES.—White's Bridge Cor. *Expositor:* On account of the abundant rains so far this season, several have sown Egyptian corn. The latest to indulge in this luxury are P. Dengler and the Fauntz Bros. They agree that if a few good showers fall during the balance of the season a crop is assured, on account of the damp condition of the ground at present. P. Dengler's experiment of two years ago in planting fruit trees and vines has been so successful that he is now engaged in enlarging his orchard, and also in planting shade trees on what will, in time, be an avenue leading to a county road. The old orchard is in a flourishing condition and proves what can be done by the possessor of a good well, with the expenditure of a little labor. Besides the fruit trees and vines, Mr. Dengler has growing alfalfa and vegetables of various kinds, and all doing remarkably well.

Los Angeles.

FRUIT AND BUGS.—L. A. *Express:* John Scott is still distributing the *Vedalia Cardinalis*, which is so fond of the cottony cushion scale bug. The latter is to be found in many parts of the county, in spite of the efforts made to wipe it out. The Vedalia is, however, keeping the pest in check. The recent importation of parasites from Australia to feed on the red scale have not turned out well. But few arrived alive. Those that came through safely are breeding slowly. However, the experts and those directly interested in the parasite are satisfied that in time large colonies will be established here. Reports from the country are to the effect that deciduous fruit trees are doing finely. The season is well advanced—much earlier than usual. The crop promises to be abundant. Citrus trees are growing finely this year. The frost seems to have done little damage to the trees.

Monterey.

A MODEL FARM.—Salinas City *Index:* On the ranch of Duncan McKinnon, about two miles northeast of Salinas, is a big windmill that is the wonder and admiration of the neighborhood. Built about the tower on which the mill rests is a two story building, in the lower story of which are bins to receive from the cutting and the chop mills above. Conveyors run from the lower story to carry up material to be chopped, and a derrick from the outside for straw to be cut. In the second story are the chop mill and the straw-cutting mill. The windmill was made in Illinois and required two freight cars to transport it to California. It cost at the factory $1500. It has a 27-horse power in a wind 18 miles to the hour. It works like a charm, easily running the chop and cutting mills. Mr. McKennon intends to connect the power with his turning lathes in his machine and carpenter shop. It was a surprise to find in his machine shop the finest lathe for iron in the county, and to find on a farm an establishment with lathes, forges and drills equipped for complete work in wood or iron. In the dairy barn 60 cows are fed and milked. The cows are polled and in stanchions during the day until they are milked and turned out at night. A tramway runs from the chop mill through the center of the barn, and a large car, from which the cattle can be fed on either side, brings in the feed. The arrangements for feeding and milking are the best that could be devised for economy of labor and to ensure each animal in getting the feed intended for it. At the dairy house, the milk is poured into a vessel provided with a strainer outside of the building, and led by a pipe to an inside tank above the cream extractor. The cream extractor is a wonderful machine, pot-shaped and made of the finest Sweedish steel. It is made to revolve at 7500 revolutions a minute, and nothing for this purpose has ever been made in the United States that would not go to pieces under this fearful centrifugal force. The milk is led by a pipe into this pot-shaped vessel when at its full speed. The milk, being heavier than the cream, keeps to the surface of the extractor, while the cream, being lighter, keeps to the inside of the rapidly revolving mass. The motion carries the liquid to the top of the extractor, where the milk is discharged through a hole a little larger than a knitting needle, and the cream from a similar hole a little higher up. Although these discharging holes look so small, it does not take long to put through a tankful of milk.

Placer.

TWENTIETH DISTRICT FAIR.—Auburn *Republican:* At a called meeting of the Board of Directors of Agricultural Association No. 20, committees were appointed to revise the premium list and ticket system. Ordered that the fair for 1892 commence Tuesday, August 30th, and end Saturday, September 3, 1892.

San Bernardino.

2500 ACRES PLANTED TO SUGAR BEETS.—Chino *Champion:* Beet-planting still continues unabated. During the past week 500 acres were planted on the ranch, and there are now fully 2500 acres planted altogether. Mr. Gird alone is planting 40 to 50 acres per day, and the other farmers are just now putting seed in as fast as possible. About 1500 acres will be planted by them. The fields are beginning to look green with the tops of the young beets, and thinning will commence next week. All the work on the fields this spring has been very thorough. The ground was all cleaned of weeds or rubbish, plowed deep and well, and now looks as clean and smooth as a huge garden. The planting was done remarkably straight, adding much to the appearance of the fields.

San Mateo.

PESCADERO DAIRY MATTERS.—Half Moon Bay *Advocate:* From reliable sources we learn that the aggregate daily output of cheese from the several cheese dairies in and about Pescadero, reaches the snug sum of 114 cheese, or about 2736 pounds, and this in the beginning of the season when the grass is lacking in nutriment. It is safe to say that the yield will amount to 150 cheeses per day during April and May, at least. The item of butter is also of considerable importance in the products of Pescadero. The yield per day at this time, from the various dairies, amounts to about 600 pounds. In connection with the dairy interests of Pescadero, the question arises: Do we realize for our products all that the market affords? From the many complaints heard from time to time, we are convinced that honest returns are rare.

Santa Cruz.

INCREASED ACREAGE TO BERRIES.—Watsonville *Pajaronian:* A considerable acreage has been placed in raspberries and blackberries during the past year. Wherever Chinamen have cleared land in the slough district they have put in raspberries, and they have leased desirable tracts of land in different parts of the valley, paying high cash rent in advance, to cultivate blackberries. On the Lake farm of Thurber, Stewart & Buckley, it is estimated that there are over one hundred acres in these berries. For some years the San Jose canneries have bought heavily of the Pajaro valley blackberry crop, and hence the rush into this business.

Sonoma.

HISTORIC OLIVE TREES.—Santa Rosa *Republican:* E. S. McClellan, residing about ten miles northwest of Santa Rosa, has 60 olive trees that were planted 15 years ago by some Italians who then occupied the place. They are of the Mission variety, and are on clay subsoil with sandy loam above. The trees are now about six inches in diameter and from 15 to 18 feet high, the spread of the tops of most of them being about 12 feet. They occupy less than half an acre of land. Mr. McClellan says that olive trees should be planted on land well sheltered from the dry, warm, north winds that often visit this section about the time this fruit is in bloom. His trees are exposed to these winds and the bloom is often killed by them, making the crop light. Olives should be highly manured for the best results and should be well cultivated. About every other year, coarse manure should be put into the ground about the roots of the trees. Fine manure burns the roots in hot weather and thus does injury. The coarse manure should be covered with dirt. By such manuring and cultivation, a splendid growth is promoted. Mr. McClellan picks his olives just as they begin to turn purple. He puts them into weak lye at once and keeps them there about 36 hours. This process is repeated every 36 hours until all bitter taste is removed from the fruit. It may be necessary to change the lye three or four times. When the pulp of the olive is free from the nut, pour off the lye and put on fresh water. Change the fresh water once a day until all the lye is gone and the water remains perfectly clear. Then make a brine of coarse Liverpool salt strong enough to bear an egg. Put the olives in a keg, filling it full, and through a hole in the head of the keg pour in brine until all the space is occupied. In all the work from the time the olives are picked, they should be exposed to the light as little as possible. Thus their color is preserved and they are more marketable.

APPLES.—Santa Rosa *Democrat:* Good winter apples are worth more in the market to-day than oranges. The coast country from Santa Cruz north is especially well adapted to the growth of apples. In Santa Cruz county there is a colony of Hungarians and Bulgarians, who are said to be making a specialty of apple culture, and are making a great success of it. They are not only planting orchards, but purchase all they can get from other orchards and put them on the market late in the season, thus realizing very handsome profits. Their favorite varieties are the Wagoner, Vandever Pippin, Ben Davis and Red-Cheeked Pippin. Apples do especially well on the hill lands around Santa Rosa. A grower, who has had large experience in their culture in this township, informs us that the best varieties are the Wagoner, Rhode Island Greening, Winter Green, Hoover and Spitzenburg. The last named kind is very popular in Australia, and find ready sale in the fall, at good prices, for shipment to that country. The Newtown Pippin is also a fine apple, but it does best in the Sebastopol country and nearer the coast, as it has a special affinity for the coast moisture. It depreciates in quality as you leave the coast.

Sutter.

CROP PROSPECTS.—Yuba City *Independent:* The prospects for abundant crops of all kinds continue good throughout Sutter county. In many fields the summerfallow wheat is very heavy, and in all, the grain is growing rapidly. The acreage is large and the stand excellent. The warm weather is forcing a rapid growth of alfalfa and other grasses, and the prospect is that haying will begin early. Indications are favorable for a very full fruit crop. With fairly favorable weather from this time on, the season's output will be the largest in the history of the county.

STEAM HARVESTING OUTFITS.—Yuba City *Farmer:* Henry Best has purchased a new harvester with steam engine on the same, which runs the machinery, the steam being supplied from the traction boiler and engine which draws the outfit. A 25 foot header is attached to the harvester. Geo. Walton and H. A. Walton Jr. have purchased a large steam traction engine and also a steam harvester with a 25 foot header attached. The engine will be up the latter part of this week, and will be ready for plowing. Messrs. Walton have about 700 acres of summerfallow plowing which they expect to do this spring with their new outfit.

Tulare.

GYPSUM AS A NEUTRALIZER.—Visalia *Delta:* F. A. Ziegler of the Traver *Advocate* informs us that gypsum is being used on the alkali lands between Kings river and Cross creek, and with every prospect of making the soil productive. When thrown into a pool of the black water that collects on alkaline lands, the water becomes clear almost immediately. Mr. Moreland, living southeast of Traver, has treated a patch of land with gypsum and seeded it with alfalfa which is coming up well and growing as rapidly as though on the best loamy soil. Where the hardpan is firm, holes are being blasted through it in order to give the water a chance to drain off, carrying the injurious salts with it. A. E. McClanahan has also tried it successfully on a patch of land that was too strongly alkaline for trees. Up to the present time about four carloads of landplaster have been used about Traver, and if found to work as well as it promises, much land that has been considered almost worthless for farming will be made productive. There are several districts in the San Joaquin valley where this character of land predominates, and which, by the application of this neutralizing agent, can be made valuable.

HOW TO CURE HOG CHOLERA.—*Journal*: Hog cholera became infectious among J. H. Dopkins' herd recently, but he knocked the disease out by the use of carbolic acid, and he recommends it to any hog raiser who may be so unfortunate as to need it. He gave the medicine in ground barley, the latter being soaked in water containing two drops of carbolic acid to the pig or hog. Some of the animals were so far gone that they could scarcely walk, but the medicine has apparantly cured them and he lost but a few. The recipe is well worth remembering by hog men.

ALTA IRRIGATION SYSTEM COMPLETED.—Traver Cor.: The great Alta irrigation district system of canals, established under the Wright law, is completed and running full of water, practically irrigating 130,000 acres of land. This result has been brought about by the residents of this district purchasing bonds themselves. Five hundred miles of canals and distributing ditches are in operation. Five million feet of lumber has been used in headgates, drops, checks, bridges and flumes.

Yolo.

FRUIT CROPS.—Woodland *Mail:* The universal opinion of Yolo county fruit growers seems to be that indications point to good crops in everything but apricots. Now that the apricot trees are blooming, it is found that the blossoms are very light as compared with other years. The law of compensation will likely help a good many growers, however, in the increased prices which a shortage in this crop will undoubtedly produce. Many growers are still holding last year's crop of dried apricots, being loth to part with them at the prices which have ruled. These will be benefited by the advance in prices which the shortage will cause. Prunes promise well, and with a good spring the grape crop will come forward with its usual volume and quality.

NEVADA.

STOCK NOTES.—Reno *Gazette:* A stock special left Reno March 14th made up of the following shipments: Charles W. Welby of San Francisco, two cars of cattle from George W. Monks of Deeth, five cars from J. M. Tunnel of Halleck, one car from Blossom & Blossom of Battle Mountain, and one car from them at Halleck; to M. Brandenstein of San Francisco were consigned six cars of cattle from L. Piper of Ogden and six cars from Wm. Gifford of Ogden; to J. Hall of San Francisco were shipped six cars of cattle from Wm. Gifford of Corinne and five cars of sheep from Wm. Gifford at Ogden. * * * * The sheepmen in this vicinity are engaged in shearing. They report that the wool clip is unusually heavy and clean. The lamb crop is also very large, and the high price of mutton makes the industry very profitable. The sheep wintered splendidly, with little loss.

ARIZONA.

LARGEST HOG RANCH IN THE UNITED STATES.—Phœnix *Herald:* The Salt River valley has one of the largest and most complete hog ranches in the world, where the business of raising hogs for the great markets is systematically carried on. It comprises upward of 1000 acres of land under a "hog-tight" fence, constructed under direction of the owners, the Fowler Co. The early trouble in raising hogs in this valley arose from the difficulty of confining them anywhere, as lumber was scarce and expensive, and barbed wire fences could not be so constructed as to confine hogs. The result of these conditions was that the Fowler Co. devised a wire net fence perfectly hog-tight, and had enough of the fence constructed at an Eastern manufactory to enclose a thousand acres of land now devoted to the hog business exclusively. The land is almost entirely in alfalfa, and the company is engaged in raising what is known as 'butcher's stock," or hogs weighing from 150 lbs. to 200 lbs. for current slaughter and use. These are entirely alfalfa fed, and make the finest kind of fresh pork, and the returns are more profitable than to raise "packing stock," or hogs for the the use of packing-houses. Aside from the quick and fair returns realized from raising "butcher's stock," the alfalfa keeps them ready for market the whole year around, so that there is scarcely a day in the year that a carload of fine "butcher's stock" cannot be selected from the herd. To Eastern stockmen this will be almost incredible, that hogs should be kept in marketable condition on green alfalfa feed alone, but the fact speaks for itself, and if nothing can convince them but their eyes, the business is here on the ground to convince them that way. In fact, all sorts of stock keep rolling fat on alfalfa all the time; the only limiting condition seems to be that there be enough of it. The 1000-acre hog ranch, covered as it is with what we would roughly estimate at 6000 hogs, big and little, is one of the sights of the valley.

Fruit Preservation.

The Chemistry of Sulphuring.

Los Gatos, Cal., March 25, 1892.

To the Editor:—In reply to Professor Hilgard's commenting I would say that I do not deny but that the oil circulates with the juices of the fruit, but do not the juices stay in the cells? I know that the veins or conduits ramify the fruit. To prove this all we have to do is to open a frozen apple.

Reader, if you think that the juices of the fruit are not contained in cells, just open a navel orange. I do not forget, nor did I forget, that sulphurous gas is converted by aid of the atmosphere into sulphuric acid, but all fair-minded chemists will bear me out in the statement that the presence of nascent oxygen is greatly desired for such a chemical change and almost absolutely required.

Wagoner says: "At ordinary temperature and pressure of the atmosphere sulphurous acid is a gas having a pungent odor and a specific gravity of 2.21. This gas dissolves readily and in large quantities in water, one volume absorbing at 18° C. 44 volumes of gas. When water is present all the higher oxides of nitrogen give up some of their oxygen to the sulphurous acid, converting it into sulphuric acid." This is not theory, it is a fact. We see by this that we cannot make sulphuric acid under ordinary temperature and pressure unless we have oxygen in some other form than ordinary atmosphere, and that as soon as the fruit is removed from the bleacher the pressure being relieved causes the acid to become a gas again.

On the same page Wagoner says: "Sulphurous acid is employed in some metallurgical processes, for preserving food, bleaching syrups, silks, wool, sponges, etc., which do not admit of being treated with chlorine."

All the sulphites of the alkalies and metals are very unstable salts, the tendency being to form sulphates since they are solids and have no chance to become gases, as sulphurous acid has at ordinary temperature and pressure. The sulphites' instability is in direct proportion to the amount of heat absorbed in their formation.

The two most general laws in nature are, 1st, all inorganic bodies tend toward crystallization under some one of the various systems; 2d, all organic bodies have been organized by cell growth.

Now, cells, to organize, must float in a liquid and this liquid must, after organization begins, flow through the organ; hence we will always find cells in this organ floating in its liquid, until the organ is perfect.

Wagoner says on page 481: "The essential oils largely met with enclosed in the cells of the skin of lemons, oranges, bergamot, and, in fact, all the fruit belonging to the citrus species are obtained by pressing the rind of these fruits."

If we take a plum that is ripe from the tree and lay it upon the ground in the sun, in a short time we will find that its acidity has, as far as the taste is involved, changed, so that before we could eat it, but now it soon sets our teeth on edge. What has produced this change? There is but one answer, heat. Other fruit act similarly. Many good cooks know this, and hence to save sugar sweeten their fruit after it is cool.

I have carefully analyzed some bleached fruit, using the best of reagents and soaking my fruit for twenty-four hours, but failed to find even a trace of sulphuric acid.

Fresenius says on page 175: "The characteristic and exceedingly delicate reaction of sulphuric acid with the salts of baryta renders the detection of this acid an easier task than that of almost any other. It is a rule that should never be departed from in testing for sulphuric acid with chloride of barium to dilute the fluid largely. A little hydrochloric acid should also be added, which counteracts the adverse influence of many salts, as for instance, citrates of the alkalies."

We would not expect to find citric acid nor citrate present, but we would expect to find succinic acid in large quantities; hence we should, in making this analysis, follow Fresenius closely.

I am fully in accord with Professor Hilgard's last statement, and that is why I protested against the use of bisulphite of soda, since any analysis of fruit bleached by this process would always give a trace, at least, either of sulphite of soda or sulphate of soda, and with zinc trays, sulphate or sulphite of zinc, in addition. This mode of bleaching doubles the work, hence it is not to be advised. J. J. Shaner.

Comments by Prof. Hilgard.

Berkeley, March 30, 1892.

To the Editor:—In regard to the above remarks of Dr. Shaner, I state briefly:

First: In his former communication, he spoke distinctly of "oil cells" as containing the flavor of the fruit, and in his present communication he still alludes to the *true* oil cells in the *rinds* of the citrus tribe as relevant to the question, which is certainly not the case. The essential difference is that the flavor, when dissolved in the juice, circulates with it by diffusion through the cell walls. That all vegetable tissues are composed of cells is so elementary a proposition that it was not worth while to mention it.

Second: When we desire to manufacture sulphuric acid *by the ton*, we require the use of "nascent" oxygen; but sulphurous gas dissolved in water or fruit juice will show the formation of sulphuric acid within a day, unless very strong so as to exclude access of air. Precisely the same is true of the solutions of sulphites, only in a *less* degree instead of in a *higher* one, as Dr. S. avers; a dilute solution of free sulphurous acid is more quickly transformed than any of its salts or sulphites. If Dr. S. has not been able to detect "even a trace" of sulphuric acid in the fruit he examined, his reagents or manipulations must have been grievously at fault, for by the very method he mentions, *any* fruit, sulphured or unsulphured, will show the presence of the very sulphates he so deprecates. They are part and parcel of the ashes of every fruit; but the quantitative determinations made both here and elsewhere settle the fact that a large excess of free sulphuric acid is present in sulphured fruit, all denials notwithstanding.

Third: The vegetable acids that may be produced when fruit is allowed to ferment, instead of drying promptly, do *not* set the teeth on edge, however they may affect the palate, because they are too weak to attack the enamel as does free sulphuric acid. Otherwise, fruit would be injurious to the teeth instead of being beneficial, as is well known. E. W. Hilgard.

Advisory Horticultural Board for the World's Fair.

Frank A. Kimball of National City writes to the *Great Southwest* as follows:

The personnel of the board includes:

Chairman—Prosper J. Breckmans, President of American Pomological Society, Augusta, Ga.

D. W. Adams of Tangerine, Fla., representing the Southern States.

Hon. C. L. Watrous of Des Moines, Ia., representing the Northwest.

Charles W. Garfield of Michigan, representing the West.

W. C. Barry of Rochester, N. Y., representing the North.

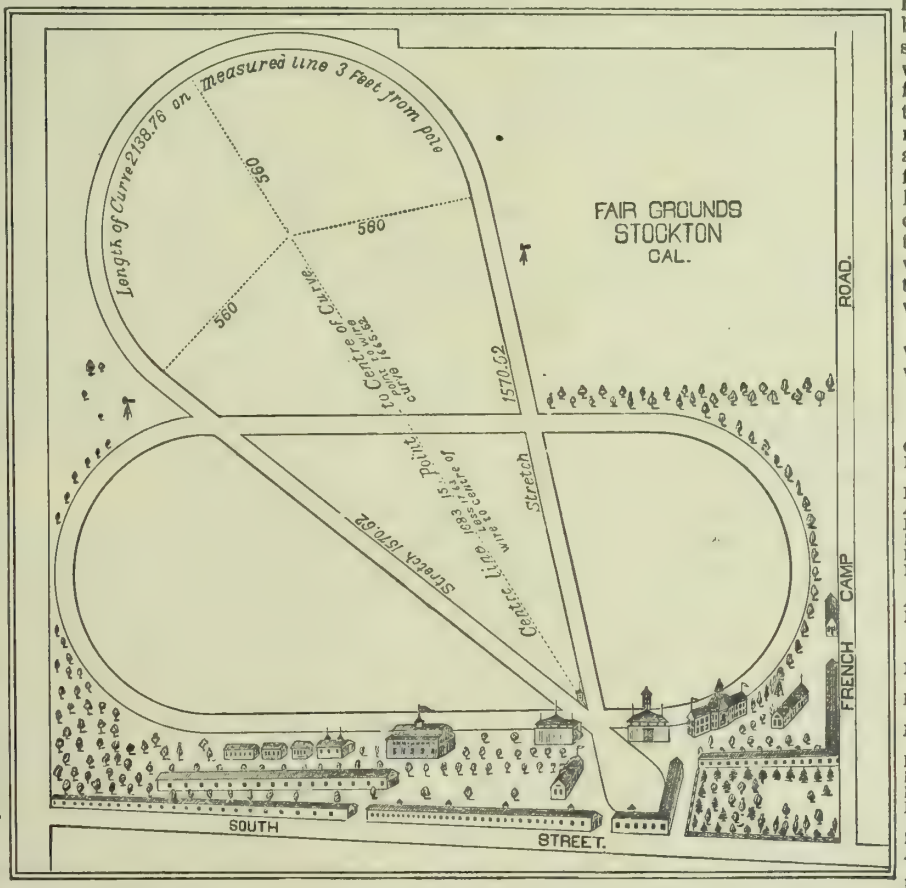
Frank A. Kimball of National City, Cal., representing the Pacific Coast.

It is hoped, and expected, that the board individually will be able to fully and fairly represent the various sections, and without unnecessary friction as a body secure such action by the department of horticulture as will advance the interests of the most obscure section to the position its importance entitles it. It was for this purpose the board was constituted, and its membership distributed at widely separated points—thus making a representative easily accessible, and the needs of a section easily and cheaply canvassed. A general meeting of the board was expected to have been held on the 20th of January, but it was found that the call would have been premature and it was not issued.

Growth of an Agricultural Society.

The San Joaquin Valley Agricultural Society was organized in 1859, and its first fair held in 1860. The Society bought 60 acres at the S. E. corner of the present city limits of Stockton, and a desirable piece of city property opposite Court House Square in the city, upon which a large brick pavilion was erected. This latter property was lost to the Society in 1864, but the ownership of the park was held and now comprizes 127 acres of very valuable land.

From the inception of the enterprise the park has been constantly improved for fair purposes, over $60,000 having been expended in improvements up to and including the year 1891—an average of about $2000 per year. The park and improvements are now richly worth $125,000, exclusive of the mammoth pavilion in the city which was built at a cost of $47,000 in 1887, and since then additions and improvements have been made amounting to an aggregate expenditure of $50,000.



STOCKTON FAIR GROUNDS—KITE-SHAPED AND ELLIPTICAL TRACKS.

The Board determined to build an additional track, kite shaped, in 1891 and it was completed in September, 1891, at a cost of $8300. Both the elliptical and the kite shaped track are now kept in order at all times. The phenomenal speed developed upon the "kite" from Oct. 6 to Nov. 30, 1891 (when 14 different days of racing were had) shows the sagacity of the directors in making the pioneer experiment of its kind on the coast. The result is that the Stockton kite shaped track at Stockton, holds the fastest trotting records of the whole world, and the same exhibition of pacing speed (2:06) which was made by "Direct" elsewhere, was by the same horse duplicated on this "kite".

In 1887 the new pavilion, having a floor room of over 75000 square feet, was jammed with exhibits and has been thoroughly well supported each successive year since. The building is in the form of a Greek cross, two stories and 276x80 feet each way.

This San Joaquin Valley Agricultural District, up to 1880, comprised nine counties; but being at that time placed under control of the State, it has by legislation been reduced so that it now comprises the counties San Joaquin and Calaveras only.

Notwithstanding this, however, and the formation of districts and the holding of annual fairs in many other places in the San Joaquin Valley, every succeeding fair at Stockton has been an improvement upon each preceding one.

Farmers' Institutes.

The Annual Institute at Fresno.

[Fresno *Expositor*, March 23.]

The first annual meeting of the Fresno County Farmers' Institute will be held in the Y. M. C. A. hall in Fresno city on April 7th and 8th.

Many eminent speakers will be present, including Prof. E. W. Hilgard of the State University, professor of agriculture and director of experimental stations. Prof. E. J. Wickson of the Department of Agriculture, who has been so capable and faithful a friend to the institute and knows just how to conduct one to the best advantage, will speak on "What Has the Farmer to Do with Science?"

Charles E. Aiken of San Francisco has a number on the program and the other literary and musical features alone should be a sufficient inducement to fill the hall, and as will be seen they are most generously distributed throughout the more practical work of the day.

B. M. Lelong of the State Board of Horticulture, will deliver an address on "Orange Culture." His duties, when here as Secretary of the Fruit Growers' Convention, kept him closely occupied throughout the day, but those who were present at that evening session and heard him there, will look forward with pleasure to hear him under more favorable conditions. Mr. Davis, Master of the State Grange, and possibly Marion Cannon, President of the State Alliance, are also expected. The impression that the first session is not of interest is a mistake. It is fully organized, and from the time of calling to order until final adjournment there is no time wasted. Topics of interest will arise, and people capable of discussing them to fill a program of far greater length, will be present.

Mayor Cole will deliver the address of welcome to the city, and President Laird will make the anniversary address.

The following is the program:

THURSDAY MORNING, April 7.

Called to order.....Pres. O. P. Laird
Musical duet, violin and piano.....Mrs. Hollingsworth and Prof. Samelson
Invocation.....Rev. Mr. DeWitt
Address of welcome to the city.....Mayor Cole
Response and anniversary address.....Pres. Laird
Music, "Laughing Song".....Mrs Southard
Reading of minutes.....Secretary Mrs. M. B. Stuart
Music, piano solo.....Mrs. Hollingsworth
Recess
Appointing committees and general business.
Music duet.....Mrs. Hollingsworth, Prof. Samelson
Recess.

THURSDAY AFTERNOON.

Music, violin and piano.....Mrs. Hollingsworth and Prof. Samelson
Roll call, responded to by membership dues.....Members
Paper on treatment of sunburned peach trees.....Lineus Steuart
Discussion, five minute speeches.....Members
Music, vocal solo.....James Baird
Paper on orange culture.....B. M. Lelong
Discussion.....Institute
Recess
Music, piano solo.....Mrs. Hollingsworth
Address, "What Are We Trying to Do in Our Schools?".....Supt. T. J. Kirk
Music, vocal solo.....James Baird
Address, "The Farmer and Taxation".....George E. Church
Music; violin and piano.....Mrs. Hollingsworth and Prof. Samelson

THURSDAY EVENING.

Music, instrumental trio.....The Misses Balthis
Lecture, "What Has the Farmer to Do With Science?".....Prof. E J. Wickson
Music, vocal solo.....Miss Kate Balthis
Essay. "The Culture and Love of Flowers".....Mrs. Carnagham
Recitation, "The Knight and the Yeoman".....Opal Stuart
Music, vocal solo.....Mr Rophuro
Address.....Charles S. Aiken
Music, vocal solo, "Last Rose of Summer".....Miss Kate Balthis
Recitation.....Miss Nellie Boyd
Instrumental solo.....Miss Connie Balthis

FRIDAY MORNING, APRIL 8.

Instrumental duet.....Mrs. Thayer and pupil
Invocation.....Rev. Mr. Phelps
Report of executive committe, election of officers.
Music, vocal duet.....Mrs. Evans and Mrs. Kirk
Conclusion of subject of drainage...Miss L. H. Hatch
"Needs and Benefits of Ship Canal".....J. H. Harding
Discussion.....Institute
Music, vocal solo.....Mrs Evans
Paper on Olive Culture.....Geo. C. Roeding
Discussion.....Institute
Essay, "The Human Seasons".....Mrs. R. M. McLean
Instrumental solo.....Mrs Thayer
Recess.

FRIDAY AFTERNOON.

Instrumental solo.....Misses Foin and Covalt
Roll call, responded to by proverbs.....Institute
Address, "Relation of Board of Regents to Farmers' Institutes".....Dr. Rowell
Vocal solo.....Miss Avilla
Paper on "Soils and Fertilizers,".....Prof. E. W. Hilgard
Instrumental solo. "La Somnambula,".....Miss Covalt
Address, "Work and its Results,".....Rev. T. H. B. Anderson
Vocal duet.....Misses Avilla and Foin
Report of committees
Instrumental duet.....Misses Foin and Avilla
Adjournment.

Paris Green for Linnets.—The linnets have done great damage to the prune, apricot and peach buds this season. Poisoned wheat used freely about the trees has proved quite a good remedy, but it is understood that by spraying in January and adding a little Paris green to the wash the ravages of the birds may be checked.

The Home Circle.

The Mastery of Love.

Love was a stranger.
Without lock or key
He unlocked my bosom
And took my heart from me.
Now my heart is subject
Everywhere I go.
Be a gentle master, Love,
To one who loves you so.

In a few days and weeks,
In a few months or years,
Love brought me sorrow,
And the salt, salt tears.
Oh, Love, come with laughter,
Or, Love, come with woe.
Deal but gently with the heart
That leans upon you so.

The bee's wing is fragile,
The lark's egg is small;
That you took was little,
But it was my all.
Bear the captive where you will,
To high estate or low,
But be a gentle master, Love,
To one who loves you so.

Dora Read Goodale.

One in Forty.

The scene was an army post. It was one summer morning. Just after the new guard had relieved the old, a soldier, who had been ill for a month, came down from the hospital toward his barracks. He felt happy in being out in the open air again, in being strong and able bodied, and he felt impatient to carry his musket once more, to fall in line with the rest, to march out on the parade ground, and, above all, to hear the voice of his lieutenant give the orders for the manual of arms.

While Murray was crossing the parade ground, a private of the same company was returning from target practice. Just when Sanford had finished practicing, this particular morning, he saw a seagull hovering over the water. He reloaded and waited for a chance to fire, but the gull disappointed him, and so he shouldered his rifle and started for his quarters. He forgot to unload his gun.

Murray reported to the first sergeant and was allowed to attend drill that very morning. He hurried in for his musket, looked at it, then groaned. It was rusty. Just then Sanford came in. They shook hands.

"Don't you drill to-day?" Murray asked.

"No."

"Lend me your gun, will you, mine's rusty?"

With Sanford's gun in his hand, Murray hastened out, for the call for drill was sounding. The next moment he was standing in his old place. There were just 40 men in the line.

It was the duty of the first lieutenant to drill the men that morning. Lieut. Brooks had lately become engaged, and it happened that at just this time the girl to whom he was betrothed was visiting at the post. On the morning when Brooks had no drilling to do, he spent his time on Miss Colyon's porch or strolling about the ramparts with her. But when duty required him to drill his soldiers, Miss Colyon walked up and down the edge of the parade ground, listened to his words of command, admired the precision with which they were obeyed, and waited for the intervals of rest, when her lover would come up and talk to her.

Thus it was that, when the first sergeant of the company marched the men on the parade ground, Miss Colyon was standing beside Brooks. He said a few more words to her, then raised his cap and went forward to drill the men.

There was a preliminary order, signifying that the 40 men were to fire together. The men were merely to snap the triggers when the order came to fire.

"Ready!"

The muskets were raised and the muzzles tilted forward. Brooks was standing on a little bare spot, where, purely out of habit, it had become the custom for the officer to stand. He was directly in front of the center man in the line. Miss Colyon, though some distance beyond him, stood a few yards to his right.

"Aim!"

The forty rifles were pointed straight ahead. The men were waiting for the command to fire. One gun covered Miss Colyon, another covered Brooks. Murray's gun was loaded. Miss Colyon and Brooks each had one chance in forty of being hit by the bullet. Not a soldier anticipated the next command. Not a trigger snapped. Every man was waiting, listening for the word. Brooks stepped to the end of the line and looked down the row of guns. To his well-trained eye the position of the forty guns was not precisely to the regulation. He came forward again and stood on the grass-worn spot. Miss Colyon had not changed her position.

For about half an hour Brooks put the men through the different movements of wheeling to the right and the left, and the like, but did not go through the manual of arms. The company was drawing up in line when he ordered them to rest for a time. He went up to join Miss Colyon. He held her parasol over her and partly over himself, and she held his sword and made little marks on the ground with its point. The officers and their wives, seated on the porches near by, knew how happy the two were. When they had talked for about ten minutes, Brooks raised his cap again, and now went forward to put the soldiers through the manual of arms. Miss Colyon stood in front of the company.

The company drilled so well that morning that the officers on the porches stopped talking to admire the movements. Brooks walked up and down before the line, but halted after every order to see how accurately it was executed. The muskets were now at right shoulder arms.

"Carry arms!" was the next order.

The guns came down simultaneously.

"Fire by company!"

"Recover arms!"

The muskets came down again.

"Fire right oblique!"

The men turned as one man and pointed their rifles forty-five degrees to the right.

"Ready!"

Once more the forty guns were raised and the muzzles tilted forward.

"Aim!"

The first sergeant, at the head of the company, looked down the line. Every musket was now precisely in the regulation position. This new order for direction of fire brought two different guns to bear, the one upon Miss Colyon and the other upon Brooks. The gun which had just previously been aimed at her was now leveled at him. Both stood perfectly still. Brooks paused a moment before giving the order:

"Fire!"

The bullet passed through his brain.—Harvard Advocate.

If I Were a Boy.

Somebody has sent me a conundrum—"What would you do if you were a boy, for your health, for your education, for your future career?" A three-leaf question like this always sets a fellow to thinking. It is so much easier to tell other boys what they should do than it was to do just those things, in exactly that way, when we were boys. St. Paul and myself agreeing in so many things, and resembling each other in so few, were never more harmonious than when we both declared—I repeating after him—"The good that I would do, I do not; but the evil which I would not, that I do." However, it is a foolish sailor who will run upon the rocks to find where they are, when by flying a signal he can get a pilot who knows all about them.

"For my health" I would do just as I did when I was a boy. Out of school hours, summer and winter, rain or shine, I would spend a great deal of time in the gymnasium. I am a strong believer in athletic scholarship and gymnastic training. I had the advantage, which you may not possess, of one of the best equipped gymnasiums in the country in which to build up my health. It extended over the greater portion of Peoria, Tazewell, Woodford and Stark counties, Illinois. I could walk, climb or coast where I pleased. When I went hunting, which was often, I didn't ride in a close railway car through clouds of dust and cinders to the hunting-grounds. I walked both ways. When I wanted to go anywhere, unless I had mislaid my legs and couldn't find them, which was frequently the case with my hat, I knew how to get there. At home I had a private gymnasium, in which I exercised most faithfully. My father was a gymnasiarch, and he furnished white oak and limb hickory, "buck," saw and ham-rind at his own expense. The ventilation in my gymnasium, private and public, was perfect. The air came with a sweep from the sunrise to the sunset. There was sunshine all the way from heaven in the clearings, and grateful shadows under the trees. I don't know so much about gymnasiums hedged in with walls and roof, and ventilated by machinery; but I know they are much better than none.

On my eighteenth birthday, I enlisted in an infantry regiment, and shouldered a man's musket. I was in active service three years, went into every fight and on every march with my regiment; never was marked off duty one day by reason of sickness; never saw the inside of a hospital; never but once failed to march into camp at night when my regiment did; and many a time when I saw some big fellow lying "played out" in the fence corner, as I marched past him, carrying as big a load as any man in the regiment, unless it might be a convalescent with a haversack like a feather-bed, I felt grateful for my schoolboy training in the gymnasium of prairie and forest. And to-day, with the tranquil digestive powers of an ostrich, as I think of past mercies, I thank the good Lord for the wood pile. Live out of doors all you can, my boy! "Walk a heap!" The open air, the free, pure air and sunshine are as good as the exercise—better.

"For your education?" Well, mine began at "Hinman's School" in Peoria and ended in the high school of that city. Naturally, I have the same love for the public schools that I have for my oldest and best friends. The discipline is much better in the public than in the private schools, and you can stand a great deal of discipline, my boy. It will do you good. There isn't a teacher in the public schools who doesn't know a great deal more than you do. Many, oh, a great many of them, know a great deal more than you will, even after you have been out of the university several years. If you remain in the public school until they teach you all they know, you will probably be in some grammar school until your children are married. So if you can't go to college, the public schools can and will give you an education that will equip you for the practical work of life; they will give you the ground work of any professional career; they will start you splendidly. But, if you have a hunger for books, a desire for knowledge, and you can go to college, by all means go. Give all the years to study that you can. A college education will make you a better blacksmith, a better farmer, a better carpenter. Other things being equal—natural ability, industry, ambition, tact, application—of two men, the college man will be the better equipped for any work he may engage in.

One day last week I took a drive with a farmer up in "York State." He wore "tailor-made" clothes, kid gloves, long cuffs, swell collar and a high hat. He drove a stepper to cart that made you feel proud and rich. His farm paid for all these things. When he wanted to go to the circus, he bought a dollar seat and went. He didn't drive to town, 17 miles, on a jag of wood, to sell it for 50 cents. He farmed because he liked the business, loved country life, and there was money in it. He was a graduate of Cornell University, and that is the kind of a farmer he was. It stands to reason that the more a man knows, the more sense he has, the better fitted he is for any position, except that of a petit juror. Of course there are some boys whom you can't educate. There are some boys who can learn books by heart; who go to college and graduate; go to Europe and finish; and come home knowing so much less than they did when they went away that they are disqualified even for sitting on a coroner's jury. If you are that kind of a boy, which you are not, why of course you had better not go to school at all. Schools are conducted for the purpose of furnishing instruction for the mind; they don't agree to furnish the mind itself also. You have to take that to school with you.

"For your future career?" Ah, my boy, who can tell you so much about that as yourself? You know your own tastes better than we do; you know what you can do best; you know the line of work that will give you most pleasure in doing—work, not play, mind you. Do that! Don't pick out something easy—the easiest things to make a living or reputation by. There isn't an easy "job" in the world—not one; but there is something in the world that you would like to do better than anything else. You will get tired at it, but never tired of it. It may sometimes bring weariness to the arm and brain and heart, but you will never want to give it up; you will never honestly wish you had chosen some other work. Find what that "something" is—the something that you can pursue with eager zest and ambition and unflagging earnestness all your life—and do that. Whether it be making shoes or making sermons, playing baseball, Hamlet or the pipe organ, the work that enlists all your desires and energies and awakens all your enthusiasm; the something which you believe Providence has designed that you can do better than anything else—that is the thing for you to do. Only, my dear boy, do try and get on the right side of Providence, so that this shining "something" shall be something better than playing billiards or the tennis championship.—Robt. J. Burdette in the "Standard."

ENGLISH WOMEN AND THE WORLD'S FAIR.—English women are active in preparation for their participation in the Exposition. At a meeting of the woman's committee in London, on March 3d, it was announced that Queen Victoria had promised specimens of her own work in spinning and knitting, done when she was a girl; also some of her embroidering, fine drawing and water color painting. Princess Louise will contribute some clay modeling, Princess Beatrice several paintings, and princess Christian some embroidery. The committee assigned charge of various branches of woman's exhibits as follows: Irish exhibits, Countess of Aberdeen; Scotch, Lady Reay; philanthropy, Baroness Burdett-Coutts; education, Mrs. Fawcett, the writer on political economy; hospital nursing, Mrs. Fenwick; woman's art, Mrs. Robert Austin. Several women were selected to prepare papers on various educational and economic subjects.

Electricity in Decoration.

We read of the luxuriousness of the ancients, of the hanging gardens of Babylon, etc., but the nabobs of old never could imagine anything so gorgeous as the following, which is an account in the *American Florist* of the decorations at a dinner recently given in Washington by the Montana millionaire De Lamar to Mr. and Mrs. Russell Harrison:

The table was an elongated oval, set for 39 covers. In the center was an oval mound some five feet in length, made up of maidenhair ferns interspersed with clusters of La France and white lilacs. From the middle of the mound rose to the height of four feet above the table a superb specimen of *Areca lutescens*, the base resting on the floor, while its long and gracefully overhanging fronds were strung with innumerable closely wired miniature incandescent electric jets of various colors. Near either end of this table, opposite to one another, were two small round mounds of ferns, from the midst of which rose great clusters of long-stemmed Laings encircling sprays of white lilacs. Beneath the maidenhairs in these fern mounds, hid from view, incandescent lights imparted to the foliage a wonderfully vivid yet delicate green. Immediately above the areca, from the center of the ceiling, were suspended 16 electric cables—four larger than the rest, extending to the four corners of the room, entwined with smilax and studded with 16-candle power incandescent jets, while the intervening shorter cables were twined with Asparagus plumosis and studded with vari-colored miniature jets, the whole forming a marquee-shaped canopy, of which the central portion constituted a closely woven network of *A. plumosus*.

From the center, immediately over the areca, was suspended a large magnet, the sides of which were encased in steel springs clamped at the base by an iron catch, which adhered to the magnet by reason of its polarity, the catch being so arranged that any interruption of the electric current would cause it to drop, and the springs to suddenly fly from their perpendicular into a horizontal position, not unlike the sudden opening of a closed bud into a full bloom rose. And here the ingenuity of the decorator came into play. He wired innumerable short-stemmed, full-blown La France roses to bits of iron, which readily adhered to the strongly magnetized steel springs and iron plate clamp so as to form a huge ball of real roses, two similar balls or globes of roses being suspended over the table from chandeliers on either side, equal distance apart. These floral globes proved to be the feature and surprise of the evening, for, constructed as they were, it enabled Mrs. Harrison, seated at the right of the host, at the close of dinner, just as the guests were arising, by touching a concealed electric button to break the current of electricity and drop the clamp a few inches below the magnet, causing the springs suddenly, amid exclamations of wonder and delight, to fly open and rain down upon the assembled guests a veritable shower of roses.

Hints on Eating.

"If Senator Plumb's death teaches any lesson," writes Kate Field in Kate Field's Washington, "it is that eating and drinking are a science, a knowledge of which is absolutely necessary for the preservation of life, and that incessant work, combined with neglect of hygiene, is suicidal. Hard work does not kill if accompanied by an easily digested diet with proper distraction after meals. The greatest scientist I know labors from 8 in the morning until 11 at night with little outdoor exercise; but he eats simply and slowly, rarely touches stimulants, never drinks ice water, and lies down whenever he has a spare quarter of an hour. He knows the effect of foods, and never puts into his stomach what it cannot digest."

Miss Field adds that the last time she saw Senator Plumb was in a hotel dining-room. "It was past 9 o'clock when this big, strong man hurried to breakfast, after having been at work for three hours. Sitting down with the morning paper in hand, he gave his order while reading, and at one gulp disposed of a glass of ice water. It gave me a shiver to see this reckless disregard of his stomach, but if I had protested I should have been called a crank. Yet the man who gave no thought to his own diet had saved his wife's life by putting her in charge of a hygienist!

"Mr. Plumb's breakfast consisted of messes, swallowed without really masticating, and winding up with a glass of milk taken at a gulp. Then he strode off to more work. The spectacle frightened me, and I wondered how long even his iron physique could endure such a strain."

It is an instance which points the moral for a not unimpressive lesson, and one which is at the very root and foundation of hobsehold life. Not only are eating and drinking a science, but a moral science. It is a part of moral responsibility to keep the body in such perfect repair that it may serve as a perfect instrument through which, and by means of which, one may accomplish his appointed work in this world. People do not, of course, live to eat, but they do eat to live.

Yet as the average eating goes, people do not more than half live. They do not have over half the vital energy to which they are by right entitled. To contemplate the unhygienic quality and the excess of quantity that a very large proportion of people consume, is to be in a state of amazement that they overcome inertia at all, and contrive to accomplish what they do in the world.

The effect of foods should be a subject of careful study by intelligent people—by all people who hold worthy and intelligent ideals of life. The relation of food to achievement is a very near and direct one.

Government Seeds and Matrimony.

Secretary Rusk is thinking seriously of establishing a matrimonial bureau in connection with the Agricultural Department. The idea was suggested by a letter he recently received from a man out West who experimented with some of the cucumber seed sent him by the Department at the instance of his representative in Congress. It appears the farmer planted the cucumber seed and his wife afterward died from eating some of the cucumbers. The farmer in his letter to Secretary Rusk said:

"Your blamed cucumbers robbed me of my wife, so instead of sending me cucumber seeds this spring, send me another wife I hear there are a number of likely women in your Department."

In reply, Secretary Rusk said he had no appropriation from which he could draw money to send a wife to the widower, but suggested that the latter come to Washington and pick out one for himself. The Secretary informed his correspondent that he has in the Department some beautiful maidens, many sprightly widows and several experienced old maids.—Chicago Herald.

THE dressmaker deals in figures rather than facts.

What to Give the Girls.

If you must give the object of your affections a gift, try to use some taste and discrimination in the matter. Never give too much or inappropriately.

Never suggest to any young lady that she has an appetite. The only edibles that may be presented to the object of even your slightest devotion are sweets, never fruit. A box of candy as a birthday gift or in payment of a forfeit or as a favor at odd times will never come amiss.

Jewelry from the poor young man to the rich young woman, or from the wealthy young man to the poor girl, is in exceedingly bad taste. Jewellers have attempted to get in on the philopena by manufacturing small gold and silver wishbones, some of which have a clover leaf design attached and others of which are the setting of a diamond. These give the young with money a chance. The novelty in jewelry is the small gold knot, of which some have a diamond-headed pin stuck through them or are studed with white enamelled marguerites.

A box of gloves, if you know her number, or a box of fine writing paper, has been considered a suitable birthday gift through many generations.

In selecting paper, avoid monograms, for their day, as that of the initial, has passed. A plain envelope of the baronial size and octavo note paper, with the street and number printed in small raised blue letters just at the top and in the middle of the sheet, is correct. The man of fashion will, as a rule, see that the crest appears on his gift.

Of the presents that a man of fashion may give to a young lady, flowers easily take precedence. They are always proper. No woman is callous to attention, but she is either passionately fond of buds and blossoms, or she pretends to such liking, if she have it or not, rather than be thought unnatural or eccentric. At any stage of an acquaintance an admirer may press his suit with flowers and run but little risk of being thought presumptuous. To a very young woman, a hand bouquet of friezia or French marguerites is appropriate. The dark pink American Beauty rose, at $2.50 apiece, is now much affected. Fortunately for those whose purses are light, one rose with a stem and foliage 18 inches long makes a corsage. Violets at $3 a hundred are still in season. For the theater, small corsages of violets, with two roses, are worn principally, though Roman hyacinths, tulips, lilies of the valley and the narcissus are popular.

A new fad is "peace offering" bouquets of spring flowers or roses, to be given the young lady you are especially devoted to upon making up a quarrel or a tiff.

Turning to the literary young lady, you will find the way to her heart paved on the sweetest and best books in the market. If she has a philosophical taste, send her something of that nature, something you feel she will appreciate. Never send a cheaply bound book; that is, as a rule, in abominable taste; and don't send anything that borders on the sensational or suggestive, for the average young woman of education is above such literature, or at least pretends to be.

Coming to the Easter season, an appropriate card or a finely bound volume of Tennyson, Longfellow, Whittier or Bryant will go far toward increasing the heartiness of your welcome on the next calling day.

On St. Valentine's Day, it is by no means amiss to send something exquisitely designed, although the custom seems to have gone out of vogue of late years.

Another occasion for gifts comes when the ladies you have been in the habit of calling upon leave for their country home or for a trip abroad. On both occasions flowers and the best sweets in the market should be sent with your compliments. On these occasions, light literature and copies of the latest and best illustrated woman's magazines would tend to while away the weary hour of many an evening on board ship or to gladden the time in the cosy rooms of a country home.—N. Y. World.

The Way to Learn.

"Well, I think that I would sit there deliberately, as you did, and say I didn't know a simple thing like that! The idea! It's perfectly rid.culous!" a would-be-smart young lady declared to a matron with whom she was on very intimate terms.

"What would you do, my dear?" said the other.

"Do?" was the reply. "I would keep still if I didn't know, and not frankly confess my ignorance."

"Well, that's where you and I differ," said the elder lady. "I never expect to see the time when I will be too old or too wise to learn some new thing every day. I think, of all the follies of life, the most foolish folly is to think one should know everything. I have frequently heard elderly men, with a great reputation for wisdom, declare that they often felt humiliated when they realized how little they knew. I assure you, my dear, that if your life is spared until you are three-quarters of a century old, you will often find yourself covered with humility at the things you don't know. The wisest way is to learn early in life that no human being can know everthing; therefor, never be too silly or too proud to ask what you want to know, and frankly confess your ignorance of things with which you are not familiar. No sensible person will respect you less for it, and wise people will value your opinion much more when they find that your utterances are based upon actual knowledge, and that you are not afraid or ashamed to admit that you do not know."—New York Ledger.

April Foolery.

"That young preacher we heard to-day was a fine pulpit orator, wasn't he?" "Yes, if he could only control his voice. He woke me twice during the sermon.

A clever woman listens to compliments, a foolish woman accepts them.

There is always a hand of welcome ready to be offered to the strange umbrella.

When you need a friend don't pick out the man whose dog never wants to follow him.

When you open a window on the railway train the first thing to catch your eye is a cinder.

Electricity is a great educator. Think what it has done to make men see things in a new light.

Stout Women's Dress.—The stout woman is always asking what she shall wear, says an exchange. Now these are some of the things she should not wear: She should not wear a tailor-made suit fitting her figure closely; it brings out every pound of flesh for the benefit of lookers-on. She should not wear a rosette at her belt, either at the back or front; it makes her look thicker through. She should not wear a lace or ribbon ruff about her neck, though the soft feather one is permissible if it have long ends. She should not wear a short skirt; it gives her a queer dumpy look that is especially undesirable. She should not wear her hair low on her neck; it should be high and arranged with great smoothness, though it need not look oily. She should not wear a string of beads about her neck, rings in her ears, or, if her fingers are short and fat, many rings on them.

Young Folks' Column.

The Dolls' Dressmaker.—After Dickens.

[Written for the Rural Press by Caroline E. Sanders.]

She was a strange, quaint, little figure, sitting, as she generally did, in a little, low, old-fashioned chair, with a kind of small working bench before it. She had a queer but not ugly face, with bright grey eyes, and an odd chin that was capable of great expression. For instance, she would give a weird kind of laugh, then look out of the corners of her eyes, and hitch up her chin, just as if her eyes and chin worked together on the same wires.

But the misshapen little form had a crown of beauty in her long, bright, golden hair which fell in a beautiful shower over the poor shoulders that were much in need of such an adorning rain. At the time we introduce you to her she has a kind friend living with her, a sweet, good, young lady, by the name of Lizzie Hexam.

One day, a boy knocked at her door; it promptly opened with a spring and a click, and as the visitor came in she said:

"I can't get up, because my back's bad and my legs are queer; but I'm the person of the house."

"Who else is at home?" asked the boy, staring.

"Nobody's at home at present," answered the child, with a glib assertion of her dignity, "but the person of the house. What did you want, young man?"

"I wanted to see my sister—Hexam is my name."

"Ah, indeed!" said the person of the house. "Your sister will be in in about 15 minutes; take a seat."

He complied in silence, and the little figure went on with its work of glueing together, with a camel's hair brush, certain pieces of cardboard, previously cut into various shapes. The scissors and knives upon the bench showed that the child herself had cut them, and the bright scraps of velvet and silk and ribbon also strewn upon the bench, showed that when duly stuffed she was to cover them smartly. The dexterity of her nimble fingers was remarkable, and as she brought two thin edges accurately together by giving them a bite, she would glance up out of the corners of her eyes with a sharp look.

"You can't tell me the name of my trade, I'll be bound," she said, after several of these odd glances.

"You make pin cushions," answered young Hexam.

"What else do I make?"

"Pen wipers."

"Ha! ha! what else do I make? You can't tell me."

"You do something with straw," he returned, pointing to a corner of the little bench. "I don't know what though."

"Well done, you," cried the little body. "I only make cushions and pen wipers to use up my waste, but my straw really does belong to my business; try again."

"Dinner mats."

"Ho, dinner mats! I'll give you a clue to my trade in a game of forfeits. I love my love with a B, because she is Beautiful; I hate my love with a B, because she's Brazen; I took her to the sign of the Blue Boar and treated her to Beer; her name's Bouncer and she lives in Bedlam—now what do I make with my straw?"

"Ladies' bonnets."

"Fine ladies," said she, nodding assent; "Dolls, I'm a dolls' dressmaker."

Yes, that was her business. Jennie Wren was a dolls' dressmaker. Her real name was Fanny Cleaver, but she called herself Jennie Wren, so that was the name she went by. The funny part of her business, she used to say, was the way she made the great ladies "try on" for her dolls; that is, if it was to be a grand day in the park, she would go and stand leaning on her crutch, peering through the gate or railing by the hour, until she had thoroughly studied up the different styles of ladies' garments. Sometimes she would make friends this way of little children, but the larger ones she disliked and avoided, because they often made fun of her. Getting the evening dresses was severe work on her, because as she had said "her back was bad and legs queer," and she had only the doorway for a full view of the costumes she wanted to copy, so in the crowd ran great danger of being thrown down or run over.

All this danger was run and hard work accomplished, not solely for her own support but for that of a drunken, worthless father who was a continual worry and care to the little creature.

Poor, poor little dolls' dressmaker.

But Jennie Wren had her happy moments, too. They would come to her as she sat working, always working; then for one moment she would stop and brush back the bright masses of golden hair that fell over her face and listen to strains of sweetest melody, breathe the fragrant perfume of lovely flowers, and in the slanting beams of the sunshine see beautiful children dressed in white with golden crowns upon their heads, who seemed to lift her in their arms far away above the pains and weakness of her poor deformed body.

At those times her face was beautiful, for it showed "the peace of God" which was in her heart. Now she has passed away and in that other world may be far more enviable than the grand and beautiful children we see here. Oh, blessed dolls' dressmaker!"

The Paper Chase—A True Tale.

[Written for the Rural Press by Pheyne.]

Children, do you know what a paper chase is? perhaps some of you will say yes, and some no, so I may as well describe one for the benefit of those who do not. A paper chase usually takes place on Saturday afternoon, which is a holiday in all Christian countries. The boys who are going to engage in it, meet at a certain given time and place, one of them carrying a large bag full of paper, torn or cut into smallest fragments; a leader is selected, generally a strong, athletic boy; he carries the bag, and at a given signal, sets off running, gently at first, and then at the top of his speed, the others following pell-mell. As soon as the leader has gained a little distance, he begins to scatter the tiny pieces of paper so that, if the others lose sight of him, there may be no difficulty in keeping the same route; he chooses the roughest ways, over plowed fields and ditches, through hedges and stiles, wherever the leader goes the others are bound to follow, so long as their strength holds out; when this fails, the weaker ones drop out and follow at their leisure; in this way they frequently travel many miles between dinner and supper. Having now described a paper chase I will begin my story.

At a certain village in Yorkshire, England, there was, many years ago, and may be now for anything I know to the contrary, a boys' school where paper chasing was a favorite amusement in its season. On a warm afternoon in October the boys gathered for a chase, and following the usual course arrived at home, hot and tired, just in time to wash hands and faces and prepare for supper. When they were seated, one place was found to be vacant, the boy next to it called out, "Please, sir, Beggs isn't here!" Beggs not here," said the master, "why, where is he?" "Please sir, we don't know," cried out half a dozen voices. "Who saw him last?" "Please sir," said one of the boys, "I passed him about a mile from home, he seemed quite winded and greatly distressed and I called out to him to sit down and rest, the others were all in front." "Why did you not stay with him?" "I was in a hurry to catch up with some of the others before they got home." "Sulyard," said the master, turning to the head boy, "take a light and see if he is upstairs, perhaps he has gone to bed." The boys looked at each other and the supper remained untasted until Sulyard returned saying he could find no trace of him. The master rose, called to the man servant to bring some lanterns, chose two or three of the elder boys to go with them and bade the others remain in their places until they returned. They then left the house to search for the missing boy; they had not far to go, for just outside the garden wall, close to the gate, the poor little fellow lay dead; so near home and yet unable to reach it. What were his thoughts as he lay there, dying, almost within sight of the lights shining from the windows of the schoolhouse? He had been seriously warned by the family physician, before leaving home, that he must carefully avoid all excitement and engage in no athletic sports, and now, now, he must leave this world without one tender farewell to father or mother, or a word of forgiveness for this last act of disobedience; it is so hard for boys to remain passive when they see others in the full enjoyment of health and strength, indulging in the sports which make life so beautiful to the young. He was the only child of a clergyman living in the neighborhood, and the event caused a profound sensation throughout the county, for Mr. Beggs was greatly beloved and respected, and this great trouble drew toward him and his wife the sympathy of all classes. It was a long time before another paper chase took place in that school.

Domestic Economy.

Scrambled Eggs with Beef.—Chip dried beef very fine; put equal parts of lard and butter in the pan; break a few eggs and stir all in; season, and cook one minute.

Cream Cookies.—One egg, one cup sugar, one cup of sour cream, one-half nutmeg, one teaspoonful of soda, flour sufficient to roll. Sprinkle with sugar; bake quick.

Pork Pie.—One-half pound of of salt pork chopped fine, as many sliced apples as you have pork, mix together and put in crust. Sugar and spice to taste, bake slowly one hour.

Poverty Soup.—Pare and slice ten large potatoes and six large onions, then take six slices of salt pork fried crisp, and then mix contents together, and boil until about done, then thicken and add dumplings as for any soup.

Ginger Snaps.—One cup of molasses, one-half cup of butter or shortening, heated and put in the molasses; one-fourth cup of water, one teaspoonful of soda, 1½ teaspoonfuls of ginger. Flour enough to roll rather soft. Bake in a quick oven.

Orange Snow (with Cornstarch).—A pint of boiling water, two tablespoonfuls of cornstarch, the juice of two and a half oranges, half a lemon, a cupful of sugar. Remove when cooked thick, and add three whites of eggs when a little cold.

Cake Without Eggs.—Chop one cup of salt pork very fine, add one cup of boiling water, one cup of sugar and one cup of molasses, four and one-half cups of flour, one teaspoonful of soda, one-half pound of raisins, and other fruit if you prefer.

Baked Parsnips.—Scrape or pare the parsnips, and. if large, cut them in quarters; lay them on a flat baking-dish; add a little water, dredge with flour and salt; bake till soft and slightly browned. A little butter may be put on the top just before serving.

Reliable Cake.—One cup of sugar, one and one-half cups of flour, one-half cup of milk, one egg, two tablespoonfuls of butter, one and one-half teaspoonfuls of baking powder. Flavor to suit the taste. Beat eggs, sugar and butter together, then add rest of the ingredients.

A Bean Stew.—Here is something we always like. Take a good beef bone and boil until tender. Have some beans well parboiled, and to five pounds of beef take two quarts of beans, and salt and pepper to taste, and put in enough potatoes for dinner. Thicken with three tablespoonfuls of indian meal.

Sour Milk Corn Cake.—One cup flour, one-half cup corn meal, one-half teaspoon salt, one-half teaspoon soda, one-third cup sugar, two eggs, one tablespoon butter melted, one cup sour milk. Mix the flour, meal, salt, soda (sifted), and sugar; add sour milk, eggs beaten well, and butter. Bake in shallow cake-pan and cut in squares.

Celery Mayonnaise.—Cut off the root end of four heads of celery; separate them and wipe each piece; cut them in inch pieces, and then into small, narrow strips; put them in a salad bowl; add a mayonnaise sauce and serve. Mayonnaise is more satisfactory than a plain salad dressing in a celery salad, but the plain can be used if desired.

Raised Muffins.—One pint milk, one egg, one-half cup yeast, one saltspoon salt, one large tablespoon butter. Flour for a stiff batter. Mix in the order given; add flour gradually, beating it well, until so stiff you cannot beat. Let it rise over night. In the morning put it into buttered pans, taking it out with a spoon and knife, without stirring out the air. Bake about 15 minutes.

Cream Cornstarch Pudding.—Put a pint of milk in a double boiler. Measure four even tablespoonfuls of cornstarch, moisten with a little cold milk; add this to the hot milk; add a half-cup of sugar, stir and cook constantly for five minutes, then take from the fire; add hastily the beaten whites of four eggs, a teaspoonful of vanilla and turn into a mold to cool. Serve with the custard made from the yolks of the eggs poured around.

Dried Apples for Pies.—Pick and wash them well. Then pour over boiling water enough to cover them. Let them stand all night to soak. In the morning put the apples, with the water they were soaked in, into your stew-pan; if they have absorbed all the water and are nearly dry, add a little more; simmer them slowly, but do not let them boil. When perfectly soft, pass them through a sieve, and prepare them for pies according to the directions given for apples which have not been dried.

Pap or Grated Flour.—Take a quarter of a pound of flour and pour on just enough water to moisten it. Form it into a ball and tie it in a cloth, closely and firmly. Put it in a vessel of boiling water and let it boil the whole day. Then take it out, dip it in a pan of cold water, remove the cloth, and place it in a cool oven to dry, when it will be fit for use. To make the pap, grate some of this, mix it to a paste with cold milk, and stir it into some boiling milk; boil it slowly 10 or 15 minutes.

One Egg Mayonnaise.—One-half cupful of olive oil, one scant cupful of whipped cream, one tablespoonful of vinegar, one tablespoonful of lemon juice, as much cayenne pepper as can be taken up on the point of a penknife, one-quarter of a a teaspoonful of salt, and the yolk of one egg. Beat the yolk with the salt and pepper until it is light and creamy, then add the oil, a few drops at a time, until about half of it is used. Add the remainder in larger quantities. As the sauce thickens, add the vinegar slowly, and then the lemon, and last the cupful of whipped cream. This will be sufficient for a pint and a half of fish or shrimps and three small heads of lettuce.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Our latest forms go to press Wednesday evening.

Regis ered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

Saturday, April 2, 1892.

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[NEW THIS ISSUE.]

Sale of Live Stock—Gilbert Tompkins, San Leandro.
Windmills—Byron Jackson.
Mowers and Rakes—Frank Brothers.
Cultivators—Deere Implement Co.
Mowers and Reapers—Baker & Hamilton.
Plants—W. R. Strong Co., Sacramento.
Fruit Evaporator—T. & W. A. Beck, Watsonville.
Hopkins Academy—W. W. Anderson, Oakland.
Lawn Sprinklers—Studebaker Mfg. Co., South Bend, Ind.
Stock Scales—C. H. Lindemann.
Fruit Paper—S. P. Taylor Paper Co.
Incubator and Brooder—Pacific Incubator Co., Oakland.
Fruit Evaporators—Blymyer Iron Works, Cincinnati, Ohio.

☞ *See Advertising Columns.*

The Week.

There has been a continuation of the favorable conditions which go to make a good season. The late rains make the crop, according to the experience of our closest observers, and we go into April with a good figure for late rains surely. The average for April is a little less than two inches, with a possibility of a good deal more.

Transportation affairs continue to engross public attention as they should. The Railway Commissioners have been endeavoring to assign reasons for their uselessness, and have made people still more weary of them.

A large convention held in this city has approved the Nicaragua canal project heartily, with a proviso for Government control, which is really a necessity. More railways are being continually projected. The air is full of rumors of action in the interests of producers, and action is certainly better than listlessness, though the outcome may not be all that is hoped for.

Report of the State Board of Horticulture.—We have received an advance copy of the 1891 Report of the State Board of Horticulture. It is the best volume of a very important series, and consists of nearly 500 pages copiously illustrated with cuts and colored plates. The subjects chiefly treated are the prune in all its aspects, new fruits, olive oil, lemon-curing, propagation of fruit trees of all kinds, insects injurious and beneficial, including the resistance of certain apple roots to the woolly aphis, and a long discussion of the fig blastophaga. All of the subjects mentioned are treated in detail, and the report becomes a compendium of valuable information. We advise all our fruit-growing readers to apply at once for a copy of this report, to B. M. Lelong, the author and secretary of the State Board, at 220 Sutter St., S. F. Applicants should send 12c in stamps, to pay postage. Make early application, for the supply will probably soon be covered.

Make Hay While the Sun Shines.

We trust our hay-making readers are getting their pencils sharpened for the straight-forward, practical letters on how to make hay, for which we offer rewards, not as the value of such service, but merely as a token that we appreciate and esteem such contribution. In last week's issue we endeavored to express our desires in this direction plainly, and we hope many readers have already determined to contribute to a result which must be widely useful if we succeed in drawing out the best experience on the subjects involved.

We repeat the announcement which we made last week in case any may have overlooked it. We offer the following

Prizes for the four best Letters on Haymaking on the Pacific Coast:

First Prize.....Cash, $10
Second Prize.....Cash, $5
Third Prize.....Rural Press one year
Fourth Prize.....Map of the U. S. and Chronological Chart of American Political History.

By "haymaking," we include all the acts which enter into the outturn of hay as an agricultural product, viz.: Choice of seed, soil and location; method of putting in the crop; condition of plant at cutting and methods of haying, including curing, gathering up, stacking, stowing away or baling; marketing, including hauling to local markets or to shipping point; cost of product per ton or acre, and customary prices.

Each contributor is invited to write upon one or all the plants he has used for hay on this coast. The letters are not to be elaborate essays, but plain statements of experience, and they may be as long or as short as the writer chooses.

It is our plan to publish in a single issue, if practicable, all the letters which seem to us of public value, and to give our readers a grand symposium on the hay question. If our friends will kindly enter the lists we shall be able to give in one issue of the Rural more valuable information on the hay crop of the Pacific Coast than has ever been brought to light before. Our hay crop is peculiar, as are many other coast crops. Eastern haymaking materials and methods do not apply here. Let us have a grand write-up of hay from coast points of view. Each writer will have the benefit of all the methods and experiences described by others. Each can review his practice in the light of the experience of others, and if he is making mistakes he may find out what they are.

We hope this venture will awaken the interest of our readers. We desire to turn the same light upon every specialty of our agriculture. Even if making hay is not your main interest, write about it just the same, providing you make hay which you have confidence in. If the hay-letter contest succeeds, perhaps the next subject proposed may strike your special hobby. We want 500 letters on hay mailed to us before April 15th.

The Coyote Crop.

The coyote crop is probably turning out greater than any one anticipated. Even the sheepmen, with whom the reduction of these marauders seemed to be a prime necessity, hardly thought so many of the "varmints" could be captured in so short a time. It is currently believed that hunters have not strictly observed State lines when they pursued their game, but it is not yet claimed that scalp producers are breeding coyotes for the market. The time has been too short for such enterprise.

According to the Sacramento *Bee*, the office of the State Controller is very busy with the coyote business. County Clerks have sent in claims for 9 months, showing that 20,299 scalps have been taken during that period, which will pull $101,495 from the State Treasury.

The southern counties, especially, are reaping a harvest in this direction, as will be seen by the following amounts demanded by the several counties for the respective quarters:

Counties.	First Quarter.	Second Quarter.	Third Quarter.
Fresno	$3850	$2245	$2455
Kern	2695	5450	4590
Los Angeles	2040	2010	1955
Merced	2425	1515	1615
Monterey	1130	950	1875
Orange	670	1010	1120
San Bernardino	1565	2070	3700
San Diego	1185	2440	3120
San Joaquin	1170	2000	2210
Tulare	3920	3135	2885

Other counties are in for smaller amounts, which make the aggregate named above. Now, we should like to hear from our readers whether they notice less depredation on their flocks and poultry since the slaughter of coyotes has taken place. It looks as though the next legislature would revoke this expenditure, or largely reduce it, unless some commensurate benefit can be shown. Those who desire the continuance of the existing bounty should collect data to show the value secured by this large item of State expenditure.

More Blastophagas.—Prof. Gustav Eisen, who is now in Lower California, collected indigenous wild figs inhabited by the blastophaga, and he recently sent a collection of the figs full of insects to E. W. Maslin of this city. The insects have been placed on the wild figs at Mr. Shinn's orchard, in the hope that they would find an entrance to the fruit and propagate.

Great Horticultural Events.

The coming months offer the horticulturist, who can travel and admire, rare chances for gratification. Upon this coast, during the months of April and May, there will be held in this State two of the greatest floral exhibitions the State has yet seen. They are different in kind, though both largely appeal to the same tastes. At Santa Barbara, in the latter part of this month, there will be a floral carnival which, for wealth and beauty of scenic effect, bids fair to be exceptionally fine. For weeks past the telling features have been the enthusiastic study of the Santa Barbara flower lovers, and for uniqueness of design and intricacy of decoration the floral creations will be notable.

Another great floral display will be that by the State Floral Society in the Mechanics' Pavilion in this city during the second week in May. Premiums to the amount of $3000—a sum never before offered in such competition in this State—will be striven for. It is intended to produce many pleasing effects in the way of decoration, and to gratify the visitors with music and other charms; but the chief end will be a display of flowers for their own sakes—a systematic and creditable exhibition of the best plants and blooms according to the methods of the leading exhibitions of the older States. All flower growers are urged to contribute to the display and to assist the Floral Society in making its Seventh Show by far the best of the series.

Another undertaking which is ambitious in extent and scope may attract the interest of Californians. It is called an International Horticultural Exhibition, and will be held in London from May until October of this year. It will be a comprehensive exhibition of gardens, garden products, garden art—of everything, in fact, appertaining to horticulture. Its aim is to display the state of progress of horticultural science, taste, resources, implements and plant culture at the present date, and, in addition, the various departments and exhibits will serve as models for every one who loves a garden. Examples of the gardens of all ages will be prepared, including restorations of the ancient gardens of Egypt, Greece and Rome; copies of those of China and Japan, and types of the Baronial, Italian, Tudor, Jacobean, Georgian and Victorian eras. A large subtropical garden will also form a feature of the attractions offered. The tea gardens of India and Ceylon will be represented, illustrating the growth of the tea plant, etc. Arrangements have also been made, whereby foreign countries will cooperate to show the progress in horticulture in their respective lands. It is hoped California can do something for such a show, though distance and consequent expense are great.

State Horticultural Society.

The regular meeting was held at the rooms of the State Board of Horticulture March 25th, President Hilgard in the chair. The following were elected members: S A. Earle, 765 Mission St.; N. P. Batchelder, 36 New Montgomery St.; C. W. Sawyer, 765 Mission St.; P. W. Butler, 430 Sansome St., S. F.

The Committee on Nomenclature and New Fruits reported as follows:

First—Requesting the President to appoint as additional members of the committee, C. H. Allen and E. W. Maslin.

Second—That the name "Mikado" be substituted for the names "Abundance" and "Botan," as applied to a Japanese plum, of which a specific description will be given later.

Third—That a grape heretofore known as "Isabella Regia," and which originated on the place of J. P. Pierce of Santa Clara previous to the year 1880, be named "Pierce," in accordance with the request of the originator; and that the committee understands that there are one or more varieties of grapes known as "Royal Isabella," "Isabella Regina," "Queen Isabella," etc., and will endeavor to correct their nomenclature hereafter, and for this purpose the committee requests samples and correspondence from growers of such varieties.—Leonard Coates, R. C. Kells, B. M. Lelong, Fred. C. Miles, Committee.

The report was adopted and the recommendations therein approved.

B N. Rowley made a narrative report of the Fresno Fruit Growers' Convention, as one of the committee delegated to attend the meeting. The report was accepted, and the committee discharged.

Mr. Rowley also made some interesting remarks concerning the shipment of plants and trees to the World's Fair.

Mr. Coates called attention to an International Exhibition to be held in London from May to October, and suggested the advantage of exhibiting California products. Upon motion, Mr. Coates, Mr. Maslin and the Secretary were appointed a committee to look into the matter.

The greater part of the afternoon was devoted to a valuable lecture on fertilizers for fruit trees by Prof. Hilgard of the State University. The lecture was illustrated by a large table of analyses, and will be published by the State Board of Horticulture.

The subjects chosen for the April meeting were "Thinning Fruits," by R. C. Kells, and "Suckering Young Trees and Vines," by Ed. M. Ehrhorn.

The State Press.

Fresno *Expositor:* "The Supreme Court of California is probably the most remarkable judicial body that ever misinterpreted the law or upset common sense."

Colusa *Sun*: "It is so funny to us to see some papers howling 'r-a-i-l-r-o-a-d' from day to day where it can do the railroad no possible harm, and as soon as it is proposed to do anything real or practical against the interests of the great monopoly, these same papers bounce it like a duck on a June bug."

Lake County *Avalanche:* "The new system of voting, while it may at first seem cumbersome, will certainly prevent a large amount of that worst of all crimes against the purity of the ballot, 'fixing' votes. A man who would sell his vote would not be likely to command the necessary amount of confidence to justify the buyer in 'putting up' where he cannot know that the contract is carried out. A man who would sell his vote for a consideration, as a rule, may be relied on to sell it as many times as he can, and to as many parties, and then go and vote regardless of all of them."

Stockton *Mail:* "The Fresno county sheep-raisers declare that if the absurd Government reservation of high timber land in the mountains back of that region is insisted upon by the Washington authorities, who know nothing of the situation, the sheep-raising industry of these counties will be injured to the extent of at least a million dollars a year. The sheep have hitherto been driven into the mountains in summer time to graze upon the rich grasses which grow there and which will go to waste if stock be not permitted to eat them. This is in singular contrast to the Republican policy of protection for American wool."

Watsonville *Rustler:* "The riots in Berlin, the miners' strike in the north of England, and the undercurrent of dissatisfaction with the present condition of affairs that exists in this country, are the natural results of the concentration of power in the hands of the immensely rich. The contest between capital and labor in this country has not yet reached the point where violence takes the place of arbitration. The masses still retain the semblance of liberty of thought and freedom of speech, but that they are woefully lacking in judgment is evidenced by the ease with which corrupt men can secure their own election to offices of trust, and the shamelessness with which, once in office, they rob, directly and indirectly, the public treasury."

Biggs *Argus:* "Wherever an election has been held since the adoption of the new ballot law, under the Australian system, it has given satisfaction to every voter who wants to cast an honest vote. The man who will sell his vote and the man who buys the seller will lose his election-day profit to a great extent. The man who buys cannot now lead the ignoramus who sells his manhood to the polls and watch him cast the vote, and, knowing that the seller cannot be trusted, he will not buy; hence the ballot-box stuffing system which has so long disgraced our civilization will be averted. More particularly will the new system be a benefit in the protection of the honest poor man. The manufacturer and all others who in the past have held the rod over the head of the employe and compelled him to vote the ticket dictated by the oppressor or suffer the ultimatum of being discharged in disgrace and his family made to suffer for food or raiment, is also handicapped.

Extension of the Weather Service.

On July 1, 1891, in accordance with the Act of Congress, the Weather Bureau was transferred from the War Department to the Department of Agriculture. Only eight months have passed since that time, and yet the Bureau has been entirely reorganized and its efficiency greatly extended. In addition to nearly 200 official stations for observation, sending out and displaying the weather forecasts, there are now nearly 3000 voluntary stations distributed in all parts of our vast territory, and which number is constantly increasing. The Secretary of Agriculture and the Chief of the Weather Bureau particularly desire to have the weather forecasts of still greater usefulness to the farmer. To this end, and in hearty cooperation with a number of farmers' organizations that have made special requests for the service, the number of stations for the display of the weather forecasts, the sounding of steam whistles by mills and factories, etc., is now being greatly increased. By the use of the telegraph and telephone, the "Probabilities" will ere long reach a very large majority of the population of the entire country from 24 to 36 hours ahead of the coming changes for better or for worse.

GLANDERS.—Dr. A. E. Buzard, who has been employed by the Supervisors of several counties to make inspection for glanders, tells a reporter that he has, during the last two and a half years killed 150 glandered horses in the counties of Contra Costa, Monterey and Santa Barbara, and 22 of these horses he has destroyed this year alone. This is a large number for the area covered. If a human being is so unfortunate as to get inoculated with the virus of this dread disorder, it means certain death sooner or later, for it is absolutely incurable. During the past 12 months, to Dr. Buzard's certain knowledge, five persons have died of it—one in Soledad, one in Santa Cruz, two in San Bernardino county and one in Santa Ynez, and he has heard of several other cases also.

Training School for Farmers.

Further Discussion Concerning the Subject of Mr. Kemp's Letter.

OAKLAND, March 29, 1892.

TO THE EDITOR —The writer was delighted to note that the able communication of Mr. Kemp in last issue of RURAL, was so appreciated by the editor, and has no doubt that upon further consideration he will conclude that it opens a question more important to his readers and the future welfare of the State with which they are identified, than any probable solution of the four leading questions—currency, transportation, tariff and reciprocity—likely to absorb public interest for the next seven months. Upon this basis we think the question merits thoughtful and continued discussion and deserves a reasonable share of space. To awaken the public interest likely to result in such an enterprise requires agitation.

Attention was drawn to the small proportion of young men engaged in industries likely to make prosperous citizens. By studying the statistics of the Labor Bureau and enquiry among those whose line of work had qualified them especially to judge of this matter, showed that probably not less than ten thousand young men between 15 and 21 in the city of San Francisco, are without useful occupation at the very time of life when character is forming. As the urban population of California is about 600,000, it is very likely that we may double the above figures for the army of idlers in the State. As work is always so plenty at farms and mines we could not expect a like proportion of recruits from those districts. No statistics have been prepared to cover this point, but expert estimates will approximate these figures.

CAUSES OF IDLENESS.

1st. Circumstances of parents average better than those of other States, and parents feel less necessity for help in bread-winning.

2d. Introduction of machinery and division of labor make it more profitable for manufacturers to employ operatives who become skilled on a single machine or specialty, whose places can be easily filled, and who can never command high wages; than to foster an apprentice system designed to train thorough mechanics.

3d. Labor organizations consider it their policy to adopt regulations limiting the number of apprentices, in order to limit the supply of skilled labor and keep up wages at a high standard as long as possible. This in turn discourages the investment of capital in new enterprise, and so restricts demand for labor.

The results may readily be seen:

1st. The boys are just such as their fathers would have been had they grown up under the same conditions.

2d. We are sending to Europe, where they have long apprenticeships and thorough technical schools, for skilled mechanics. These are to be found as draughtsmen, foremen, superintendents and proprietors.

3d. We are graduating all too many of our own sons from the High School of Idleness, with the credentials of the court, to the Universities of San Quentin and Folsom.

WHERE IS THE DEMAND FOR SUCH LABOR?

The society which Mr. Kemp represents finds it by taking young offenders to their headquarters, giving them a short course in civilization, and finding homes for them in the country. His special work is to visit them at those homes, and see that they are receiving the training likely to make them good citizens; and, while meeting with his share of discouragement, he is able to point to many boys once apparently hopeless who are now successful and honored citizens. The very high esteem in which Mr. Kemp is held by those associated with him in the work, as a man of broad ideas, successful experience, and enthusiastic devotion, was the reason why the communication was solicited.

A STILL BROADER DEMAND.

We were interested in Mr. Mills' statesmanlike showing of the industrial conditions following the aggregation of large estates that is going on in Northern California, and hope for another communication showing the resulting loss to civilization. The development of irrigation, especially in the San Joaquin valley and the southern counties, has a marked tendency toward intensive farming. There is as good a prospect of finding books, pictures, carpets and music at the ten-acre cottage as at the thousand-acre mansion, and a far higher enjoyment of social life. To develop our State to the standard found in some others, it is estimated would require a ten-fold increase of population. Realizing the advantage of small holdings and increased population, we are making determined and persistent efforts to secure immigration, believing that we have better inducements to offer than any part of the world.

We think that a white citizen is worth as much to the State, as an increase of public wealth, as a black man was once worth on the auction block. For one in the prime of life, that was about the price of 100 month's service; so we may say, that the State, as a whole, can afford to spend on immigration as much as the immigrant brings, and the value of his services for a hundred months.

To make ten-acre homes a success, requires intensive agriculture, reinforced by high skill. If such an institution as Mr. Kemp has in mind can take boys before they are spoiled, and train those likely to follow in the footsteps of former idlers, to meet this special and great demand of the State, may we not fairly say that the gain in each case equals that of two average immigrants? With two great universities, of which every Californian is justly proud, we believe the demand for higher culture is fully provided for, but think that there is a field not less promising and useful, if less conspicuous, for the smaller colleges and high schools in preparatory work, joined with methods by which Eastern academies, in their palmy days, graduated so many intelligent farmers and excellent citizens.

Still, more inviting is the field for training-schools that shall combine work and study to such advantage, as to take the 15-year-old boy, make him practically self-sustaining until 21 and graduate him with a good general knowledge of the practice and science that go to make a thoroughly well-informed farmer, with one or two years' training in some chosen rural specialty. To outline a plan adapted to accomplish this result in an economical and efficient manner, we shall ask your futher indulgence.

FRANK S. CHAPIN.

Public Lands Questions.

TO THE EDITOR:—Please answer the following relating to land taken up as a Government homestead in June in 1877, proved upon according to law in the fall of 1882, and a Government patent secured in 1883.

Now, has any party or parties any right by law to upset or infringe on my right, if the Government gives me right according to the laws governing? Also, can any one open roads or trespass without paying for such privilege, or without my permission? SUBSCRIBER.

RESPONSE BY HAVEN & HAVEN.

SAN FRANCISCO, March 25.

TO THE EDITOR:—In reply to the inquiries by you submitted to us, we would state:

First. If your correspondent has strictly complied with all the provisions of the laws of the United States, with reference to the acquiring of title to Government lands open to homestead entries, and a patent has been issued to him in the due course of procedure, and by the proper authorities, and no fraud has been practiced in obtaining the same, he then has a perfect title to the land covered by such patent. This title is, however, subject to attack, in a court of equity, on the ground of fraud practiced in any of the steps or proceedings by which the patent was secured. A Government patent is a final determination of the validity of the title of the premises covered thereby, so far as the Land Department of the Government is concerned; but a court of equity, which regards "that only as done which ought to have been done," will set aside even a Government patent if it can be proved that fraud was the means, or a portion of the means by which said patent was secured. Such fraud must, however, be clearly proved, and such that would mislead the officers of the Government, and not known to them before the issuance of the patent.

The courts are very loth to invalidate Government patents, and will do so only in clear cases.

The following quotations from decisions of the United States Courts will show their attitude upon this question:

"It is a startling proposition to those who hold patents to lands . . . that, after 25 years of compulsory litigation, intended, in the language of the various Acts of Congress, "to settle titles to lands in the State of California;" the holders of all such patents are liable to be called upon to re-litigate their claims with the Government in the ordinary courts of justice; and that the patent, instead of being conclusive evidence of a "settlement" of the title—the end of litigation—is but the foundation for the beginning of a new contest to unsettle it."

Sawyer, Circuit Judge, in "United States *vs.* Flint"—4 Sawyer's Reports 85:

"It is at war with the whole character of proceedings in courts of equity, to call in aid its extraordinary power to set aside, on these allegations, such a solemn public record as a patent of the United States."

Justice Miller of the United States Supreme Court, in "United States *vs.* Atherton," 102 U. S. Reports 374:

"It is idle at this day to suppose that the expensive machinery of a court of equity is to be put in operation for the purpose of reviewing and reversing the judgment of the tribunals to whom that question (the question of the validity of the right for the issuance of a patent) is by law entrusted, on such loose, untraversable allegations of fraud in general."

U. S. Justice Miller in "Marquez *vs.* Frisbie," 101 U. S. Reports 478.

Second. The holder of the legal title to land, who is in the possession of the same, has the absolute control thereof, and no other person has any legal right to "open roads or tresspass," without the consent of the owner of the premises, unless such right has been acquired by adverse user for the statutory period, or by some right of easement or other title superior to that of the person in possession. Respectfully yours, HAVEN & HAVEN.

530 California Street, San Francisco, California.

Improve the Waterways.

(*Letter by T. W. Hubbell.*)

The improvement of the waterways of the country has been a great element in the prosperity of the West. For instance, corn used to cost 25 cents per bushel from Chicago to Buffalo. The waterway in its shallowest point has been deepened from 9 to 16 feet, and in other ways improved, and the water competition has made it possible to ship corn from Chicago to New York at 6 cents per bushel and to Liverpool at only 11 cents per bushel.

If the water competition had not entered into the problem, the farmer would have yet had to give all the profit on his product to the railroads, and the people of Iowa, Illinois, Kansas and Nebraska would yet be burning corn for fuel. The railroads lobbied against appropriations for the improvement of waterways for many years and long prevented it. Now, the water advocates are very strong and get a great deal from the Government.

Yes, I believe that the Nicaragua Canal is a great scheme for the prosperity of the country, and that it will surely get the aid asked, and that not long from now it is capable of cutting in two the prices of transportation from east to west and vice versa.

CHEAPER RATES TO CALIFORNIA.—The Santa Fe route has notified the Trans-Continental Association that after June 15th it will sell second-class westward tickets at these rates: From Chicago and common points, $34.30; from Mississippi river points, $20.81; from Missouri river points, $14.30.

Patrons of Husbandry.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The State Grange of California has, through the Executive Committee, begun a thorough canvas of the State. From all sections where meetings have been held, come encouraging reports. A force of speakers well posted in the work of the farm and on the financial and political needs of the farmer, is engaged to speak to the members of the Order, and the farmers generally, at times and places where the greatest good can be done. If any section is omitted from the list, and there are farmers enough interested to secure a meeting at that point, a speaker will be sent on application. The object of this canvas is to arouse the farmers to their condition and to urge on them the necessity of organization. The Grange comes with substantial men and solid reasons, and urges the farmers to *act*.

The silver battle has waged hot in Congress during the past fortnight. In the lower House of Congress there were but *two* of the California delegation who voted for the Bland Silver Coinage bill. They are Representatives Caminetti and Bowers. Representatives Cutting, Geary, Loud and McKenna voted against the bill.

Bros. Brigham, Charters, Rhone and Trimble are doing good service for the farmers of the United States in appearing before the Committees of Congress. These gentlemen are giving *information* based on practice, and not *suggestions* based on theory. We hope much more good is yet to follow from the seed they are planting.

Testimonials about the success of the Trade-Card plan of purchasing are of every day occurrence. It is a feature peculiar to the Grange. Farmers who want to know more of it, or to get benefit from the plan, must join the Grange.

There ought to be a good Grange at Suisun City. Won't some of the thrifty farmers thereabout secure the necessary charter list and send for a Deputy?

The Supreme Court of Ohio has just decided that the "trust" existing between the Standard Oil Company and other smaller oil companies of that State is illegal. Thus the Goliah—"Trust"—has had another blow from the slungshot of justice. Keep after the combines, and sooner or later victory will come.

Mary's Little Lamb, with its fleece as white as snow, has done more to bring trouble to the home of the politician than any other of the domestic animals. McKinley with his bill, and Mills with his proposed law, found the wool clause a hard one to frame. And for all that, the dear little lamb is not all to blame. Democrats as well as Republicans are willing to have the spring lamb with the green peas; to wear good woolen clothes, and to sleep under the fine blanket. Then why, oh why fall out about the woolen clause!

What would the home on the farm amount to if there were no boy to hoe the garden, to milk the cows, to split the kindling, to turn the grindstone, to ride the horse, to lose the tools, to break the eggs, to do the whistling, to take the scoldings, to be late at school and to be on the deck when circus-day comes? Oh, yes, we must have the boy, in spite of all his foibles, for he is the kingpin that holds the home machinery all in place. Three cheers for the American farm boy. He may soon be a Governor or a Congressman. Bear that in mind when you see him, or when you feel like scolding the boy on the farm, who may perchance have a dirty face and ragged clothes. Maybe you were a farmer's boy once on a time yourself.

Very soon, nominations for the Assembly and for the State Senate will be made in this State. See to it, fellow farmer, that one of your own number is nominated. See to it that a man who will not sell his honor and his birthright for a small mess of pottage, gets that nomination. Then don't forget that seven Congressmen are to be elected this November. How would it do to send about *five* farmers to Congress? If you are to have a voice in these nominations you must attend the primary elections and see that proper delegates are sent to County, Congressional and State Conventions. If you want a mutual insurance law, if you want U. S. Senators elected by direct vote of the people, you must see to it that friends of these measures are sent to the State Legislature. Stand for your rights, farmers. Select farmers to help make the laws under which you must live and pay taxes.

The Secretary's Column.

[A. T. Dewey, Sec'y S. G of C., No. 220 Market St., S. F.]

From Oregon.

H. E. Hayes, Master of Oregon State Grange, writing to me, March 5th, says that Mrs. Hayes' health, while not recovered, is sufficiently improved to permit of his absence from home, and he is away on duty much of the time. He has appointed Mrs. B. Scofield of Cornelius, Washington Co., as Chairman of the State Committee on Woman's Work in place of Mrs. Hembree, whose death is deeply deplored by her many friends. Speaking regretfully of the lack of support of Grange papers, he states: "I hope that you will still continue, as you have in the past, to aid in improving the condition of agriculturists."

The letter closes with the following: "As the springtime is warning us that May will soon be here with all its grandeur, and that the Oregon State Grange will be called together Tuesday, May 24th, in Albany, Linn Co., the question arises 'What will be its work, and the objects to be accomplished?' I have just received a letter from Hon. Jno. H. Mitchell, our U. S. Senator, in answer to one I addressed him upon the resolutions we passed in the last National Grange, to wit, for free coinage of gold and silver; election U. S. Senators by the people; pure food; postal roads; also for the relief of those who fought our Indian wars and supplied their wants. He assures me that he agrees with me upon all of these questions and will give them hearty support.

"Our Order has been a great school for the farmers who belonged to and attended its meetings. Every member was their teacher, and all nature with its daily lessons enlarged their views, and those that have availed themselves of their grand institution of learning, know of the evils that have crept into our body politic, and the remedy. We need not be longer deceived by our billionists, nor be sold out by their wire pullings; but we must not divide our forces if we expect to make a success in restoring equal rights and protection to labor and production. We must select our servants for their qualification and honor instead of the name that they may sail under.

"I am in hopes that yourself and wife, Worthy Master and Sister Davis, and all of those honored brothers and sisters that have visited Oregon State Grange, and many others, will meet with Oregon State Grange the fourth Tuesday (24th) of May. In extending my heartfelt wish to California Patrons, I am sure I only voice the wishes of the Patrons of our State. Be assured you will meet with a hearty welcome.

"Mrs. Hayes wishes me to say that she fears her labor in the Woman's Work in our Order is past, her health, not her desire, preventing. Yours fraternally,

H. E. Hayes."

Farmers' Lectures.

The State Grange lecture canvass in California, now in progress, offers an opportunity for farmers and their families to receive much information in a pleasant and profitable way. Pending the public meeting of Paso Robles Grange, at which Bros. J. V. Webster, Geo. Steele and W. L. Overhiser were announced to speak, Editor Tuley of the local paper remarks:

"The farmers of this vicinity are congratulated upon the opportunity presented them by the grange of this place of hearing Mr. W. L. Overhiser, the Grange orator of this State. An open meeting has been arranged and will be held at the Masonic hall in this place on Wednesday next, March 30th, at 1 o'clock. Messrs. J. V. Webster and George Steele, of this county, will also speak. No one who can make it possible should fail to attend this meeting. The subjects to be discussed are of vital interest to the farmers. Great efforts are being made to educate the farmers in the affairs of government, and to put them in possession of facts that will aid them in distinguishing between what is and is not designed to be of benefit to them, and they should not miss an opportunity to hear good speakers whenever the occasion presents itself. The politicians and the partisan press charge the farmers with spending time sitting upon boxes and whittling pine sticks that ought to be spent in following the plow. It would suit the fancies of these gentry to have the farmers stay at home and give their attention to the raising of crops and paying taxes while they did the whittling and lived on the fat of the land. The American farmer has learned the fact that if he gets justice at the hands of his law-makers the demand for it must come from his own class. In order to make these demands intelligently, it is necessary for him to understand the situation. Time spent in discussing public questions is not always time thrown away. A day spent in hearing good speakers may be worth more in dollars and cents than if it were spent at home in hard labor upon the farm."

Quarterly Reports.—The following Granges have lately reported for quarter ending March 31: Santa Cruz, Two Rock, Lodi, Santa Rosa, Bennett Valley, Yuba City, Eden, Glen Ellen, Eureka, Stockton, Merced, Lockeford, Valley and Waterloo.

The number of applications for membership in the Subordinate Granges of California, we judge, has been greater during the past month than any other within the past ten years. There is a decidedly lively working up in Granges in various parts of the State; evidently, the early result of the general lecture canvass going on along the whole line.

Change in Appointments.—I have referred all notices received at this office from Lecturers unable to fill all their appointments, to the W. M., who will fill vacancies and report to all interested, through the Rural or otherwise.

Farmers' Alliance.

People's Party Leaders.

Mrs. Nye's "Camera" Sizes Up Some of the Prominent Men at St. Louis.

Last week we printed the first half of a paper read by Mrs. Anette Nye before Duarte Alliance, in which she "pen-pictured" some of the leading members of the late People's Party convention at St. Louis. In this issue we give the concluding part of the paper:

Of our California men little need be said. President Cannon commands respect and admiration everywhere and always. He has the happy faculty of doing better than you thought he would, and thus surprising you agreeably. True as steel, firm, yet not arrogant, level-headed and conscientious, we have in him a leader to be proud of.

J. A. Johnson of San Francisco is an educated man of the broad-gauge type. He went to St. Louis to work for the success of the People's Party; also to advance the interest in reform press work. He expects to give us soon, from San Francisco, a daily paper with the associated press news, as well as all other news, pertaining to this new movement. A weekly will also be published, and we hope to have the truth hereafter, at least a part of the time. State Lecturer Gilbert and Secretary Poundstone are also stanch and true, earnestly working for the cause they have espoused.

Terrence V. Powderly.—Close to our delegation of women sat the K. of L., and with them that grand man, so reviled and spat upon, so belied and threatened, yet holding his place in the hearts of those who know him best as no other man in these United States could hold it. Terrence V. Powderly of Pennsylvania, than whom we believe no more brave, no more conscientious man breathes to-day. He converts the offscourings of Europe into men who can be trusted as American citizens. Castle Garden of New York is his recruiting field. How much bloodshed he has prevented during his eighteen years of service as Grand Master Workman of the K. of L. no one can know. His men have learned to obey their commander, as one little incident at the conference proved. When he calls they follow. When he commands they obey most willingly, for he has a manner so gracious that he wins all hearts.

Hon. Jerry Simpson of Kansas.—Here is a character—an orator whose words ring in the ear long after his voice is hushed; a careful thinker who dives down to the bottom of facts and principles, then places them before his hearers so clearly and forcibly as to carry conviction to all who listen. As he is but 50 years of age, and these set so lightly on him, we may confidently expect much from him in the years to come. He will be popular, as well among his political enemies as among his friends, for he has the good sense and sagacity to turn everything to his own advantage. Humorous, quaint, odd if you please, he always amuses, pleases and instructs while he forces home the truths he handles. He makes a humorous point in a peculiar, slow way which is very telling. He always has a story or an illustration ready for use. A studious man, and one who does his own thinking on all subjects, religious as well as economic, he will command the respect of the whole country, and will be one of the immortal few, of this time, whose words and works will live in history.

(*Continued on page* 317.)

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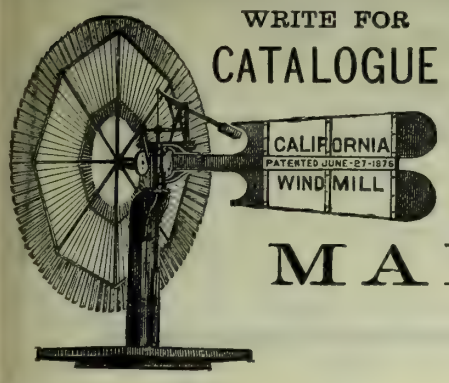
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In consequence of the pressure of other business, and a desire to clear out all "side issues," and to devote my entire energies to my lines of pumping and harvesting machinery, I have decided to discontinue manufacturing WINDMILLS; and to close that part of my business, I offer all the stock of them remaining on hand at the following UNPRECEDENTED PRICES:

10-Foot Wheel, Weight 650 lbs.	**$35.00**
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These prices have never been approached in America. Jackson's "California" Windmill is guaranteed first-class, equal to the best. The terms are: Cash with order only.

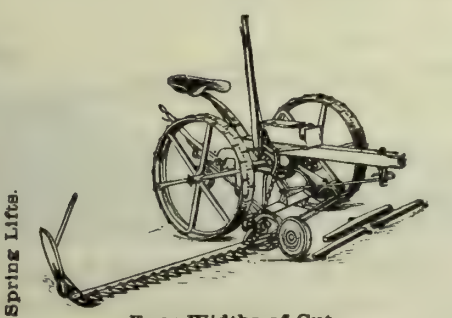
I have also a large stock of "RED JACKET" WINDMILL PUMPS which I desire to close out promptly at MANUFACTURER'S COST. SEE THEM! WRITE FOR PRICES!

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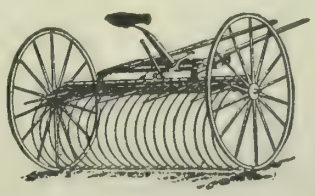
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Walter A. Wood Machines have been steadily growing in perfection for forty years. Every part works right. They are durable, simple, light draft and up to date.



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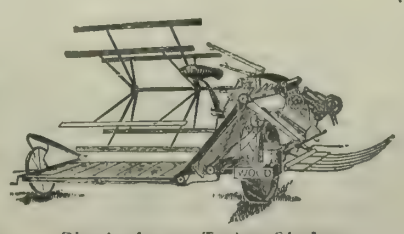
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The Field.

Where Futures Hurt the Farmer.

The Washburn anti-option bill, now under consideration by a House committee, has developed some ardent friends of the farmer in entirely unexpected quarters. Grain gamblers and cereal poker players, whose occupations are threatened, forgetting their own danger, have flocked to Washington to assist in protecting the poor, misguided and friendless farmer. Of course, they have no ax to grind, no personal purpose to serve! They are only actuated by that high and noble charity of soul, that stern sense of justice, that so characterizes their dealings among themselves. Their only fear is, that the bill under consideration may reduce the price at which the farmer can sell his grain—the annihilation of their own business does not trouble them. They are public benefactors, who struggle and shout in the wheat pits, vociferously selling wind and greedily buying grain, which is sown, grown, harvested, threshed and sold in a second's time, only that the price of the actual article, when grown and marketed in the old-fashioned way, may not get so low as to discourage growers and leave us all to starve.

The tender solicitude of these self-constituted custodians of the public weal is most touching, and their tears put to shame the immortal Peckniff. Practically, the only argument advanced against the bill by the presidents, secretaries, members and hangers-on of the boards of trade who have appeared, is the assertion that trading in futures is necessary to maintain values. An examination of the testimony adduced, shows that almost without exception, witnesses have persisted in ignoring the whole core of the matter, by talking entirely of the effect of stopping sales of actual grain for future delivery, and ignoring the practice at which the bill is aimed of betting day by day of the value of a bushel of wind on some future date. Sales of actual grain for delivery as wanted, or on some specified date in the future, are necessary in distributing the crop, and it is expressly provided that such transactions do not come within the purview of the measure. It is aimed at those men who do not see or own a bushel of grain from one year's end to another, and yet profess every day to sell and buy as much wheat as could be grown in one or perhaps a dozen counties. The honest grain dealer has no personal interest in the bill, because it in no way affects his business, which is legitimate, but his living has been stolen by the gambler, and is now being used in the service of the devil of speculation.

To give a semblance of legitimacy to their transactions, it is declared that every board of trade man who makes a contract for future delivery is bound to deliver the actual grain, and that, therefore, in his frantic efforts to keep his contract, he helps to sustain prices. This is all cant and subterfuge. When he sells his promise, he watches his chance and buys a similar promise from another trader who, in turn, hedges by a like purchase from a third, and so on back to the first man. When settling time comes, A finds that he has agreed to deliver to B, 100,000 bushels of wheat at 65 cents, but B has sold the promise to C at 65¼ cents, and he in turn has sold it back to A at 65⅜ cents. Here are three sales aggregating 300,000 bushels of wheat. How much of the farmer's grain is needed to fill the contracts? Not a bushel. They get together and solemnly agree that for the wind which has been bartered, B owes A $65,000, but A owes C $65,375 and C owes B $65,250. In this little jack-pot, A has lost $375, of which $250 goes to B and $125 to C, while A recoups by fleecing some other broker or shearing some outside lamb in another similar transaction. Not a bushel of wheat has been needed, and yet men have gravely asserted that this little betting ring has helped to sustain the price of the actual grain. Occasionally, a big gambler makes a break in this little ring by taking all offers and selling nothing. He becomes a reservoir of promises, and when settling time comes, purchases have stopped at him and sellers have no promises to balance against their sales. If ever the theory of an actual delivery works, it should here; yet at every corner sellers buy back their own promises at whatever rate the Napoleon sees fit to charge, and settle by paying the difference in cash. The amount of grain actually offered is insignificant. It could not be otherwise. The city of Chicago never contained at one time more than the merest fraction of the grain represented by the holdings of Old Hutch, in the corner of September, 1888. The whole thing is pure and simple betting on the course of prices, and the only use operators have for a bushel of wheat is in the form of bread or cake, as they have struck or missed the combination.

So far, the business of the speculator does not affect the actual holder of grain, and some supporters of the system have vigorously called attention to the fact, not noticing that, by so doing, they upset the first contention that a positive benefit is bestowed. There is a point, however, in which the business touches the farmer's pocket, and touches it deeply. The man who sells his promise to deliver wheat in a certain future month has now an interest in nothing connected with wheat except the course of prices. His interest is to keep values below the point at which he sold. How? By creating the impression that prices are too high. A large *proportion* of his prospective profits can profitably be spent in making the public see it in this light. When he is successful, however, he has affected somebody besides the holder of his promise. He works by means of stories of large stocks just ready to come into sight, by tales of increased supplies in other lands, by prophecies of immense crops soon to be garnered, by creating the feeling that money invested in wheat is not safely placed. When settling time comes, he has frightened his fellow operators until they have sold him promises at a figure lower than that at which he disposed of his; balances are struck, and checks, not wheat, delivered. The influence has been operating elsewhere. The farmer has been persuaded that the o'er told tales of abundance are true, and he rushes to dispose of his stock before the decline, which he believes to be inevitable shall fully reach him. This brings a sudden increase in visible stocks; purchasers begin to see an actual fulfillment of the prophecies, and hold off in order to buy at the bottom. The bottom falls out and the farmer parts with his grain at the lowest point reached, yet thinking that he has been specially fortunate in getting in before the deluge. At this point the millers and middlemen stock up, the panic is over and nobody but the farmer has suffered. The board of trade man who toppled over the first brick has probably got nothing from the losses of the farmer. He has succeeded in his purposes by shearing the lamb which has ventured into the ring, but he has created an excitement during which every man who handles the grain between the field and the table has picked the farmer's bones, and yet neither he nor his associates have needed an ounce of wheat to settle their little transaction.

Now a change comes over his dream. This little venture has paid well. He is ready to sell again and things look altogether different. From *ursus despondent* he becomes *taurus rampant*. Prices are too low. A foreign war is a certainty just three months away, and he will sell you a promise to deliver wheat then. Farmers' stocks are exhausted, the granaries swept bare, while the drouth, rust and chinch bugs have destroyed the coming crop. We are bound to go hungry. Instead of exporting wheat, the necessity of importing it stares us in the face. Again he sells and settles up contracts for thousands of millions of bushels without using a peck of grain, but again he has disturbed values of the actual grain. The holders who bought when the farmer sold at the bottom take the cue and hoard their supplies, prices go up and up, the consumer at last settling the bill. The farmer is not in at this performance. The matinee of the downfall of wheat was played for him. He can see his 60-cent wheat go to the table in flour at $6 to $8 per barrel, and wonder why there is no profit in wheat-growing. The consumer can look at it from the other end of the line and wonder where the difference has gone.

It is a significant fact that almost all bear raids for the purpose of depressing prices are made in the fall and early winter, while the farmer still has or is just parting with his crop, while the bull movements come later after farm stocks are safely gathered into commercial hands. The gouge works both ways, the grower getting too little and the consumer paying too much.

This constant play between the animals in the pit, while it does not necessarily or actually call for the purchase of any grain, molds public opinion, disturbs values, lessens the influence of the law of supply and demand, and gives abundant opportunity for the middleman, who only handles the grain, to gouge the farmer who worked a year for it on the one hand, and squeeze the consumer, who has no alternative but to buy, on the other.—B. W. Snow in Country Gentleman.

Unitarian Literature

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IN A DAY.



Lawrence, Kans., Aug. 9, 1888.

George Patterson fell from a second-story window, striking a fence. I found him using

ST. JACOBS OIL.

He used it freely all over his bruises. I saw him next morning at work. All the blue spots rapidly disappeared, leaving neither pain, scar nor swelling. C. K. NEUMANN, M. D.

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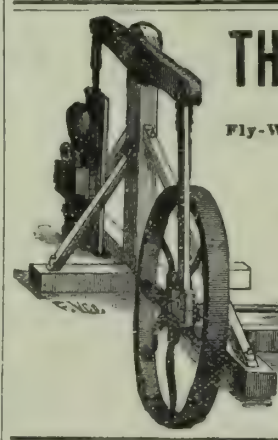
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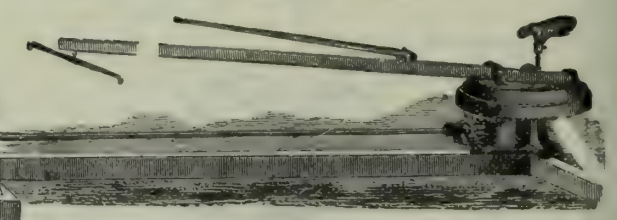


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A simple adjustment permits plow nearest vines or trees to make shallow furrow, say two inches, thus avoiding danger to the roots, the others plowing required depth.

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will be shown on two Saturdays, April 9th and 16th. Sale takes place on

WEDNESDAY, APRIL 20, 1892.

Promptly at Noon, rain or shine. Lunch at 11. Sale and Lunch under cover if it rains.

THERE WILL BE SOLD

Colts by Glen Fortune, Mountain Boy, Figaro, Jester D., Etc.

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ON EXHIBITION DAYS, April 9th and 16th, Saturdays, take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

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KILLIP & CO., 22 Montgomery Street, San Francisco,

OR OF

GILBERT TOMPKINS, Souther Farm, San Leandro.

FLORIST AND GARDENER.

Carnations in Southern California.

[Paper prepared by C. J. Haettel, Redondo Beach, Cal., and read before the American Carnation Society, February 16, 1892.]

The following notes are not designed to be a systematic treatise on the cultivation of the "Divine Flower" in this section, but will outline briefly a few points that may be of interest to those not conversant with methods differing materially from those of other localities.

Our soil is almost pure sand, of a dark color. Plants grown from cuttings and pinched back once, attain a growth of about two feet in diameter and produce hundreds of fine flowers. We never lift them, but keep them always in the ground.

Plants set out in February will bloom until the young plants commence blooming. These will be set out in January, direct from the cutting boxes out of the sand to the open ground, and come in bloom in June, when the old plants will be destroyed.

Seedlings I never pinch back, but let them bloom at once. They are set out in rows three feet apart and six inches in the row, and we take cuttings from the best and destroy the balance.

In planting carnations here, the loss is about one-fourth from the borers. They are very troublesome during the months of July and August, but later in the season their ravages cease altogether. We are not troubled with any disease as yet. In making cuttings we use no fire heat, but always choose the coldest season in the year, and cuttings will root successfully in three or four weeks, while in the summer time they damp off in about one week.

January 27 we had our first rain since early in March, 1891, and during November, December and January, our carnations suffered much from the drought, the ground having become so dry that irrigation was of little value. After such a long dry spell, the first flowers will split, but in a short time they will be all perfect again, and from now on until May or June we will have an abundance of flowers on our old plants; by that time the young plants will come in bloom, when we will burn the old plants.

This season I shall make a planting about the middle of July to first of August for a succession of bloom.

Our method of fertilization is probably different from that employed by other growers, and while it is more complicated and expensive than some other modes, I believe it to be very effective.

From 7 to 9 o'clock A. M., according to the amount of moisture in the air, the flowers will be ready to pick for the purpose of extracting the pollen, which should then be dry. I use a clean plate to receive it. The easiest way to extract it from the flowers is to turn the petals back and, with a sharp pair of scissors, cut the stamens off. After all is gathered, cover the plate with a clean pane of glass, and turn it over occasionally, as some moisture will collect on the glass. Under ordinary circumstances, the pollen will be ready to put away early in the afternoon. It is then put through a fine sieve and allowed to fall gently upon a clean sheet of paper, from which it is transferred to a one-ounce bottle.

When we are ready to hybridize, we make use of a pair of pincers, such as jewellers use. With these we extract the stamens, early in the morning, before the flowers have been fertilized by insects or self-fertilized. A little later we pass with the pollen bottle and shake a little of it in the calyx, covering the pistils when the operation is complete. The same method is employed in fertilization for seedlings of roses, gladioli, amaryllis, cannas, dahlias, etc. We use the best flowers for seedling purposes and retain only the best from which to propagate.

Experience during our past dry winter shows us that we would have better success in sowing carnation seed the latter part of February because, as we use no fire heat, many of our seedling plants are lost during the cold, dry winter, if the seed is sown in the fall.

Pansy Growing.

There is probably no place better adapted to the production of magnificent pansies than Southern California, especially during the first half of the year. The weather from January to July is more or less cool and moist, conditions favorable to the growth of the pansy, and with proper management the plants will produce an immense crop of blossoms of large size.

In order to have them come into bloom in January or February, the seed must be started in August. Considerable care is necessary to success at this stage, but after the plants are large enough to remove from the seed bed, the directions for culture are simple, though imperative. They may be expressed in a negative way, and if you cannot comply with the requirements, let me candidly advise you not to undertake it. In the first place, don't believe the threadbare and absurd statement that "pansies like a shady place." Set them where they will receive the full sun but no reflected heat from the buildings. When the weather begins to warm up in June, it is well enough to shade them with light muslin.

Secondly, don't set them where you have to dig holes with a pick or blast them with dynamite. Select a good gravelly loam, moderately compact, excavate to the depth of a foot, and as the earth is replaced mix in a goodly quantity of cleanings from the cowyard or chicken house (not too much of the latter). Then thoroughly saturate the mass, and as soon as dry enough to handle, work it over again with spade, hoe and rake and set your plants about a foot apart; and, lastly, don't give them a shower bath with the hose every day or two. It is folly. It hardens and packs the ground while the roots may be suffering for moisture. Once in a week or two make holes or furrows among the plants and keep water therein until the ground is thoroughly soaked. When sufficiently dry, cultivate and pulverize the surface. Remove all blossoms as they begin to wilt. If these instructions are heeded, the rainbow will paint your pansy bed and make it the envy of your neighbor and the delight of the wayfarer. If they are not heeded, you will be heard in the doleful chorus: "I never had no success with pansies nohow."—W. M. Bristol in Redlands Facts.

POTATO SHIPPING CASES.—The potato, says the *Prairie Farmer*, may be valuable for sending grafts and other material of a succulent nature, even including flowers carefully pressed in. The potato should be carefully scooped out, leaving a layer around the outside thick enough to be pretty firm. In these two halves the flower buds or grafts may be safely carried if the halves are placed together. Mr. John Thorpe, Chief of the Bureau of Floriculture of the World's Fair, informs us that he has repeatedly sent to and received from England herbaceous cuttings inside of scooped out potatoes and wrapped in waxed paper, in perfect condition, and in some cases they had begun to form roots in their prison.

NURSERY STOCK AT THE WORLD'S FAIR. It is announced that five acres of space in the Midway Plaisance have been reserved for a nursery exhibit.

Stump Pullers.

Result of Inquiries as to the Best Stump Puller.

A recent notice of the Harvey Stump Puller in the RURAL PRESS brought a great many inquiries about the qualities of this machine, and there seems to be a general desire for enlightenment on stump pullers. In order to satisfy this desire, some inquiries were made among those who have bought and used the Harvey Stump Puller, and we publish the first letter received in answer to our inquiries.

GUERNEVILLE, Cal., March 16, 1892.

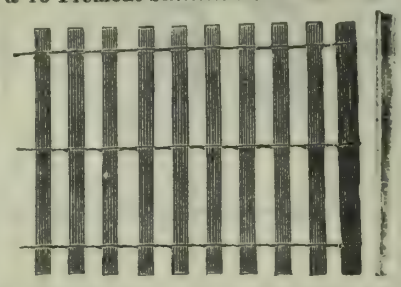
Dewey Pub. Co.—DEAR SIRS: Yours of recent date is at hand, and in answer I will say that it has been a conceded fact that redwood stumps could not be pulled, but I was a new comer in this community and did not know how hard they were to pull out. I bought a piece of bottom land that was full of stumps and I made up my mind to pull them, notwithstanding all the neighbors said I was foolish to try it. I bought a Harvey Stump Puller and thought I would pull the smaller ones and blast the large ones. But to the surprise of myself, as well as my neighbors, I pulled stumps that were from 8 to 15 feet in circumference, and did it in a short time and easily, using four single blocks. I pulled one stump in particular that I will mention. It was about 14 feet in circumference and was filled in around about three feet, and the roots were at least ten feet across. We had to anchor, so that we could use but two blocks on the stump, but out it came and left a hole at least ten feet across and eight feet deep. Aside from the immense power of the Harvey Stump Puller it has improved capstans, that no other capstan I know of has, the pawl to hold all that is gained and also the gear to let a horse go up hill idle and pull down hill. I believe that it is the cheapest and best as well as the most powerful land-clearing machine in existence, and for clearing land will save the labor of 30 men, as I pulled 50 redwood stumps and blasted them up, and piled them up in seven days with the labor of two men. These facts can all be proven by many people, as we had from one to twenty visitors every day that we worked. I think that the machine is a perfect success. If I have left out anything write me and mention just what you want to know, and I will cheerfully give all the information in my power. Yours very respectfully, CHAS. E. OGBURN.

NOTICE.

The Annual Meeting of the Stockholders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

CHARLES WOOD, Secretary. I. C. STEELE, President.

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Produce More Eggs.
Consume Less Food,
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Are the Most Beautiful,
Are the Most profitable of all Fowls.

Choice Selection and expensive purchases for ten years make my fowls equal to any, excelled by none.

Eggs, $2.50 for 13.

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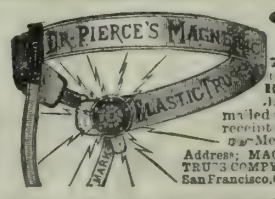
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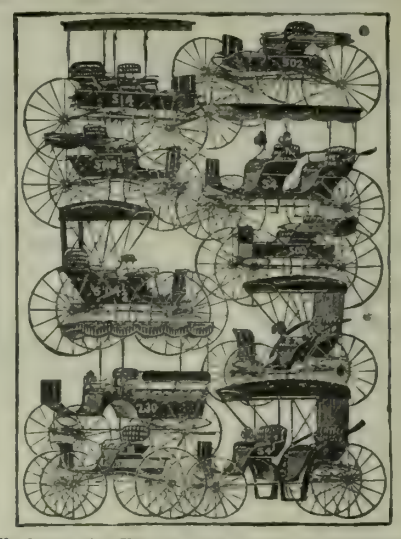


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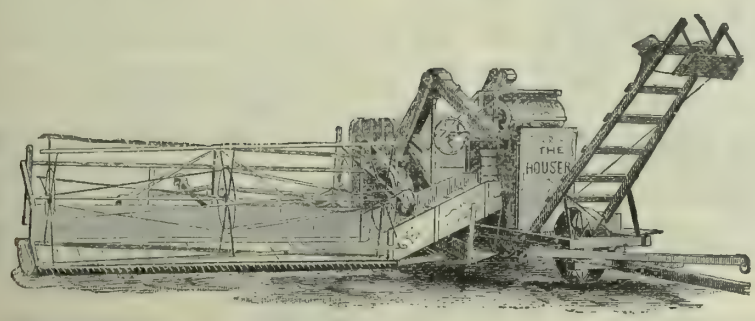
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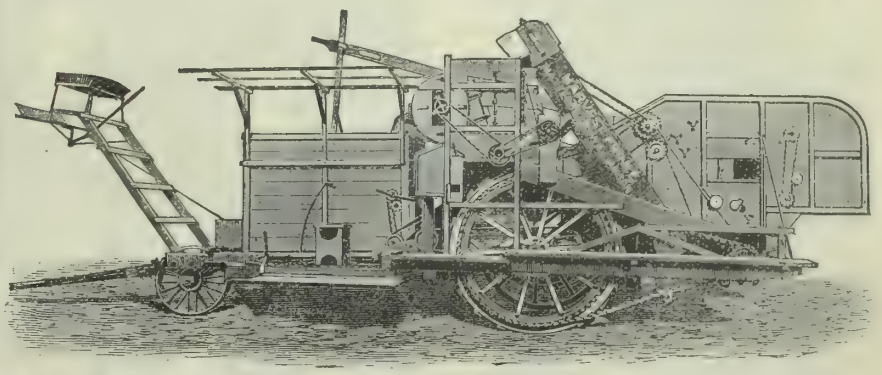
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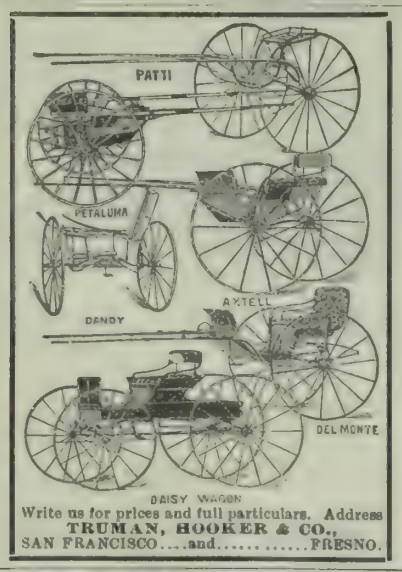


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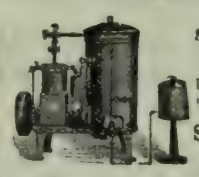
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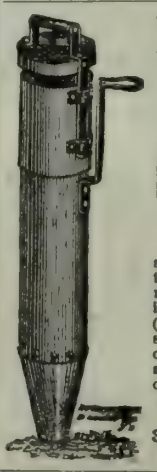
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THE BEST!
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Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (104 gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
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People's Party Leaders.

(*Continued from page* 310.)

Humphries, Pres. of the National Colored Alliance, is a very quiet, fine-appearing man. He is very popular among the members of the Colored Alliance, and is the Moses who will lead them on to victory.

Hamland Garland, our novelist, was there. He is just as you would expect to find the author of "Many Traveled Roads," "A Spoil of Office," etc. A keen observer and a young man of fine personal appearance, and most genial manner, he won many friends at the convention. We advise all who want a rare treat to get his books and read them.

The National Woman's Alliance.—The N. W. A. was represented by more than 20 delegates, from nearly as many States. Among those present were Mrs. Lease from Kansas; Anna L. Diggs, D. C.; Mrs. Weaver, Iowa; Mrs. Geffs, Ohio; Mrs. Helen M. Gougar, Mrs. Emery, Mrs. Dubbs. Mrs. Elizabeth M Wardall, S. D.; Mrs. Curtis, Neb.; Mrs. McCormick and Mrs. Pack and many others, all representative women and all equal suffragists, you may be sure. They went home saddened and disappointed, but not discouraged. They went to the conference from far and near, hoping by their influence and votes to get an equal suffrage plank into the People's Party Platform. As it was not deemed wise to insert such a plank into the National platform, they went home to work for equal suffrage, each in her own State, hoping at no distant time to see it adopted in the National. Of lady lecturers, will mention as worthy of hearing, should they pass this way, our good sister Mrs. Lease of Kansas, our Queen Mary as she is sometimes called. A fine speaker and most gracious woman, tall and queenly, she carries conviction to all hearts and will be one of the best speakers of the campaign. "The little woman" from D. C., Mrs. Anna L. Diggs, is also one of the best in the field. Marion Todd is too well known to need recommendation. She, too, may come this way. Hoping you may listen to the eloquence of these and many more, I thank you all for your kind attention.

Cannon Sat Down Upon.

The Nicaragua canal conference, held in San Francisco on Tuesday of this week, passed resolutions warmly endorsing the canal scheme. Mr. Cannon, President of the Alliance, introduced the following substitute, which was promptly laid on the table. The spirit of the daily press of San Francisco is shown by the fact that not one of the city papers printed Mr. Cannon's resolutions:

Whereas, This Convention assembled in San Francisco, on the 29th day of March, 1892, to devise ways and means for the speedy construction of the Nicaragua Canal, and,

Whereas, The people of this State must have relief from the excessive rates of transportation now filched from them by the grasping railroad corporations built with the government credit. Therefore

Resolved: That we earnestly request the President of the United States to renew the treaty with the government of Nicaragua that was negotiated by President Arthur in December, 1884, and withdrawn from the Senate by President Cleveland; and make such terms with the Maritime Canal Company of Nicaragua as may be just and honorable, for the purchase of their rights in the concessions and privileges granted them by the governments of Nicaragua and Costa Rica.

Resolved: That the government of the United States take all necessary steps for the speedy construction of the said canal, and own and operate it in the interests of the commerce of the United States, and of the world, and for the relief of the people of the Pacific Coast from the bandit railroad corporations.

Resolved: That we demand that the House of Representatives enforce a resolution recently adopted by them declaring it "to be the judgment of the House that the granting of subsidies or bonuses by Congress, in public moneys bonds, or by pledging of the public credit, to promote private enterprise, is unjust, impolitic, and in manifest conflict with the spirit of Republican institutions."

Resolved: That a copy of these resolutions signed by the president and secretary of this Convention, be forwarded to the President of the United States, and to the Speaker of the House of Representatives.

Alameda Co. Farmers' Alliance.

Warm Springs, Mar. 21st, 1892.

The regular quarterly meeting of the Alameda Co. F. A. & I. U. will be held at Clark's Hall, Irvington, on Saturday, April 9th at 10 o'clock A M. Basket lunch and lively speeches will be in order at noon time.

Let every Sub Alliance send its full number of delegates, and special committees come fully prepared to report.

H. B. Valpey, Pres.
Mrs. L. A. Shaw, Sec.

President Cannon's Appointments.

Mass meeting at Santa Barbara	April 8th
Fresno	April 13th
Tulare Co., Alliance	April 12th
Merced (probably)	April 14th
Winters, Yolo Co.	April 15th
Colusa	April 16th
State Ex. Com. Mt'g. S. F. (probably)	April 18th

Any changes occuring in above will be noted, if possible in later issues.

The Executive Committee of the State Farmers' Alliance will met in San Francisco Monday, April 18th, a little later than first contemplated.

State Secretary Barbee, writes Mar. 26: The order is still on the forward, march. Two new Alliance charters, secured through the work of Bro. G. D. King, are sent by this mail for Tulare Co.

Frank S. Chapin of Tulare Grange, a valued correspondent of the Rural, who had a successful surgical operation performed upon his body at the Fabiola Hospital, Oakland, some weeks since, is now nearly recovered. He expects soon to resume active duties as a correspondent and agent for this paper in Tulare county. With many other sincere friends, we heartily congratulate our correspondent on his fortunate lot in being treated so well at the Fabiola.

Fashions in Children's Clothes.

An invaluable help for those mothers who strive to keep their children well and fashionably dressed at small expense is Diamond Dyes. It is through their use that so many children have clothes of the fashionable colors. Little suits, cloaks, etc., are easily made from faded or half-worn clothes, and when colored with these dyes cannot be told from new.

"It's easy to dye with Diamond Dyes," is a familiar saying in thousands of homes. They are the great money-savers of the age, and never fail to give satisfaction when the simple directions are followed. Old fashioned dye stuffs, and crude imitations of Diamond Dyes should be avoided, as they lead to trouble and disappointment. Prudent people prefer to do their dyeing with Diamond Dyes rather than be to the trouble and expense of sending to a dyer.



The Louden Hay Slings.

The above is an illustration of a new Self Compressing Center Trip Hay Sling, which is manufactured by the Louden Machinery Co. of Fairfield, Iowa. It is laid upon the rack and the hay built upon it. It will roll up 500 to 1000 lbs. of hay, as shown in the cut, and drop it in the mow or on the stack just as it lay on the load, leaving no litterings. They are especially adapted for unloading headed grain from the header wagon, and for handling all kinds of hay raised on the Pacific Slope. The company makes this Sling in several styles and sizes to suit all kinds of hay, straw, fodder and bound or unbound grain, either for loading on to the wagon or unloading from it, or from the sweep rake. No farmer who puts up 50 tons of hay or cuts 40 acres of wheat can afford to be without them. They also make a complete line of other Hay Tools, and it will pay any one to write them for their large, 40-page catalogue, containing 100 illustrations. Address, Louden Machinery Co., Fairfield, Iowa.

Cattle Raising Corporation.—The Otay Jersey Cattle Company is now thoroughly organized, for the purpose of importing and raising thoroughbred stock, and Jersey cattle in particular. The capital stock is $25,000, with Westley Smith of San Diego as president, and Mrs. A. M. Chittenden, secretary and manager. The company have already some of the finest Jersey stock, and are fast adding to their number by importation and home purchase of calves, and have now under their control 1800 acres of pasturage and alfalfa lands, preparatory to carrying on an extensive business in raising beef and dairy cattle.—Otay Press.

A. P. Roache, W. O., writes regretfully that, owing to repeated attacks of la grippe during the past month, he will be unable to make the tour of appointments made for him in the State Grange canvass. We shall still hope to see him at Oakland and Haywards at least.

Our Agents.

J. C. Hoag—San Francisco.
R. G. Bailey—San Francisco.
Geo. Wilson—Sacramento Co.
Samuel B. Cliff—Creston, Cal.
A. C. Godfrey—Oregon.
Mrs. Bruce B. Lee—Tehama Co.
M. H. Truett—Alameda and Contra Costa Co's.
Thos. Osborn—Santa Clara Co.
L. J. Sellon—Sacramento.
H. A. Lehndorff—California.

POLITICAL MENTION.

People's Party Announcements.

Public meetings in Alameda county, to be addressed by Mrs. K L. Nevius (and in most instances by volunteer speakers also), will be opened at about 7:30 P. M., as follows

Warm Springs	Friday, April 1
Irvington	Saturday, April 2
Sunol, at Schoolhouse	Wednesday, April 6
Livermore, at School house	Thursday, April 7
Altamont, at Schoolhouse	Friday, April 8
Pleasanton, at Hall	Saturday, April 9

People's Party Clubs will be organized at each of thes; meetings, if sufficient interest is manifested to warrant such action. Per Order Central Committee.

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Taploca or Sago, choice, 25 lb. lots	4
Rice, very fine grade, per lb	5¼
Dried Peaches, Cots, Pears or Prunes	5
Ladies' fine patent tipped Oxfords	1 00
Ladies' fine and durable Kid Shoes	1 50
Ladies' Kid Shoes, cheaper grades	$1 25, 1 35
Handsome square toe, patent tip, latest	2 00
Same with cloth top, $4 50 quality	2 75
Infants' Shoes that would surprise you	50
Men's heavy Kip Boots, 8 to 11, closing	1 75
"Seconds" fine heavy gray Wool Shirts	89
Gray or white Underwear, medium and heavy	50
Men's Cassimer Pants (worth double)	$2 50, 3 00
Men's Sunday or every style Pants	1 00
Best outside Shirt yet offered at	50
Dress patterns in wash goods, beautiful	50c, 75c, 1 00
Dress patterns in other soft finish goods	75c, 1 00, 1 50
Ginghams, extra quality, unsalable styles	6¼
Ginghams of fine patterns, best value	8c, 10c, 12½
Flannelette or Tennis Flannel	6¼c, 8c, 10c, 12½
Cashmere, 20 shades, dark, 38 in., plain	25
Cashmere styles and finish fig., not wool	8c, 9c, 12½
Misses' School Hats, trimmed, 6½ to 6¾	25
Little Boys' Hats, Sunday, 1 to 4 years	25

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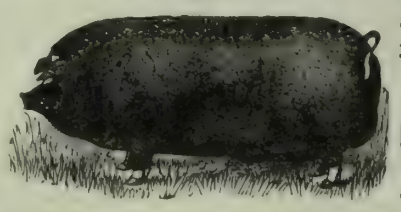
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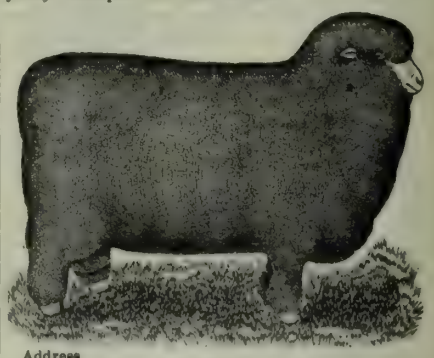
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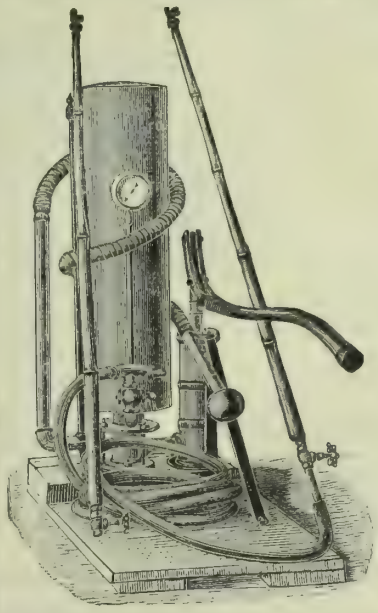
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

Blustering and stormy weather the past two or three days have added largely to the confident feeling that without some unforeseen, unfavorable, climatic influences within the next 60 or 90 days, our crops, particularly that of cereals, will be phenominally large. The rapid decline in the price of silver is, at this writing, exerting an unfavorable influence on the market price of wheat which both directly and indirectly causes other farm products to weaken in sympathy. English importers are taking advantage of the present situation and buying all that India has to spare of wheat, cotton, etc. The exports of wheat from the latter country to England and the Continent are on an unexampled large scale. The local money market continues easy, with no increase in the demand either for legitimate business or speculative purposes.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June.	July.
Thursday	7s 8½d	7s 8½d	7s 8½ d	7s 8½ d	7s 9d
Friday	7s 8½d	7s 8½d	7s 8½ d	7s 8½d	7s 8½d
Saturday	7s 7 d	7s 8½d	7s 8½d	7s 8½d	7s 8½d
Monday	7s 8½d	7s 8½d	7s 8½d	7s 8½d	7s 8½d
Tuesday	7s 8½ d	7s 8½ d	7s 8½d	7s 8½d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	37s 9d	37s 9d	37s 9d	Steady.
Friday	37s 9d	37s 9d	37s 9d	Quiet but steady.
Saturday	37s 9d	37s 9d	37s 9d	Firmer.
Monday	37s 8d	37s 9d	37s 9d	Steady.
Tuesday	37s 9d	37s 8d	37s 9d	Quiet.

To-day a cablegram is as follow:

LIVERPOOL, March 30.—WHEAT—Quiet. California spot lots, 7s 8d; off coast, 37s 6d; just shipped, 37s 8d; nearly due, 37s 6d; cargoes off coast, steadily held; on passage, steadier; Mark Lane wheat, quiet.

New York.

The following shows the closing prices of wheat for the past week.

Day.	Mar.	Apr.	May.	June	July
Thursday	159	158½	154½	151¼	151½
Friday	161¼	161	156¾	153¾	154
Saturday	162	158½	154	151	151½
Monday	...	157¼	152¾	149¾	149¾
Tuesday	160	158¾	153¾	150¾	150¾

The following is to-day's telegram:

NEW YORK, March 30.—WHEAT—97c for March, 95c for April, 92½c for May, 90½c for June, 89¾ for July, 89½c for August, and 91½c for September.

CHICAGO, March 30.—WHEAT—82c for May and 80⅞ for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	166½	160	....	....	143½	142½
Friday	162¾	160¾	....	....	144	144
Saturday	160½	160¾	....	....	142½	141½
Monday	159½	157	146	146	....	....
Tuesday	160½	156¾	....	....	141	140⅜

The following are to-day's recorded sales on Call:

Informal Session.—Buyer season—500 tons, $1.56½; 100, $.56⅞; 1900, $1.56½. Seller 1892—490 tons, $1.40½ per ctl. Regular session.—Buyer season 300 tons, $1.55⅝; 100, $.56⅜; 1300, $1.56. Seller 1892-300 tons, $1.40½; 100, $1.41; 1.0, $1.41½ per ctl. Afternoon session.—Buyer season 400 tons, $1.55½; 200, $1.55½; 100, $1.55½. Seller 1892-800 tons, $1.41½ per ctl.

BARLEY.

	Buyer Season.		*May		June.	
	H.	L.	H.	L.	H.	L.
Thursday	99¼	98½	....	....	93½	93½
Friday	99	98½	96½	96½	93½	92½
Saturday	98½	98½	....	....	....	....
Monday	97½	97½	....	....	....	....
Tuesday	97	96½	....	....	92½	92½

*New crop.

The following are to-day's recorded sales on Call:

Regular session.—Buyer season—300 tons, 96½c; 350, 96⅝c; 100, 96⅞c; 100, 97½c; 600, 97c; 100, 97¼c; 500, 97½c; 600, 97¾c. Seller season—1 0 tons, 94½c; 100, 94⅝c; 100, 94¾c. May 100 tons, 95c per ctl. Afternoon session.—Buyer season—100 tons, 98c; 400, 96½c; 100, 96⅝c; 100, 96c. June, new—200 tons, 92½c per ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, March 27.—Unpeeled peaches are higher for our light remnant, and good to fancy range from 7½c to 10c. Best sizes of prunes are tending higher. Sellers are glad to move unattractive smalls at old rates. Apricots, owing to the depleted stock, are doing better; bags, 7½@9½c; boxes ¾@¾c above.

Eastern Raisin Markets.

NEW YORK, March 27.—There is a decidedly good trade, local and outward, for the season. One hundred bag lots are frequently named at 4½@5c, the latter three crowns. Half a car of boxed layers and a good line of five loose sold to go out at $1.30. This is 15 cents more than demanded for the same grades a month ago. Wholesale grocers have pushed the trade commendably this season, by accepting a narrow margin, which has helped the consumption.

CHICAGO, March 29.—Outside of a moderate demand for choice Peaches and fine large Plums the trade is quiet and slow. The above descriptions are in small supply and firm. Other lines rule quiet. They meet with but a limited demand. There is a fair stock of Raisins and the market for them is easy, though in values there has been little or no change in the last few days.

Eastern Wool Markets.

NEW YORK, March 28.—About the same features of last week prevail. Prices are considered to have have touched bottom, with stocks noticeably diminished. This ought to be favorable for farmers in new clip, unless manufacturers have obtained a reserve in late liberal dealings, that will have a governing effect upon the future situation. The condition of goods, however, modifies this possibility. Deliveries of goods were very heavy this week. Boston sold 2,961,000 domestic and 600,000 foreign. Philadelphia is doing enough to indorse the general easy state of affairs.

Eastern Hop Markets.

NEW YORK, March 26.—Best Coast and State are firm at 25c; other grades are unchanged. The market is still neglected, but holders seem convinced that all will be needed, and do not try to revive trade with material concessions. Foreign advices are not unfavorable.

Miscellaneous.

NEW YORK, March 26.—Honey is firm and active.

Lima Beans—There is a good demand. Spot is fairly firm at $1.75@1.85 a bushel; the latter for recleaned.

Mustard seed obtains a better share of demand than usual for California. Brown, 4¾@5c.

General Remarks and Statistics.

Cereals.

Mark Lane *Express*, March 7. The American shipments continue large to the Continent, which help to support the British market, seeing that the total American surplus is a fixed quantity, and the more the continent takes the less is likely to be pressed on the English market. India is shipping freely for the time of year, but this is balanced by Australia being only a very moderate exporter.

London Agricultural *Gazette*.—It is important to note that the United States can generally meet a deficiency of "produce" in Europe, whatever it may be. The unusual demand for oats and rye in Europe could not possibly have been foreseen in time to grow these articles in excess; yet under the influence of a few shillings per qr. above the usual level of values Uncle Sam has sent to Europe, during the seven months from July, 1891, to January, 1892, inclusive, 811,250 qrs. of oats and 1,089,725 qrs. of rye, as against 101,950 qrs. of oats, and 40,500 qrs of rye in the corresponding period of the preceding cereal year.

The official report of stocks of rye in the principal Russian ports Feb. 14, made a total of 10,000,000 bushels, oats 8,500,000 bushels, barley 4,000,000 bushels, maize 160,000 bushels, and flour, rye and wheat, 760,000 sacks. The official report of stocks and requirements of the famine districts give the supplies on hand as 22,000,000 poods. The average requirements have been 6,000,000 poods per month, but would reach 10,000,000 poods for the three months ending April 30. Seed requirements were 36,000 000 poods. The net requirements were 19,000,000 poods, of which 9,000 000 poods were required to be delivered within the first six weeks leaving the balance to be delivered during March and April. Of this amount part could be obtained immediately in other provinces, while the balance could be supplied after the opening of navigation.

The government report of the foreign crops states that after severe weather vegetation in France is making excellent progress. In Germany there is no complaint as to the present condition. In Austria-Hungary changeable weather over unprotected grain fields has had an unfavorable effect. In Italy and Spain the conditions are favorable. In Russia the condition of the winter wheat is reported as beyond repair, but this is possibly exaggerated. The conditions are certainly unfavorable, even more so than last fall.

The speculative market for wheat made quite a bad break the past week, closing barely steady. The main cause for the decline is traceable to a drop in silver; the latter touching 39d in London and 85c in New York, which is lower than ever before known in the world's history of silver. The decline in silver is said to be due entirely to the machinations of speculative Europeans, headed by the Rothschilds. It is claimed that even without a free coinage bill the market price of silver will be advanced in the near future and that the price of wheat will move up in sympathy. It is the scarcity of metallic currency that enables moneyed speculators to combine and make successful deals.

The local wheat market has ruled dull and heavy throughout the week with still lower figures looked for before an encouraging up move sets in. The disengaged tonnage in port and tonnage on the way are in favor of wheat growers, but this is more than offset by the low price of silver. Oregon and Washington advices report a small surplus of wheat, but that the growing crop promises to be nearly as large as was that in last year.

Barley futures have sold lower, but cash or sample parcels have held to fairly firm prices. Free exporting of the more choice grades of brewing are still continued to England where malting barley is in light supply. It is claimed that new barley will be in the market at an earlier day than before known. This year's crop promises to be large and of most excellent quality.

Light receipts of oats and a fair demand cause a steady market to obtain. The crop up North, it is claimed, will show a decided increase over that in 1891 while its grade promises to be uniformly good.

Corn is steady at unchanged figures. An increased acreage is reported in the States. Rye is weak as is buckwheat.

Mark Lane *Express* just to hand says: The view on Sunday, March 13, instead of being of fields in their natural colours of green and brown, was still of white, such an outlook, with the equinox close at hand and all the operations of springtide to engross farmers' attention, might well be expected to strengthen the markets. Why it fails to do so is probably that the wheat grower does not think much of what his crop will be till May is past; that dangerous and critical month so often blights the promise of a forward season, that farmers are often almost relieved when a cold March has assured us of a backward May. The French and Italian crops are promising, and the winter in the Mediterranean countries having been wet, not cold, the harvest from Andalusia to Turkey is expected to be rather early than late. A heavy snowfall in central Europe has recently occured and is welcomed as protecting the autum-sown grain. These advices seem for the moment to outweigh the news of unfavorable t nor which comes both from Russia and from the United States. The attitude of the latter region is certainly curious, for, despite a blizzard of terrible intensity and of vast area, the latest markets are against the seller, both of wheat and of maize. An undoubtedly weakening effect on the British markets has been exerted by India, which is shipping the old crop with a feverish haste to clear before a new harvest comes in.

The quantities of wheat and flour on passage to the United Kingdom and continent have been stated this month as follows:

Week Ending—	United Kingdom.	Continent.
March 1st, quarters	3,681,000	1,144,000
March 8th, "	3,207,000	1,201,000
March 15th, "	3,489,000	1,360,000
March 22d, "	3,324,000	1,427,000
March 29th, "	3,267,000	1,330,000

During the same week the imports into the United Kingdom were as follows:

Week Ending—	Wheat. Quarters.	Flour. Barrels.
March 1st	195,000	208,000
March 8th	169,000	206,000
March 15th	100,000	211,000
March 22d	217,000	168 000
March 29th	163,000	439,000

Feedstuff.

Bran and middlings are lower, the decline is due largely to liberal supplies and decreasing demand owing to improving pastures. Rolled and ground barley continue in good demand with the Hawaiian Islands continuing to draw freely from us.

Hay is weakening under the near approach of the new season and a well grounded belief that the outturn will not only be very large to the acre, but that an increased acreage will be cut. The grade it is said will show a decided improvement for the better.

Dairy Produce.

The receipts of butter continue large and as the distribution points are falling off, the market does not show a firm strong tone. The most relief at present is still found in the markets up north, which take large quantities each week. The quality of this season's butter is exceptionally good.

Cheese continues to go out fairly well, which causes a fairly steady market in the face of large receipts. Dealers, as a rule, look for a shading in prices before the middle of April.

Eggs are steady. The consumption is very large which keeps the market fairly well cleaned up. Receipts, as a general thing, are large and with a falling off in the demand after Easter, it is only reasonable to conclude that slightly lower prices will set in. Eggs so far this year average larger than has been the rule.

Live Stock.

Bullocks are steady, but mutton sheep and lambs are weak with a downward tendency under freer offerings. Hogs are firmer for the block, but for packing they appear to be easier. Dairy cows are about as heretofore reported.

Fruit.

Orchard advices are confirmatory of an advanced season from two to three weeks earlier than it was in 1891. It is claimed that apricots will not be so many to the tree, which will be offset by the fruit being of larger size. It is claimed that other tree fruit crop, will also be of larger size owing to a lessened yield to the tree. The berry crop promises to be large, owing to an increased yield to the acre and also to an increased average.

Fears are quite generally expressed that in April we may have heavy frosts. There are too many people in this State crossing streams before they get to them.

Alpples are in large supply. So plentiful and cheap are California and Oregon apples, it is not at all likely that Australia will send us any this season. Shipments from the East did not turn out well, and consequently they were stopped.

Oranges continue to rule at around last week's quotations. The demand is still light. Lemons and limes are unchanged.

Raisins are shaping into better position for holders, as are all kinds of dried fruits. Quotations are essentially unchanged.

Vegetables.

Continued favorable weather is causing garden stuff to make rapid growth. All advices point to the certainty that the supplies this year of all kinds of garden truck will be very large, provided we escape heavy frosts in April. There are fears among large dealers that in April we will be visited by heavy frosts.

The price of seasonable vegetables continues to shade off under increasing supplies. We continue to find an outlet in both Oregon and Washington for large quantities which keep prices from sinking much for rhubarb, asparagus and peas.

Onions, if choice good keepers, can be placed at around 1½c a pound, but the general run is not quotable at over our outside quotations.

The receipts of potatoes continue heavy. Increasing supplies of new cause holders of old to press the market, and in doing so, low prices rule for all kinds that do not come up to the highest standard.

Miscellaneous.

From reliable advices up to March 30, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	207,834	250,833	*130,554	63,794
San Diego	19,791	14,356	4,437	.....
San Pedro	2,980	10,669	.....	.....
Oregon	23,857	27,720	24,688	25,464
Puget Sound	11,176	26,134	.....	.....
Totals	265,638	329,715	159,679	89,258

*Engaged for wheat, 1892, 18,330; 1891, 61,314 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,779,975	9,324,190
Flour, bbls	816,646	896,811
Barley, ctls	786,338	208,535

Poultry has held to fairly firm prices under moderate receipts and a good demand.

Hops are firmly held, but as far as this is concerned there are very few hops to be had on this coast. The yards are said to be looking well in this State, but Oregon advices report lice in some yards and also that a small animal is doing considerable injury to the vine.

Beans are showing more strength.

Mustard seeds ought to sell for more money as the New York market continues to advance.

Alfalfa and other grass seeds move off quite freely. The former is higher than for years.

The receipts of wool are steadily increasing, but as yet holders are slow to accept the lower prices quoted by buyers. Wools suitable for luster goods are wanted and fetch better prices than fine to fine medium wools. Chicago *Wool and Hide Shipper*, March 26th, reports as follows: "Stocks in general are all greatly reduced. The wools now left in the hands of the sellers are undesirable wools, chiefly the fine and fine medium grades, concessions on the heaviest of these have had to be made to move them, the clean value of these wools has however, shown no decline, on the contrary has been well maintained and in few instances slightly enhanced. Eastern worsted manufacturers from Pennsylvania and Western New York have constituted the largest buyers in this market the past week, and they have devoted the bulk of their attention to combing wool and well-grown clothing wools that make but little noil. Western mills continue to enter the market freely pursuing the hand to mouth policy of buying stocks as needed. Sales to these people continue the same as they have for months past. Parties having Shropshire, grade Cotswold and Cotswold wool or wools of a similar class will find now to be the best time to place them on the market, as commission men can now readily find sale for this class of wool at nearly outside figures and bring quick returns."

Produce Receipts.

Receipts of produce at this port for 7 days ending March 29, '92, were as follows:

Flour, qr. sks	99,043	Bran, sks	11,640
Wheat, ctls	187,854	Buckwheat "	
Barley, "	23,805	Middlings "	3,444
Rye, "	....	Chicory, bbls	120
Oats, "	202	Hops, "	84
Corn, "	872	Wool, "	2,229
*Butter, "	1,288	Hay, ton	1,966
do bxs	853	Straw, "	112
do bbls	.....	Wine, gals	205,470
do kgs	11	Brandy, "	1,520
do tubs	2	Raisins, bxs	2,650
do ½ bxs	489	Honey, cs	10
*Cheese, ctls	759	Peanuts, sks	30
do bxs	18	Walnuts "	26
Eggs, doz	65,000	Almonds "	30
do " Eastern	.....	Mustard "	....
Beans, sks	8,804	Flax "	....
Potatoes, sks	10,842	Popcorn "	....
Onions, "	548	Broom corn, bbls	....

*Overl'd, 100 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to March 28, '91.	July 1, '91 to March 28, '92.
Flour, ½ sks	237,409	378,558
Wheat, ctls	1,225,880	1,205,038
Barley, "	263,837	38 491
Oats, "	3 9,925	363,519
Wool, bales	5,918	6,011
Hops, "	443	431
Rye, sks	.....	3,352
Potatoes sks	71,319	114,559

Live Stock.

BEEF.		MUTTON.	
Stall fed	7 @ –	Wethers	9½@10
Grass fed, extra	7 @ –	Ewes	9 @ 9½
First quality	6½@ –	Do Spring	12 @13
Second quality	6 @ –		
Third quality	5½@ –	HOGS.	
Bulls and thin Cows	2½@ 3½	Light, ₰ lb, cents	5 @ 5½
VEAL.		Heavy	4½@ –
Range, heavy	5½@ 6½	Feeders	3½@ 4½
Do light	7 @ 8	Stock Hogs	3½@ 3½
Dairy	7½@ 9		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, March 30, 1892.

BEANS AND PEAS.			
Bayo, ctl	1 80	@	2 05
Butter	2 40	@	2 80
Pea	2 20	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 95	@	2 65
Large White	2 20	@	2 45
Lima	1 60	@	2 15
Wld Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do NLes	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, ₰	12½	@	18
Do good to choice	19	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	15	@	—
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	15
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	16	@	17
FEED			
Bran, ton	15 50	@	16 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 00
Middlings	17 50	@	18 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt.	7 50		
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oat	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	45	@	60
GRAIN, ETC			
Barley, feed, ctl	93¾	@	1 02½
Do Choice	1 03¾	@	—
Do Brewing	1 05	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 21½	@	1 26½
Yellow, large	1 23¾	@	1 26½
Do small	1 23½	@	1 26½
Oats, milling	1 42½	@	—
Feed, Choice	1 38¾	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 60	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 27½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling			
Gilt edged	1 63½	@	—
Do Choice	1 61½	@	—
Do fair to good	1 57½	@	—
Shipping, cho'ce	1 56½	@	—
Do good	1 53½	@	—
Do fair	1 51½	@	—
Common	1 50	@	—
Sonora	1 50	@	1 60
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
FLOUR			
Extra, City Mills	4 90	@	5 15
Do Country Mills	4 90	@	5 15
Superfine	3 00	@	3 45
NUTS—JOBBING.			
Walnuts, Cal. ₰	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, soft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	90	@	1 00
Fair to Good	75	@	—
Cut	40	@	—
POTATOES.			
Early Rose, ctl	35	@	40
Burbank Seedling	20	@	45
Do do Oregon	80	@	1 00
Do Humboldt	40	@	75
River Reds	15	@	35
New	60	@	1 25
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	7 50
Roosters, old	6 00	@	7 00
Do young	8 00	@	10 00
Broilers, small	4 00	@	—
Do large	6 00	@	—
Fryers	6 50	@	—
Ducks	9 00	@	12 00
Geese, pair	2 00	@	3 00
Turkeys, Gobbler	14	@	16
Turkeys, Hens	16	@	19
Do Dressed	16	@	21
Manhattan Egg Food ₰ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, ₰	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	13	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	5½	@	6
do Brown	3	@	3½
WOOL.			
SPRING, 1891.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	14
Calis'y & F'th'll	14	@	16
Oregon Eastern	10	@	17
do valley	—	@	—
So'n Coast, def	10	@	12
HONEY.			
WhiteComb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 30, 1892.

Limes, Mex	4 00	@	5 00
Do Cal	60	@	75
Lemons, box	1 00	@	3 00
Do Sicily	5 50	@	6 50
Oranges, Seedlings	—	@	1 25
San Bernard'o	1 50	@	2 25
River ide	1 50	@	2 25
Los Angeles	1 25	@	2 00
Do Navels—			
San Bernard'o	3 00	@	4 00
Los Angeles	1 50	@	3 00
Riverside	3 00	@	4 00
Duarte	3 00	@	4 00
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Apples, box	50	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	—
Strawberries, pr dr	1 00	@	1 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, ₰	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, ₰	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 ₰s	40	@	—
Garlic, ₰	2	@	3
Squash, Mrft, sn	3 00	@	6 00
Do Summer, ₰	—	@	—
Tomatoes, box	1 25	@	1 75
Asparagus, box	1 00	@	—
Do choice to ex	1 25	@	1 75
Peas, green, ₰	2	@	4½
Rhubarb, box	75	@	1 25
String Beans	10	@	15
Cucumbers, doz	40	@	—

NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY, Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2 00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.

Office, 111 Front Street, San Francisco, California.

OFFICE OF THE GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892 to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.

FRANK McMULLEN, Secretary.

J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres.
CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,
INCORPORATED A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,513 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	276 901 19

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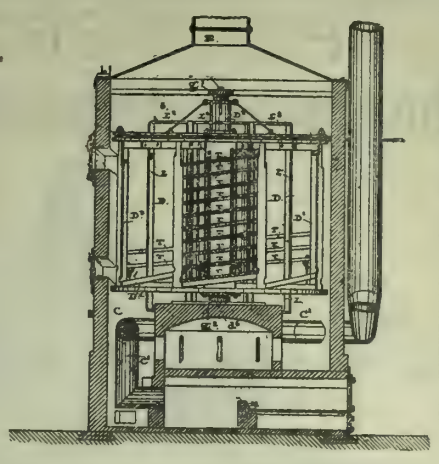
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No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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SQUIRREL AND GOPHER EXTERMINATOR!
IN 1-LB. AND 5-LB. CANS.

STANDARD MOWER

ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.

NO SIDE DRAFT as CUTTER BAR is carried entirely on Main Wheels.

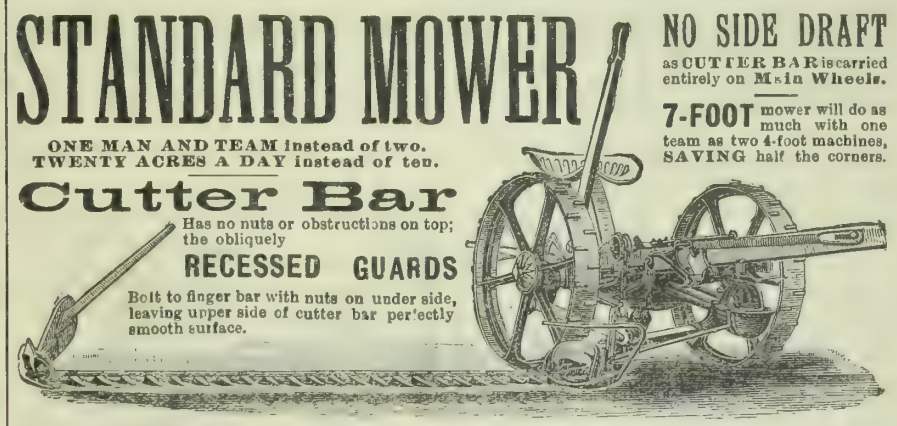
7-FOOT mower will do as much with one team as two 4-foot machines, SAVING half the corners.

Cutter Bar

Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED. THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

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PANSIES! PANSIES! PANSIES!

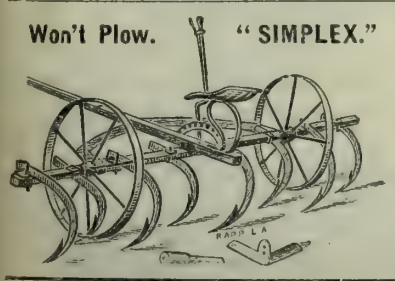
Now ready for shipment, well grown, stalky plants of richest shades, grown from choicest German seed, and extra large flowered.

SEND FOR SPECIAL PLANT CIRCULAR. ADDRESS

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A Ships' Compass.

It is said that much of the unsteadiness of ships' magnetic compass needles can be obviated by the following device: In place of one needle, or set of needles, there are several mounted concentrically one above another. The vibrational period of each needle, or set of needles, is slightly different from that of the others. The lowermost needle carries a pair of stops, which project upward so far as to embrace all of the other needles of different vibrational periods, and so as to prevent them from moving independently through more than a limited number of degrees. The weights of the several needles are so proportioned as that the momentum of each is, in the normal condition of vibration, about equal to that of the others. The swing of each magnetized needle is, of course, hampered not only by their mutual attractions, but also by the stops before mentioned, that are affixed to the lowermost needle. The result is that —the vibrational periods of the several needles not being commensurate one with another—the whole combination has virtually *no* vibrational period. The combination is not free to respond to any single isochronous swing. The attempts of any individual needle to assume such isochronous motion are frustrated by the interferences of the other members of the combination. There are various methods of mounting the needles, which. however, it is hardly necessary that we should describe. One objection that we see to the device is possible derangement by a sudden jerk, etc.

Ocean Depths.—The eight or nine mile depths in mid-ocean, declared very probable by Maury, are not found by later actual investigation, according to the *Engineering News*. A depth of five to six miles is very exceptional, and the average appears to be about 2,500 fathoms for the waters of the globe. The greatest depth yet found is 4,575 fathoms (5.2 miles) south of the Ladrones, and 4,561 fathoms north of Porto Rico, near St. Thomas. The deepest sounding, then, in the North Atlantic, is 4,561 fathoms, and in the South Atlantic bottom is always found at a less depth. The Mediterranean gives 2,150 fathoms as a maximum to date, and the deepest known water in the Indian Ocean is 3,199 fathoms. The polar basin seems to grow shallower as the North Pole is approached, and bottom was found at 72 fathoms in the most northern sounding made. These soundings, so far as made, also disprove the theory that the ocean bottom is a counterpart of the dry land in its irregularity of surface. It has its peaks and deep gorges, but as a rule, the surface lies in very gentle undulations, without abrupt or steep slopes.

The Watch as a Compass.—It may not be known to many, says *Iron*, that the points of the compass can be determined with the aid of an ordinary watch. It is simply necessary to bring the watch in a position so that the hour hand is directed toward the sun. The south then lies exactly midway between whatever hour it may happen to be and the numeral XII on the dial. Let us suppose, for instance, that it is four o'clock, and that the timepiece is held in the position indicated. The direction of the numeral II will then be the exact south. If it be eight o'clock, the numeral X will indicate the exact southerly point.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscri, tion, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1; 10 mos., $2; 15 mos., $3 Extra copi s mai'ed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Pre s," 220 Market St, San Francisco.

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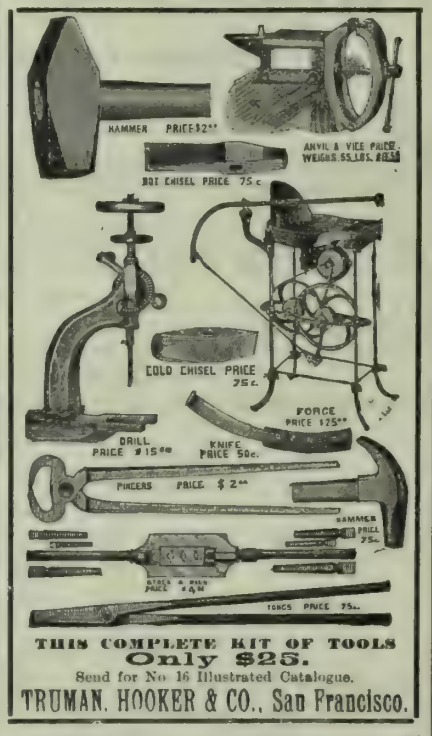
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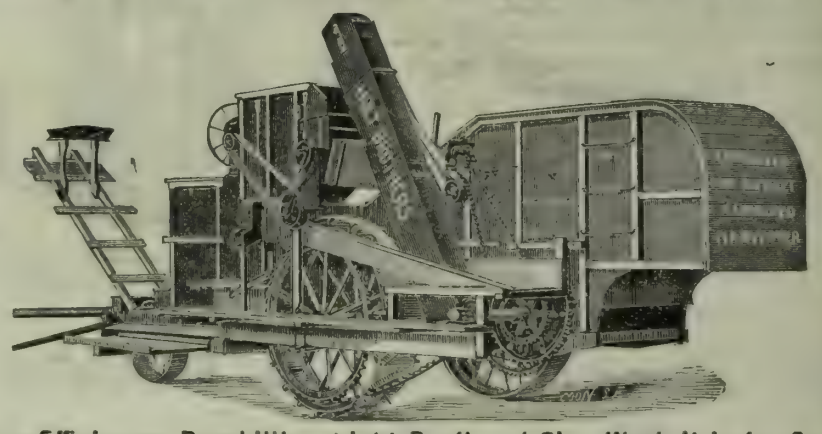
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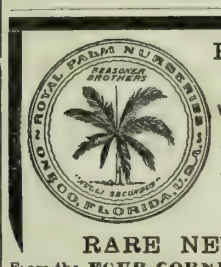
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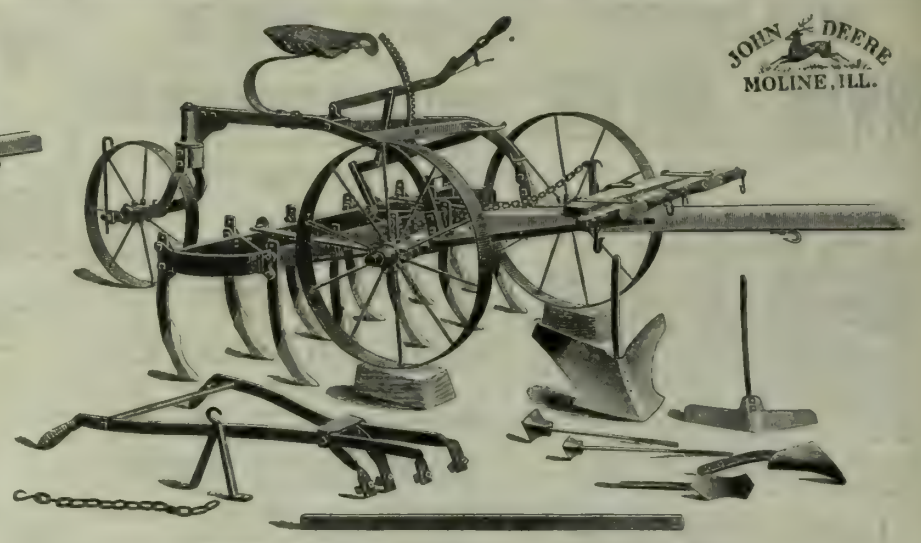


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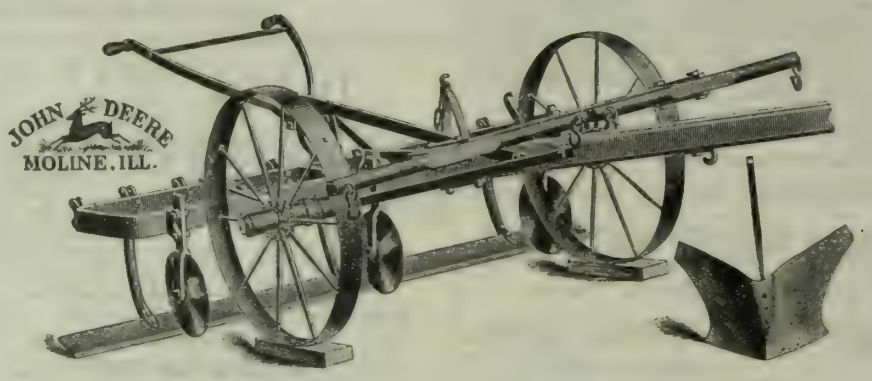
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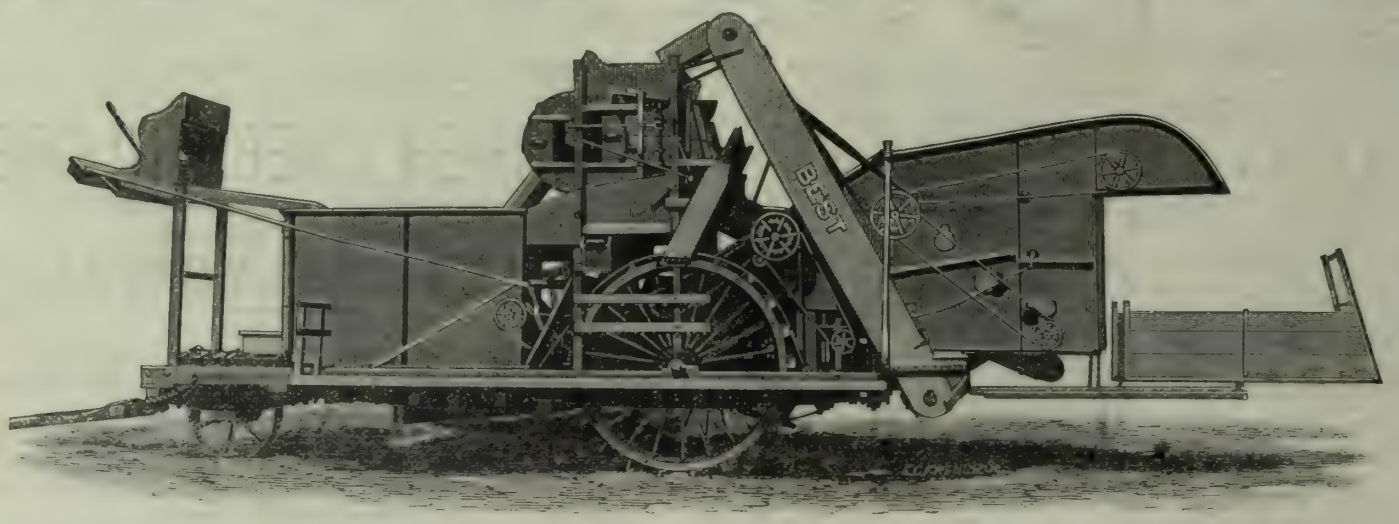
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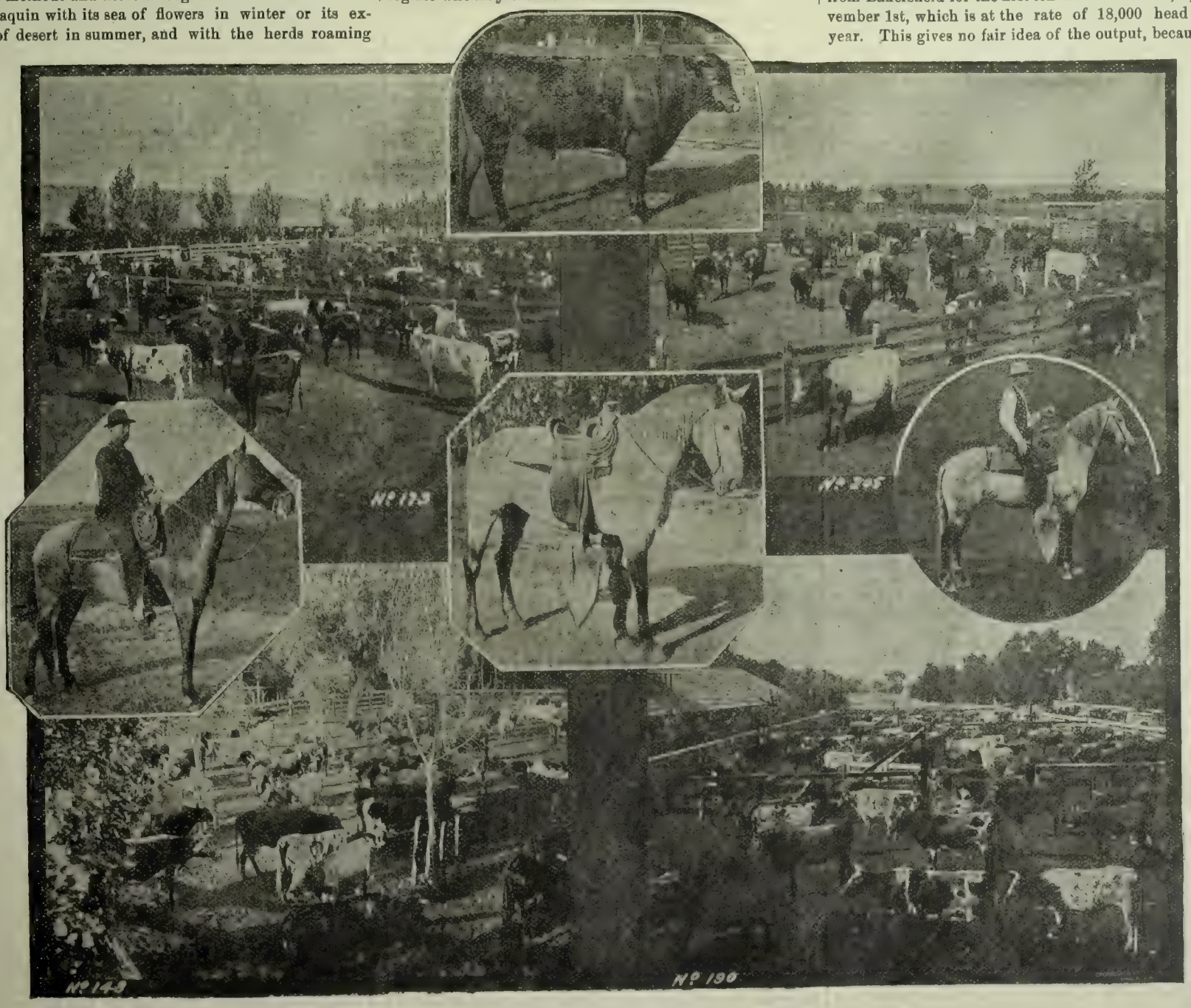
PACIFIC RURAL PRESS

Vol. XLIII. No. 15. SAN FRANCISCO, SATURDAY, APRIL 9, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Cattle-Growing in the San Joaquin Valley.

The composite plate upon this page affords a glimpse of stock-ranching in the upper San Joaquin valley. Perhaps the first impression which the scenes will make upon an old Californian will be one of the marked contrast between present methods and those in vogue when he first saw the San Joaquin with its sea of flowers in winter or its expanse of desert in summer, and with the herds roaming at will up to their knees in lush wild feed or enveloped in a cloud of dust, according to the season. Very different from such scenes as these now greet the visitor to the improved parts of the upper valley, where irrigation has transformed the country into a region of thrifty, well-kept farms. As a matter of fact, he who thinks of the improvement and advancement of the San Joaquin only in the line of fruits and fruit products has only a partial idea of its greatness and wealth-producing capacity. It is to be a vast region of diversified farming.

The pictures illustrate cattle-farming as followed upon the farm plan rather than upon the range plan of the early years. And yet the work of the photographer shows that enough remains of the old life to render it picturesque and interesting to the distant reader. The vaquero still lives, his saddle and riata have the ancient glamour still about them, but what an anachronism is the vaquero himself—a vaquero with a "biled shirt"—hide your shame ye mounted spectres of the old regime who may still haunt familiar scenes.



SCENES ON THE CATTLE FARMS OF KERN COUNTY.

And yet less change has come to the vaquero than to the scenes amid which he now pursues his vocation. The pictures show well-built corrals of sawed lumber, with swinging gates, fine cattle and hay sheds, groves of trees for shelter. All these things are common on the irrigated farms of the Kern County Land Co., on whose properties the photographs were taken. The cattle also show notable improvement through the use of thoroughbred sires of most of the popular breeds which have been introduced. Nor would glances at the fields show less progress than the cattle, for the square miles of alfalfa, Egyptian corn and other forage plants show that the owners have due respect to the old maxim that feed makes breed—only their practice shows still greater wisdom in relying upon both feed and breed as the twin factors of success.

The development of the cattle interest on improved lines is attaining respectable figures. A current issue of the Bakersfield *Californian* says: "The railway tables show a total of 666 cars, containing 15,000 head of cattle, shipped from Bakersfield for the first ten months of 1891, up to November 1st, which is at the rate of 18,000 head for the year. This gives no fair idea of the output, because there are three head driven out afoot for every one that leaves here by rail. The assessment roll of 1891 showed a total of 80,063 head of cattle in Kern county, of which 68 were work-oxen."

PLANTING AT THE WORLD'S FAIR.—Reports state that the "wooded island" in the Chicago Exposition grounds is beginning to assume the character which in great part it will have during the Fair—that of a gigantic flower garden. Already the Floricultural Department has received 27,000 rose bushes and other plants, several thousand of which came from abroad. These are being transplanted on the island.

AGRICULTURAL SCIENCE.

The Cienegas of Southern California.

[A paper read at the last meeting of the American Geological Society by PROF. E. W. HILGARD of the University of California.]

A *cienega*, in the parlance of the native Californian, is a limited area showing a growth of water-loving plants, appearing sporadically in otherwise arid surroundings—usually hillsides or valley margins—and occasionally giving rise to flowing springs. The economic importance lately attained by these cienegas as sources of irrigation water by the aid of artesian borings, and some peculiarities of structure upon which their occurrence in that particular region seems to depend, justify at least a brief presentation of the facts to this body.

A simple and typical case in point is presented, for instance, by San Antonio creek, a stream issuing from a canyon in the Sierra Madre near the town of Pomona, in the San Bernardino valley, Los Angeles county. It is near the present divide between the adjacent drainage basins of the San Gabriel river on the west and the Santa Ana river on the east. Though a small stream, carrying only from 700 to 800 miner's inches of water in summer time, it has formed in front of its exit from the canyon a debris cone or "fan" having a radius of seven or eight miles, of which the apex, near the canyon mouth, is between 400 and 500 feet above its base. On the slopes of this fan, as well as near its base, there appear numerous cienegas, some less than an acre in area, while others range up to 20 acres and over. In some of these, large sycamore trees are the only unusual indication amid the "bee-pastures" of white sage, cactus and other plants characteristic of the dry mesas of the South. In others there is added the willow and clumps of "tule" (cat-tail) and other swamp plants. From some, springs issue naturally; in all, shallow dug wells find water; in many of them, artesian bores have been made with good success. The deposits penetrated in these bores are, of course, such as may be expected in a debris-fan; but they vary so quickly and completely in wells only a short distance apart as to show that the ancient portions of the fan have been formed under a regime exactly like the present—namely, an alternation of very coarse deposits of gravel and large cobbles, such as are now carried by the stream during the torrential floods to which the high ranges are subject, with fine silt and even clay, which are practically impervious to water. The abrupt diminution of velocity on emergence from the canyon results in the quick accumulation of cobble ridges or "kames," which sometimes change the main channel, within a few hours, to a totally different direction. It is obvious that in past times such changes of channel have thrown the water of the creek from one drainage basin to the other; at present it discharges toward the Santa Ana basin, but unless artificially prevented, there is no reason why it may not some time revert to the San Gabriel watershed.

If we imagine the structure that must result from such a mode of accumulation of a debris-fan, the sporadic appearance and peculiar localization of the cienegas (being the point at which the water fed into the cone at the mouth of the canyon is forced near to the surface, either by a cross ridge or by the termination of a water-bearing cobble bed underlain by an impervious layer) is easy to understand. But it is also obvious that the continued supply of water from the stream into the various old channels of the debris cone must depend upon the maintenance of the open gravel surface at the apex of the cone. When this is wholly or partially closed, whether by natural or artificial processes, then, the source of supply being stopped, the springs or artesian wells dependent upon it must diminish or cease to flow. Such variations and stoppages have already been experienced at several points, and as they may prove very costly, if not disastrous, to heavy investments already made, it is quite important that the need of keeping the area of infiltration open for the winter floods should be fully understood by the populations concerned. When this is attended to, it is obvious that we have here natural storage reservoirs for flood waters, annually replenished and likely to be fully refilled each season, no matter how heavy may have been the drafts made upon them during the preceding irrigation season.

The most extensive example of debris-fan storage of flood waters thus far known to me occurs in the upper San Bernardino valley, at the head of which two large streams, the Santa Ana river and Mill creek, emerge from narrow canyons, at whose outlets there are truly phenomenal accumulations of huge bowlders, which in time of flood are tossed about by the torrents with a thundering noise sometimes audible miles away. Here are many square miles of open cobble surface, into which flood waters can be and are absorbed with the greatest ease, although in the usual channels of the summer flow the bottom is made sensibly waterproof by finer sediments. Costly tunnels have been driven through these cobble-beds under the impression that large amounts of water could be thus collected; but while the constant drip proves the perviousness and absorbent nature of the deposit, that very circumstance prevents the gathering together of any very large supply of water in the relatively insignificant areas of the artificial drifts.

From the head of the debris-fan of Mill creek to its base, near the town of San Bernardino, the distance is between 12 and 14 miles, according to the initial point chosen; the fall of the surface within the same distance is between 600 and 700 feet. The average width of the valley is about 10 miles, and artesian borings have shown the gravels and cobbles to be nearly a thousand feet in thickness within a mile of the southeastern edge. This enormous gravel mass, filled with water from the floods of the two streams, forms a natural reservoir of such magnitude that the drafts thus far made upon it by the numerous boreholes sunk in the lower valley have failed to show any such degree of mutual interdependence as is usually observed in wells situated short distances apart—a fact which I have ascertained by experimental measurements made under proper conditions. This relative independence of the flow of contiguous wells also indicates that the water-bearing stratum consists of gravel so large and so open that the water mass may be considered as exerting its pressure rather freely in all directions; yet on reopening a closed well there always exists a material accumulation of pressure, which takes several hours to recede to its normal amount.

Besides the artificial outlets mentioned, however, there is a number of natural outlets on the slope of this great gravel reservoir. The most conspicuous is the source of Warm creek, the stream which has been appropriated for the purpose of irrigating the well-known colony of Riverside. Warm creek has no visible connection with any of the streams that descend from the Sierra Madre; it rises in the valley itself, fully three miles away from the foot of the range. There is no obvious reason for its being there, but the water gathers from little rills and ditches within a space of about a quarter of a mile, acquiring within that distance nearly its full volume of from 2000 to 2500 inches during the dry season. At other points, also, "artesian" springs rise with considerable force and volume, and in the immediate floodplain of the Santa Ana river, rivulets gather at many points on the margins, at the foot of the bluff, some 7 or 8 feet above the river channel, and flow toward the latter to increase the volume of the stream. It thus happens that "the entire flow of the Santa Ana river" has been appropriated at at least three different points, each appropriator receiving a good flow, and that in the absence of any obvious important additions from incoming streams. As may be supposed, boreholes sunk in this region of spontaneous flows encounter at very small depths (from 120 to 150 feet) very copious flows of artesian water, in cobble-beds; while near the border of the valley not only is a greater depth required and the outflow less, but the materials penetrated are much finer.

Since the terraces of reddish loam that border the foot of the Sierra Madre from the head of the valley to the San Gabriel river indicate plainly that the subdivision of the valley into two drainage basins is a comparatively recent event, it does not seem improbable that the artesian reserve referred to might be tapped by deep borings much farther westward than has heretofore been attempted; perhaps within easy reach of the city of Los Angeles.

A very striking exemplification of the origin of cienegas exists in the valley of Temescal Creek, one of the southern affluents of the Santa Ana river, in San Bernardino county. This creek is really the natural continuation of the San Jacinto river of San Diego county, but an intervening lake basin (Lake Elsinore) prevents actual flow from the latter stream to the Temescal valley, save in seasons of extraordinary rainfall. Its water is supplied almost entirely from the canyons of the Santa Ana mountains, which have a rather copious rainfall in their higher portions. At the head of the valley there is a small lake (Lee Lake), which, with no visible inflow, nevertheless has at its lower end a steady outflow of about 400 miners' inches of water during the dry season, thus forming part of the water supply of the "South Riverside" Colony. Examination shows that the lake is fed entirely by a series of springs, or rather an almost continuous ooze, from the enormous masses of granitic and other debris that have accumulated in front of the two uppermost canyons of the Temescal valley, and which reach entirely across the valley to the foot of the (Temescal) range opposite. These debris masses are so porous that actual surface flow very rarely occurs, and no well-defined bed for a stream exists save where, close to the lake basin, the materials are relatively fine. Evidently the main body of the rainfall gathered into these canyons is stored in the coarser portions of the debris-fans above.

Below this lake basin the Temescal valley is divided lengthwise by a series of low ridges formed of materials mostly impervious to water, of Tertiary age. In front of the canyons of this lower portion of the valley similar great debris masses have accumulated also; but since the impervious ridges mentioned prevent the outflow of water save during actual freshets (when small streams pass through the gaps in the ridges), extensive cienegas have been formed between the valley ridges and the foot of the Santa Ana range. In these, as in the upper San Bernardino valley, "artesian" springs rise at many points, and vegetation remains bright green all summer. Borings thus far made have developed a very copious artesian flow, and a tunnel driven through one of the clay ridges toward the cienega was suddenly inundated when its face reached the gravel of the debris mass, about 40 feet below the surface. The artesian wells and natural surface flow from these cienegas, so far as developed, yield an aggregate flow of nearly 600 miners' inches, which can doubtless be materially increased; and this, with the flow from the lake above, constitutes the water supply for the colonies below.

These examples, which could be greatly multiplied, show sufficiently both the nature and origin of the cienegas, and also their practical importance as sources of water supply, which calls for a more careful survey of their extent of occurrence than has heretofore been made. While they do not render the establishment of artificial storage reservoirs superfluous, they do supplement them locally to a very material extent, rendering it possible to occupy for agriculture large areas that otherwise would have remained arid for many years to come. But there arises the question as to the geographic limits within which these natural storage reservoirs may reasonably be sought, for it is notorious that they are not usually found, and the name and idea of the cienega is not generally known in the northern portions of California.

The essential condition of cienega formation is manifestly the opportunity for the abundant formation of deposits of exceptionally coarse and pervious gravel and cobbles near the points where the canyons emerge from the mountains. This, again, is necessarily conditioned upon the occasional occurrence of violent, torrential rainfall in the mountains, alternating with periods when quiet deposition allows of the formation of water-shedding layers. Another condition appears to be the ready weathering of the parent rocks into rounded forms, by which close packing is prevented, so that abundant interspaces are permanently maintained.

Both conditions are fulfilled to an unusual extent in the granitic ranges of Southern California. The rock is rather easily disintegrated, first into larger and then into smaller rounded massses, from which large quantities of very coarse angular sand have been detached, and which continue to disintegrate rapidly when exposed to the air, but are relatively stable when submerged in the debris mass, and so maintain porosity. Such granitic or granitoid material forms the main body of all the larger cienegas I have examined in Southern California, and the remarkably large proportion of potash contained in their waters in consequence is of no small economic importance.

It is therefore reasonable to presume, and it seems *a priori* probable, that a concurrence of the two conditions, climatic and petrographic, is requisite for the formation of cienegas upon a practically useful scale, and the extent to which this concurrence actually exists, geographically, is a question of no little practical interest.

FORESTRY.

Notes on Wattle-Growing.

As the wattle acacias thrive in this State, and are to some extent already growing in different regions, there is not a little interest manifested from time to time in the possibility of a local product of wattle bark for tanning. We find in *Garden and Field* of South Australia an essay read by Mr. von Doussa before an agricultural assembly in that colony, from which we make the following extracts:

From nearly 20 years' close observation and 10 years' practical experience, I think I can with confidence speak on a subject which is every day increasing in importance, and one which is greatly helping to develop our country and producing interests, namely, the cultivation of the wattle. Mr. J. H. Maiden, Curator of the Technological Museum, Sydney, in his book on "Wattles and Wattle Barks," states that there are over 300 kinds of wattles (acacias) in Australia—good, bad and indifferent—and that the broad leaved wattle of South Australia (*Acacia pycnantha*) has one of the richest tanning barks in the world. The district of Echunga is in the very heart of the country producing this wonderful tanning material, and as so many colonists are making, and intending to make, their livelihood by wattle-growing, it is essential that in doing so the very best information on the subject should be obtained.

According to Mr. J. E. Brown, lately our Conservator of Forests, there is not the remotest possibility of the market being oversupplied. British and Continental tanners are languishing for ample and continuous supply, and South Australia exports in such driblets that many of the large firms in Great Britain have given over using our bark, and have fallen back on Valonia and other barks more fully and regularly supplied.

The export of bark from South Australia for the last six years amounted to 27,450 tons, representing a value of £286,272, and when it is considered that in that period one-fifth of the quantity exported could be taken by one yard alone, it will be easily seen that growers need not fear being able to produce more than would supply the demand. Even in Tasmania, which exports nearly three times the quantity of bark per annum that we do, the necessity of cultivating the wattle is receiving the attention of the authorities, and Mr. F. Abbot, the Superintendent of the Botanic Gardens at Hobart, says: "We have so many wattles growing naturally that we have no need to cultivate them, but the destruction is so great that we shall have to do it before long." Both in Victoria and New South Wales the cultivation of the wattle is receiving marked attention, as throughout Australia the species of wattles richest in tannin are becoming seriously diminished, and there is a concensus of opinion among persons interested in the matter that the various Governments should encourage the replanting of them.

The subject of wattle-growing will bear calm discussion, for we have much to learn in regard to it yet. So far, we have had to depend chiefly on estimates (which look very taking on paper) in lieu of statements of results attained. As an example of the estimates on paper which were given before the "Victorian Royal Commission on Vegetable Products," Mr. W. Ferguson, Inspector of State Forests, Victoria, says: "I calculate that from the time the seed was sown at the Majorca Plantations, Ballarat, in seven years we should get ten tons of bark to the acre—that is, off trees that were fit for barking at the time. This would be the first thinning out; then each succeeding year, and for years and years to come, we would get the same result." The soil on which this wonderful result was to be obtained was stated to be so poor that neither grass nor anything else would grow. All you who have had anything to do with growing wattles will be able to form your own opinion of the above statement. They may be able to obtain such results in Victoria, but in South Australia, even on the very best and most suitable land, this would be impossible. The best result I know of is from a ten acre paddock at Friedrichstadt, near Hahndorf, which, after it had been cropped for over 20 years, was given a spell, and in about two years the whole became covered with young wattles, thus showing how long the seed will remain in the ground. These were conserved, and in 11 years after the last cropping, the wattles being then nine years old, the paddock was stripped, yielding 27 tons of bark, for which the owner got over £300.

The soil most suitable for the growth of wattles is of a sandy nature, lying upon a clay subsoil, or on ironstone gravel ridges, which generally produce the best and thickest bark. One frequently notices wattles flourishing naturally on the poorest soil, therefore farmers should not hesitate, when they have such land, which produces them nothing, to put it under wattle cultivation. On the Echunga Wattle Plantation Company's property, wattles

can be seen growing luxuriantly on land of the poorest description—in fact, it was considered wasting time and labor when this portion of the property was put under cultivation, but the result so far has proved quite the contrary.

Preparing virgin soil for cultivation is a question on which there are different opinions, but I think results will prove that the plan adopted by the Echunga Wattle Plantation Company is the most correct and cheapest method. Here several experiments have been tried—plowing in ridges, putting in seeds with hoes and scarifying. The scarifying has proved the most successful and cheapest plan. The ground proposed to be put under cultivation—say a piece of 100 acres—is cleared during the summer months, all useless saplings and scrub timber are cut down, and with the dead timber and logs lying about the ground are stacked in heaps, ready for burning later on. All the large trees, reserving the best and those useful for timber purposes, are killed by ringing. Then in the month of May, when the fire can be easily controlled by three or four men, the whole patch is burnt out, and the ground will then be found suitable for a stump-jumping scarifier, with a team of six good bullocks to go over the whole 100 acres in from 25 to 28 days. The ground in this state forms a protection of no mean value to the young wattles in their early growth, the useful timber trees that are left and the standing dead timber being a great protection against severe frosts in the winter and the hot sun in the summer.

Before putting the seed into the ground, it is necessary, on account of the extreme hardness of the outer covering of the seed, to prepare it for quicker germination. This is best done by putting what is required for one day's sowing into a saucepan or boiler, with sufficient water to well cover the seed; it is then placed on not too fierce a fire until it commences to simmer, and is kept at that point from three to five minutes, when it has to be taken off the fire and left standing till cool. The seeds are then fit for use with a guarantee that nearly every one will grow in a few weeks after being put into the ground. From a series of experiments instituted I obtained the following results:—100 seeds treated in the above manner were planted, and 98 germinated; with only boiling water poured on them 53 germinated, and out of 100 seeds planted without any preparation only 18 grew. The seeds were all planted on the same day and one plot of ground. The whole 98 of the prepared seeds that grew appeared before one of the unprepared seeds germinated.

The best time for putting the seed into the ground is in the months of July and August, and when sowing the prepared seed broadcast, previous to running the scarifer over the ground, if on virgin soil, or the harrows over ploughed or formerly cultivated ground, care shou'd be taken not to put more than 1½ pounds seed to the acre. Say four acres are gone over in a day, the whole should not be sown at one sowing, as on a dry, windy day, before all the seeds could be covered, those assisted in their germination through the boiling process would become useless when dried up.

Wattle-growers will find the pruning of their trees when four or five years old of great advantage, for the tree when pruned (which must not be done too heavily, and only the lower branches should be cut off) will grow quicker, give a cleaner stem, hence easier stripping and at less expense, and the bark will be found to be of better quality and thicker growth than on unpruned trees. The best period for pruning is during the months of April and May.

The stripping season generally commences in October, and in wet years continues till April. Should the season be favorable for late stripping, I would recommend growers not to commence too early, as during the months of September, October, and November the trees grow more than in the remaining nine months of the year, and from an analysis of bark (taken from one tree) made by Mr. J. H. Haycraft, of Echunga, the following results were obtained: For the six months from May to October, inclusive, the percentage of tannin was from 33 to 36 per cent., and from November to April, 38 to 39 per cent., thus showing that out of the season there is a depreciation of tannin in the bark. The exact age at which wattles should be stripped can only be decided by the cultivator's common sense. Some growers allow their trees to stand until the bark on them becomes quite black and scaly. This, I think, is very poor policy, as the bark in that state becomes too fibrous and woody, and certainly does not contain the same amount of tannin as the smooth-skinned bark from trees aged from seven to ten years. As soon as the tree shows signs of the bark becoming scaly it should be stripped. The time is not far distant when bark will be judged as critically as wool, and price paid for it will be according to its strength, age and condition.

Since the erection of Messrs. Barrow and Haycraft's tannage factories at Echunga and Little Hampton, wattle growers have been able to make use of their waste (tops, thinnings, and pruning) in a most profitable manner, and those factories have, to a great extent, caused the cultivation of the wattle to be more seriously considered. The tops, etc., in former years, were during or after the stripping collected, put in heaps, and burnt; but in thickly wattled country this could not be done without risk, and very often these heaps would remain for years, covering large areas in paddocks, and preventing the growth of either grass or wattles on those patches. With the advent of those factories, growers now have an opportunity when stripping to at once clear the land, the tops being collected in their green state, tied in bundles, and carted to the factories, when a former nuisance and useless article is turned into a profitable commodity, causing a large amount of money to be annually circulated, and being a great boon to the working classes. In this natural wattle-bearing area there is room for at least seven or eight factories such as that erected at Echunga; and it is only a question of time and capital to see them established.

[The reader will bear in mind that the months named for sowing, pruning, etc., are for the southern hemisphere. —Ed.]

The Dairy.

Eastern Notes on Creaming Milk.

From current issues of Eastern journals we have collated several paragraphs to show how dairy practice east of the Rockies is running in cream separation.

Prof. J. W. Robertson writes to *Hoard's Dairyman* as follows:

"When a cow has been milking about nine months or more, I do not know of any system of setting the milk, in deep setting pails, which will enable the dairyman to recover much more than two-thirds of the butter fat in his milk, but the use of the centrifugal separator, will enable the dairyman to recover practically the whole of it. The use of shallow pans, for milk obtained during that advanced period of lactation, has given us much better results than the deep-setting pails."

And the *Dairy Messenger* remarks: "It is well to remember the following rule for setting: The depth of the milk must be modified according to the temperature available. Thus, with no ice in warm weather, set very shallow (2 to 3 inches); if colder, say 50 to 60 deg., or if running cold water is at disposal, set 5 to 6 inches deep. If water below 48 deg. or ice is available, set in cans of 8 inches in diameter, and 20 inches deep, submerge or not, as you may prefer. Plenty of crushed ice should be used, so as to cool quickly and intensely. The losses of butterfat by neglecting to have the water cold enough, are enormous; that the experiments of the late Professor Fjord have amply proved. Experiments, both here and in Europe, have also demonstrated that all the difficulties in creameries are overcome by the centrifugal force, and that there is no need to leave more than from 0.1 to 0.2 per cent. fat in the skim-milk, irrespective of breed, feed or period of lactation." [This shows that in California, without cold water, the old shallow pan system is best until one gets a centrifugal.—Ed. Press.]

At a Farmers' Institute in Western New York, George Smith, a practical dairyman, in answer to the question, "Which is the most economical, and at the same time, thorough process of creaming milk in a dairy having ten cows that will make 250 pounds of butter in a year?" said: "If you have ten cows that will produce that amount of butter, or, if you are going to purchase them, and have no creamer, and wish to choose between processes, and must buy one, by all means choose the hand separator. With one of the hand power size, you can easily skim the milk from such a herd in an hour for each milking, all seasons and conditions considered, much closer than by any gravity process yet brought out that I know of."

In answer to a dairyman who had been using a deep-setting arrangement, C. P. Goodrich replied: "It will pay you to get a hand separator, but I would advise you to get one with power attachment, for, although you can turn it by hand,—as it does not turn hard,—yet it takes time, and time is money nowadays, and you will be sure to use a power before a great while. A light tread power, run by any animal of 400 or 500 pounds weight, will answer the purpose.

"How much more butter you will get by its use than by your present system, of course I cannot tell, but I *know* you will get some more. I have tested with the Babcock tester hundreds of samples of skim-milk both in my dairy and in different parts of the State. Under the most favorable circumstances in summer, with the milk of fresh cows, set immediately after milking, in ice water, there is at least ¼ of 1 per cent left, and this winter, I have found .4 to .8 of 1 per cent., and where it had been set in cold air instead of water, and unskillful skimming had been done, very much more had been left. I think it safe to say, that with the use of the separator, you will save at least 20 pounds of butter per cow a year, giving as they do 2000 or more quarts each, which, at 25 cents per pound, would, in a year, pay for the separator; besides, if you run it by a tread power, you would save some labor."

It is interesting to note that the writer of the above uses his bull to run his hand separator.—Ed.]

How to Make Good Skim Milk Calves.

This is one of the most important propositions in dairy economy. The Iowa Experiment Station has been making some interesting trials along this line which are detailed in a late *Bulletin* as follows:

Farmers are aware that there are two critical periods in the life of the calf. The first four months when it requires care to carry it, by judicious feeding, to the point where it will develop on the common fare of the farm. All farmers know that a weaned calf loses condition rapidly if it is forgotton and turned upon pasture.

We made this trial with two thoroughbred Shorthorn calves—a heifer, No. 227, 64 days old, that weighed 179 pounds; a bull, No. 229, 45 days old, that weighed 158 pounds.

Two Holstein—a high grade heifer, No. 34, 33 days old, that weighed 151 pounds; a thoroughbred bull, No. 173, 53 days old, that weighed 200 pounds.

All were in good condition for growth. They were fed under trial three months in periods of 15 days each. The milk fed was taken from three special cows. It was thoroughly mixed and divided into equal portions. One-half was given to the Shorthorn bull, No. 229, and to the Holstein bull, No. 173, in equal parts, and the other half was set 12 hours for creaming, when all the cream was skimmed off and the milk warmed and fed to the heifers at the temperature of the new milk. The new milk and skim milk were sampled each day before feeding, and analyzed by the chemist in five day composite samples and a record kept of the analysis. We had flax ground and analyzed, so as to ascertain as near as possible the amount necessary to feed with the skim milk to replace the fat taken away in the cream.

The whole milk calves had seventeen and one-half pounds per day of fresh milk, and the skim milk calves had 16 pounds per day of milk skimmed after 12 hours setting. The whole milk feed during the period contained 9.24 pounds of fat, and the skim milk contained 2.76 pounds. To the skim milk was added one and one-half pounds of ground flaxseed per day, that by analysis showed 35 per cent fat or 7.87 pounds of vegetable fat in the 22 and a half pounds of the flaxseed meal fed during the period, thus making a total of 10.73 pounds of fat fed to the calves on skim milk and 9.24 pounds fed to those on whole milk. Owing to a variation of the butter fat in the milk fresh from the cows and also in the milk after setting, it was impossible to fix rations that would contain uniformly equal amounts of fat. One and a half pounds per day of the flaxseed meal was found to be about all that the calves could take without scouring, and sufficient to replace as much, or more, of the butter fat as was taken out by skimming. Analysis showed that the solids aside from fat contained by the skimmed and unskimmed milk were practically the same; and that the ground flaxseed contained 35 per cent fat and 24 45 per cent crude protein, hence some albuminoids as well as fat are added.

RESULTS.

These are stated as follows:

1. The experiment indicates that a ration of skim milk and ground flaxseed compares favorably with a new milk ration for young calves.

2. The larger gain came from the whole milk, but a part of it was probably due to the individuality of the calves, and good results and a thrifty growth were made on skim milk and ground flaxseed.

3. The skim milk calves were interrupted less in their growth by weaning than the whole milk calves.

4. A saving in value of butter fat alone of $1.11 per month on each calf was effected by substituting the ground flaxseed.

5. The cost of producing a pound of gain (estimating new milk at 87 and a half cents per hundred pounds, and skim milk at 15 cents per hundred pounds; grain one cent per pound, hay $5 per ton, and flaxseed meal three and a half cents per pound) was 76 cents for the fresh milk ration and five cents for the skim milk ration.

How to best and most economically develop the calf during the first six months of its life and fit it for the greatest usefulness as a breeding or feeding animal, is one of the difficult problems that confronts the farmer and stock raiser. The power of the average well developed calf of six months and upward to convert grass and grain into dollars and cents is well known. Until the age of four months is reached, however, the milk of the dam is superior to any other food, but in this experiment good results have been obtained from a more economical ration.

The Stable.

Items about Horses.

The British Government is trying to find some way of improving the breed of horses in Ireland.

Rats eat horses' hoofs. Sometimes lameness is caused by the attacks of these vicious rodents. A layer of tar on the hoofs will keep them away.

The Shire horse importers of America are up in arms against the late ruling of the Treasury Department requiring so many crosses to secure the entry of imported stallions free of duty. They consider the ruling unjust and unbusinesslike.

The breeder who carefully and correctly mates his animals, with reference not only to individual qualities, but with reference to known characteristics, will, in the majority of cases, be more successful than the hap-hazard, happy-go-lucky breeder who pays no attention to blood lines, but unites his sires and dams only with reference to individual qualities.

Breeders who cannot afford to buy high-priced stock can console themselves with the reflection that the dams of many of the fastest horses in the world have been low-priced mares. Oliver K. was sold with his dam for $150; Jack's dam sold for $75; McDoel's for $140; Allerton's for $200; Axtell's dam cost $150, and the list might be continued up in the hundreds.

C. W. Williams of Independence, Iowa, owner of Allerton, recently issued a challenge to trot Allerton against any stallion in the world a race of mile heats, three in five, in harness, at the trotting meeting to be held at Independence in August, for a purse of $10,000. Budd Doble, in last month, accepted the challenge on behalf of Axtell, providing the entire purse of $10,000 should go to the winner, to which Williams assented.

Up to the time that Mr. Robert Bonner purchased Dexter and retired him to his private stable, no horse had ever appeared that could give him a race. He was truly king. He was as much superior to any trotter then as Arion was superior to any two-year-old in 1891. Great as were other sons and daughters of Hambletonian, it was but play for him to beat them. He retired with a record of 2:17¼. What his real capacity was will never be known, but no horseman familiar with the trotting of that day and the ease with which he then did his work, believes that under present improvements in tracks and appliances he would have fallen much, if any, short of the best that has been accomplished to date. Many a regret was expressed that Dexter was a gelding, and had he been entire he could have gone into the stud and commanded his own price to unlimited patronage, but those who wanted the blood had to turn to his full brother Dictator, also a horse of excellent conformation and quality, but with nothing like the speed and personality of Dexter.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FRUIT AND GRAIN.—Haywards *Journal:* The heavy rains were a glorious thing for both grain and fruit trees, though of course it has caused some damage to certain kinds of fruit, but the trees needed just such a nourishment as well as the grain. The promise for a large yield in this valley is now assured; never before have we seen such a bright grain outlook. The rain has naturally done some damage to fruit, but, as near as we can learn, it will not be half as bad as reported. Beyond damage done to Black Tartarians, no uneasiness is felt regarding other kinds. The almonds are not injured, nor the plum or prune crop, as far as we can learn, and apricots are all right.

Amador.

GROWING STRAWBERRIES IN BARRELS.—Jackson *Ledger*: Dr. Norman of Plymouth has a strawberry garden in the shape of a barrel. It is made by boring holes around the barrel, say 100 in all, from the bottom up; then put in dirt, and fill up to the first row of holes. Then stick the plant in the hole and fill dirt over and up to the next row, and so on, until you fill the barrel with dirt, and around the outer side, the strawberries. By this method, the plants are free from weeds, and make a nice ornament.

Butte.

THE MOST PROFITABLE ORANGE.—Oroville *Register:* Hon. John M. Ward some 20 years ago purchased a dozen or more orange trees and planted them around his residence in Oroville. He trimmed the trees up so as to make them look attractive. One Mediterranean Sweet tree he did not touch with a knife, but simply kept the suckers broken off. This tree bore 500 oranges before either of his other trees bore a single one, yet all had the same care. He has two trees of this variety that are 20 years old, and a number of Navels that are 10 years old. He is convinced that his Mediterranean Sweets of the same age will bear ten times as many oranges as the Navels. He and Mr. St. Sure own an orchard together just below town. In this 50 orange trees were set in shallow holes, about 20 inches deep. Two years later, 150 additional trees were planted, but the holes were dug fully four feet deep. He says that the last lot of trees have made a remarkably strong and vigorous growth, much more so than the other trees, and that they require less water. He is positive that planters here make a mistake in digging shallow holes, for the trees will not do well unless irrigated about three times a month, while those planted in deep holes require but two or three irrigations during the summer.

Colusa.

CROP PROSPECTS NEVER BETTER.—Colusa *Sun:* It has cleared off with a small frost and without high water, and everything is lovely. The only setback coming with the late storm was the hail. The hail beat the wheat down, but we are inclined to think it did no material damage. The only thing now is that some wheat will fall, but with improved machinery now in use nearly all that grows will be saved. It will now require rust, or something out of the ordinary weather, to prevent a very large grain crop, and on all sorts of land. It is safe to say that the Sacramento valley has never had as fine a prospect, even including 1880, taking all kinds of land into the account. It is too soon to make a guess at the fruit crop, but it, too, ought to be good.

Contra Costa.

GRAPE GROWERS ORGANIZE.—Martinez *Democrat:* A meeting of the grape growers of Martinez and vicinity was held at the Opera House on Saturday afternoon last, about 25 being present. L. C. Wittenmyer was elected Chairman and A. A. Bailey Sec'y. G. Magliavacca, the well-known winery man of Napa, was present. He presented a blank contract for the consideration of the grape growers, in which he agreed to purchase all wine grapes of the first crop containing not less than 22 per cent of sugar, to be delivered at his office in Martinez, and agreed to give bonds for the fulfilling of the contract, the sellers to give bonds also for the deliverance of grapes. The following prices were offered by Mr. Migliavacca, the sellers to furnish their own boxes:

Variety.	Per ton.	Variety.	Per ton.
Zinfandel	$10	Burger	$ 7
Black Malvoisie	8	Mission	7
Burgundy	11	Matero	9
Gray Riesling	8	Grosse Blanc	9
Sauvignon Vert	8	Cabernet	11
Grenache	11	Rose of Peru	7
Chasselas	8		

Mr. Migliavacca offered to establish a winery in Martinez if the grape growers would guarantee to furnish 2000 tons of grapes for his use, and then he amended it to 1500 tons, but would have to receive an assurance of getting that amount of grapes annually.

El Dorado.

APPLE PLANTING.—Blair's District Cor. Placerville *Democrat:* Mr. Turner and Surveyor Austin of Placerville were here three days last week surveying the property the former has purchased from John Dench. Mr. Turner intends to set out 1200 apple and pear trees within the next year.

Lassen.

WOOL NOTES.—Amedee *Geyser*: Ninety-six thousand pounds of wool were shipped from Amedee last week. This is from one herd only, that of P. Flannagan. Two more bands remain to await the skill of the 20 shearers now at work. These bands contain 25,000, and will make speedy shipments a necessity.

THE APPLE SHIPMENTS.—Lassen *Advocate:* W. M. McClelland says that, in his opinion, it is safe to say that 20,000 boxes of Honey Lake apples have been shipped from this valley to the lower country—Sacramento San Francisco and Los Angeles—the past season. He places the average selling price of these apples at $1 per box of 50 lbs. It would, doubtless, be fair to figure a profit of at least one-half to the grower, so it seems our apple men—and they are few in number—have done fairly well this season. A little more care for the trees, better systems of grading, culling and packing, and there is no reason why they should not do better from year to year hereafter.

Fresno.

CROP PROSPECTS.—Fresno *Expositor:* The outlook for grain in this county has seldom been more promising than it is now. There has been only one really heavy rain, but there have been numerous light ones, scattered through the season in just the right proportion. The acreage is large, the stand on the ground excellent, there being but few bare patches of ground to be seen. In the orchards, there is a fine prospect for fruit. The orchardists say that the trees never before have been so laden with bloom and with young fruit well set on the twigs as they are this year. Of course all the orchards are yet young and they are more able to produce a large crop this year than they ever were before. It is to be observed on all sides that unusual care is taken this spring with the cultivation of the young orchards. They are plowed and tended with much industry, and the grass is kept out of the land. They show the effect, and the good results of this system of care will be seen more fully by and by when the fruit is matured. The orchardists realize the fact that if they keep the good hold they have on the markets, they must also keep their fruit up to the highest standard. This they are doing, first by careful cultivation, and afterward they will do it by a system of grading the fruit, both before and after it is cured. In those sorts which are for canning purposes, the same care will be shown and the same endeavor put forth to maintain a high standard. It is learned upon inquiry that the acreage of vineyards set out this year is very far short of that of last year. The unsatisfactory condition of prices of last season is given as the reason for it. The people who had vacant land were uncertain as to the wisdom of putting it in vineyard, and so they preferred to wait another year to see what developments might be brought about. Those who did plant vines showed a marked preference for some of the seedless varieties, usually the Sultana or the Thompson. A strong belief prevails that they will command a better price, and therefore will be the more profitable.

Los Angeles.

DUARTE'S ORANGE CROP.—L. A. *Express:* About 120 cars of oranges will be Duarte's proportion of the shipment from Southern California this season. Prices range from $1.75 to $2 a box on the trees. A considerable quantity of culls are being crushed for seed, which sells for $3 to $3.25 a gallon to growers of nursery stock.

Nevada.

PLANTING TREES.—Grass Valley *Telegraph:* Down on the Bonanza ranch, which skirts the counties of Nevada and Yuba, there is an immense business going on in the way of tree-planting. There are about 60 men employed in laying out and improving the grounds on the Bonanza ranch, and thousands of trees, mostly peach, will be put in the ground. There is no more favored region anywhere than that vale in the foothills.

Orange.

PARADISE FOR VEGETABLES.—Anaheim *Gazette:* Those of the people of this county who have planted potatoes this season, and who will be able to market them early, have already a big bonanza on their hands. Potatoes will be a cash article in the Eastern market this spring, and will bring most satisfactory prices. The crop will be moving by the middle of April, and from that time on should be rushed to market with all possible speed. The Santa Fe the other day sent out 35 cars of vegetables and oranges to the East direct, in three special trains, and is now preparing to send out special trainloads of potatoes as soon as the crop is ready to move. We have in this valley positively the very best vegetable country that lies outdoors. We have tomatoes, green peas, string beans, asparagus, squash, cauliflower and the long list of other vegetable delicacies almost the year round. And we can get them to market as early as any section of the State, and there is big money in them. This is indeed the vegetable paradise, and our people should turn their advantages into coin. It can be done by raising early vegetables for the Eastern market.

THE RED-SCALE PARASITE.—*Gazette:* Mr. Perry has received the following letter from Prof. Coquillett in reference to the newly imported red-scale parasite. We have not a particle of doubt that after this season's fumigation, these new parasites will be able to effectually do away with the scale. Prof. Coquillett's letter reads: "Los Angeles, March 29, 1882. Dear Sir—You may be interested to learn that I have succeeded in colonizing the blue lady-bird received from the agent in Australia. A few days ago I found several of its larvæ on an orange tree in the open air where I had placed some of the beetles on the 24th of January. One of the larvæ was feeding upon a red scale. It acts very much like the larvæ of the twice-stabbed lady-bird, being rather sluggish in its movements. I am not yet prepared to say whether or not these larvæ will be able to free our trees of the red scale. In the meantime, I thought you might be interested to learn of their successful colonization among us. Yours very truly, D. W. Coquillett."

CROPS ASSURED.—*Gazette:* The rain comes just in the nick of time. The grain needs it badly. Within a radius of five miles from Anaheim there are thousands upon thousands of acres in grain. In La Habra valley there is a tract of some two thousand acres seeded to grain. It is all new land, never having been plowed before, and with this rain it will make splendid crops. Without the rain, much of it would hardly have made hay. And the same is true of grain throughout this valley. With this rain, good crops are assured.

Santa Barbara.

THIRTY-SEVENTH DISTRICT FAIR.—*Times:* At a meeting of the Directors of the 37th Agricultural District, held at Los Alamos on Monday last, it was decided to hold the next District Fair at Lompoc on the last four days of September next. The fair will open on Tuesday. This gives everybody from this end of the district a chance to get there on Monday, make their entries and other preparations, and be ready to assist in opening a full-fledged fair on Tuesday morning, which will, if properly managed, far outstrip any fair ever before held in this county.

CROP PROSPECTS ON THE MESA.—Santa Maria *Times:* A *Times* representative took a drive on to the South Side mesas during the past week, and was surprised to see all kinds of vegetation so far advanced. Grain, grasses and fruit are two to four weeks ahead of what they were at this time last year. Early settlers found it very difficult to grow fruit trees at all, owing to bleak conditions. All this has changed and eucalyptus trees did it. We need all the trees we have for windbrakes, shade and shelter. They have assisted materially in increasing our average rainfall and have added more to the attractions of our valley than all other improvements combined. They have already paid well for the land occupied. Our orchards are coming on and rapidly changing general appearances, but they can never take the place of our tall evergreen gum trees. We need more of them. There are several different varieties of gums, all hardy, rapid growers, and some of them are very beautiful in foliage and flower.

Sonoma

FRUIT PROSPECTS.—Santa Rosa, April 2: TO THE EDITOR:—Another wet April seems to be at hand. It is feared that the fruit blossoms may have been chilled by cold and drop off; at least one-half can be spared and then we will have plenty left. Nearly all the fruit trees in this section have been sprayed with lime, salt and sulphur, and now, in their full bloom, present as white, pure and spotless attire as the lilies of the field. The RURAL continues to make its weekly visit like a beam of sunshine, cheering the hearts of its readers alike in fair or stormy weather. May it still cheer us on in the years to come is the hearty wish of the writer.—A. T. DAVIDSON.

Sutter.

ACTUAL TEST OF PLOWING BY STEAM.—Yuba City *Farmer:* Henry Best is getting his steam-plowing outfit ready for work, and will begin this week. The engine draws 12 ten-inch plows and does good work. During winter plowing, over 40 acres per day were plowed with the engine drawing 16 plows. Bray Bros. of Southeast Sutter and Trayner Bros. at North Butte are also running similar outfits this spring.

Tulare.

THE FRUIT CROP.—Visalia *Times:* The prospect of a big yield of the fruit trees in our Visalia district was never better. The apricot, which in the Hanford and Tulare district will be only about one-third of a crop, will be a full crop here. Peaches are promising all over the county. Visalians will have to thin this fruit on their trees. To us, these continuous yields year after year seem to be regarded as a matter of course, but to an outsider they would be regarded as phenomenal, and by many doubting Thomases as exaggerated statement. We invite the doubting ones to make a personal inspection of our orchards; they too will then believe the facts as we know them to exist. Our prune crop bids fair to be immense; just simply wonderful. Even our one-year-old trees will have some fruit on, and he who has pruned his orchard properly will have a crop on his three-year-old trees that will surprise the nations. The pear crop is also good. In the early part of the blossoming season, some few orchards were bothered with the aphis louse, but the cool weather played havoc with that pest, and, as he can't hurt anything but only the most tender foliage, I think we are done with him for this year. The cutworm has been a nuisance in some places, but he too seems to have taken his departure, although it is cool weather that suits him. He may show up again when the sun does not shine too hot. He is a night worker, and the remedy is to catch and kill him.

NOVEL WAY OF LIFTING WATER.—Reedley *Exponent:* W. P. Musaus and Will Love have built a novel concern for lifting water from an irrigating canal on to high ground. In the ditch they have constructed a large water wheel 16 feet long by 9½ feet in diameter, at both ends of which there are attached tin buckets made from five-gallon oil cans. As the wheel turns the buckets dip up the water and empty it into a box or flume, from which it is conveyed to the land. The water is raised five feet, and the wheel is so supported by a frame that it can be raised or lowered as the occasion may require.

TREE AND VINE PLANTING.—Hanford *Journal:* The planting out of the 200-acre Sunset vineyard was completed on March 28th by the 40 or more men who have been employed thereon for the past seven days under the superintendency of F. T. Bush. The gang had previously been at work replanting on the Peerless and Grangeville vineyards, and putting in half a section of prunes, peach and almond trees and Thompson's and Sultana seedless vines for the Armona Orchard and Vineyard Co.

Yolo.

FRUIT GROWERS ORGANIZE.—Woodland *Democrat:* A number of prominent fruit growers of Yolo county assembled in the office of the Town Clerk April 2d, for the purpose of effecting a local organization. C. C. Agee, of Dixon, was present, and explained the plan of the proposed organization of the State Fruit Producers' and Growers' Cooperative Association. On motion of Dr. Ross, it was voted that the fruit growers organize. J. Y. Dillon was called to preside, and Prof. Grant was appointed Secretary. Dr. Ross explained the advantages to be derived from such an organization. He moved that each fruit grower subscribe for one share of stock in the State Fruit Growers' Association for each acre of fruit he has in bearing. The motion prevailed unanimously. The President was authorized to appoint a committee of three to solicit subscriptions. H. C. Howard, Ed. Gallup and David Wyckoff were appointed.

Yuba.

STEAM-PLOWING.—Yuba City *Farmer:* The new steam traction engine of Geo. Walton has been at work below Marysville on that gentleman's farm, and is doing good work drawing a number of gang plows. The rain put a stop to the plowing for a few days, but it will be resumed.

OREGON.

RAISING PHEASANTS.—Salem *Statesman:* Mongolian pheasants' eggs can be found by the thousands in Benton county between now and next July, and any old setting hen can raise a brood of a dozen like a daisy. The young birds are delicate and very shy, but with proper enclosures and attention they can be raised successfully. They are in great demand, at a fair price, all over America for breeding purposes. The rod and gun club of Union received five pair from Linn county a short time ago, for which they paid $15 a pair and expressage amounting to $4, making a total of $79 for ten birds.

BIRDS DESTROYING THE WOOLLY APHIS.—Eugene *Register:* There is a little bird in the valley that destroys the woolly aphis, and a discussion is going on as to whether it is the English sparrow or the green finch. No matter what it is, if it destroys the woolly aphis let it work.

NEVADA.

BIG IRRIGATION PROJECT.—Truckee *Republican:* The big irrigation canal calculated to inestimably benefit Nevada State, is an assured success. Frank G. Newlands and others are at the head of the project. It is proposed to take the water from the Truckee river at a point near Cuba, Nevada county, and to carry it a maximum distance of 60 miles, irrigating 75,000 acres of land in Lemmon, Long, Prosser, Spanish and other sagebrush valleys. The promoters already own ample reservoir sites and water rights, and it is calculated that from $500,000 to $1,000,000 will build the canal, which is to be 20 feet wide and 4 feet deep, carrying 21,000 inches of water. Considerable fluming would be necessary. The canal could also be used for floating lumber.

Kentuckians are eminently a sporting people, as their ancestors in Virginia were before them. In looking over the early history of Kentucky we find that as far back as 1775, before there was a turnpike road, a brick house or a factory of any kind, they had made a race track at Shallow Ford station, and one morning while a jockey was exercising a horse an Indian crept up in the cane and shot him dead on his horse. In the same year a legislative body was elected to frame certain laws for the country which was then a part of Virginia, and this legislature, the first ever held in Kentucky, passed nine acts, the eighth act was for preserving the breed of horses and the ninth was for the preservation of game.

Whether the Electioneers are race horses, or whether they are not, the prices brought for Baby McKee, Worth, Election Bell, and Palo Alto Belle at the recent auction sales show most conclusively that wealthy horsemen believe that they are likely to race a little. The aggregate amount for the four mentioned was $69,600, an average of $17,400. With the numerous new trotting associations daily being organized throughout the country, and the increasing demand for this class of horses in foreign lands, it looks as if the demand will exceed the supply. Every day, reports of sales of American trotters to foreign parties are made.

One branch of the Virginia Legislature has passed a bill authorizing or directing the appointment of women physicians on the staff of all insane hospitals where women are among the patients. This is a humane and sensible measure, which has been adopted in several other States.

Fruit Preservation.

Experiments Wanted in Cooking Dried Fruit.

To the Editor:—Intensified farming is the cornerstone of progress in California. To dispose of the products of such farming profitably, is perhaps the most important problem we have now to consider. It is a vital matter that transportation be as rapid, economical and careful as possible, but we must not concentrate our attention upon the cost of transportation so closely as to ignore all other factors in the problem of producing something that a good customer wants, and getting it to him in proper condition at reasonable cost.

Every year it becomes more apparent that the principal outlet for our fruits must be in the dried form. In that shape, we can put on the table of the English laborer, peaches for himself and wife, a supper for a penny. On that basis, he can afford them as a daily luxury. That means that we can feed the millions. But obstacles stand in the way. When the fruit is shipped round the Horn, peaches acquire a rusty flavor and cease to be luxuries. Again, English people are very tenacious of custom, and have been in the habit of using jams already prepared for the table and want to buy something that will relieve them from the cost and trouble of a fire and cooking.

As Pres. Huntington is so anxious, as his late interview in the *Examiner* shows, to promote the industries of California, and thinks of establishing a line of steamers to connect at New Orleans with the Liverpool market, he may be able to carry by that route and deliver them in good condition. At any rate, we may expect good service upon the completion of the Nicaragua Canal.

With that point gained we would be helpless unless we can contrive some means to get the people to use the fruit, and the regular trade in this country and much more in England will never take an extra step or waste a word to deal in anything that their customers do not call for. We must contrive to send the consumers to the dealers on the same principle that the manufacturers of the ivory soap hired agents and watched them to see that they gave a cake to each housekeeper in San Francisco. The soap might have been the best in the world, and stood in the boxes in the warehouse until they rotted and the building tumbled down upon them, unless some way had been planned to make the goods known. As it was, it cost more than $10,000 to distribute those samples over San Francisco, but they have created a steady demand for soap in carload lots. *It paid!*

Now, it has been pretty generally settled by those who have paid most attention to the matter, that we want to reach the English market with our dried fruits, but the people are not inquiring for them at their shops. It is a good time for us to discuss means of bringing this about and to start the ball rolling. Suppose we introduce

A NEW SYSTEM.

Let us try different methods of soaking and cooking dried fruit at our homes. Whenever we think we have it right, send a few jars of the fruit prepared for the table and sealed with a sample of the dried fruit from which it was prepared, accompanied by the recipe, to some such public place as the State Board of Trade, where it will meet the attention of producers, consumers and dealers who will make their suggestions. We name the State Board of Trade because its manager has shown a leading interest in movements already started in this direction, and would be most likely to digest the information thus derived and publish it in such shape that packers of dried fruit could send the recipe on a printed slip with every package of fruit they sent out next fall. Then, if the English people must have their fruit ready for the table, suggest to the grocer that he fix up his back room so that he can prepare as much fruit as he can sell for a week or two at a time, put it up in some of the jars he has for sale, and display it all ready for the table on his shelves. Perhaps it would be well to send him in each box a show card calling attention to the excellence and economy of the goods. It would not be much trouble to open such a jar, so that the customers could get a taste and find how much difference cooking makes with dried fruit.

The jars could be returned to be used over time and again. There is no store where there is not some one who has a few spare hours every week, and with explicit directions and proper conveniences, almost anybody could be instructed so as to put up quite a quantity of dried fruit in this way in a short time. Probably the inferior grades could be run through a colander when cooked and sold in the form of marmalades or jams, and the better grades could be soaked out to look almost as well as canned fruit. After reading the above, the silurian will say: "Visionary talk! Looks well enough on paper, but we can't afford to educate the masses. We will do our business through the regular channels of trade."

Yes, you farm along the river bank and the stream runs in its old channels, while your crops keep failing and your mortgage increasing. By and by the sheriff sells off a piece of your farm. Some one puts in a dam, strikes out some new channels, runs the water over the land and gets rich. In like manner, almost every fortune that you ever heard of was made by striking out new channels in some direction. We are so situated that continued prosperity depends upon seeking new channels by united effort. In the first place, the value of our land depends upon its net proceeds, and again the prosperity of almost every branch of business depends upon the prosperity of the farmer. Frank S. Chapin.

An Advocate of Natural Color.

Tracy, March 20, 1892.

To the Editor.—The articles in the Rural of the 19th on sulphuring fruits for drying, prompt me to say a few words. I am glad to see the subject discussed, hoping it will bring about some change.

When white dried apples first came into use we bought them, but I soon discovered that the fruit flavor was gone, though they looked very nice. As my family was fond of fruit I searched the market for dark-colored sun-dried fruit but finally found it difficult to obtain any; the trade not deeming it best to handle it, because so many persons buy for the looks, regardless of taste.

In 1881 I had in Shasta Co. a lot of fine ripe peaches, which I dried in the sun. It was my first experience in drying fruit, and just as I was nearly through a gentleman hapened in the orchard who had had experience, and he remarked, "why, you know nothing about drying fruit, see how dark your fruit is; it is too ripe. You should dry it just as soon as you can break it from the pit and it will be much whiter and sell better." But I put it up in good shape and sent a number of sacks to the city to be sold. Time passed and no account of sales came. So in 1882 I commenced drying just as soon as it would break from the pits. I got a much lighter colored fruit but at the expense of the flavor; so in the fall I moved back to this county and shipped all my new crop to the city, and told them to ship the old fruit to me at Tracy. When it came I loaded it into my wagon and started out among my neighbors, and soon had disposed of all, after reserving a good supply for the family.

I think likely some bought to accomodate me, but soon after when I met my neighbors, the querry would be, "have you any more of those dried peaches, they were the best I ever saw?"

If I was drying fruit for my own family now, I should pick it just when it was nice and ripe, dry it in the sun without bleaching. My experience the last year has been as follows: We bought last fall eight lbs. of apricots which looked beautiful, but when cooked, after a meal or two they would stand untouched either by the family or the hired men. The result was that these eight pounds was the extent of our supply of dried fruit for the last seven months, except dried grapes and prunes and probably from five to eight lbs. of peaches. The trouble is there is so little unbleached fruit in the market that we cannot find it when we want it. J. M. Kerlinger.

California Dried Fruits in Cambridge, England.

To the Editor: I send you a part of a letter from a brother in England, with a line or two on our dried fruits that may interest your readers, as it speaks from a thoroughly English point of taste. Edw. Berwick.

"I have meant in the last three or four letters to tell you about the dried fruits that have come into the English market from California. The apricots are the coming success, and the dried peaches have been turned out of the lists because no one cares for them; so that if you are planting at Lodi fruits for drying, *apricots* are the friend, not peaches. The apricots sell at the stores in London at 8d a pound; at the retail shops here 1s a pound. They are well worth 8d, as half a pound, when really well soaked and well cooked, makes a pie that will go round our family of nine souls, and we can't buy fresh apples to do that. The dried apples sell at 6d a pound (the rings), and we have found them very useful in spring before rhubarb comes in, for many years, but I don't know whether they are produced in California or not. The dried apricots can give the canned ones fits, as far as flavor is concerned. Cases of California pears, I see, are quoted regularly now in the Covent Garden market list at 12s to 20s a case, London, whatever size that means."

Queries and Replies.

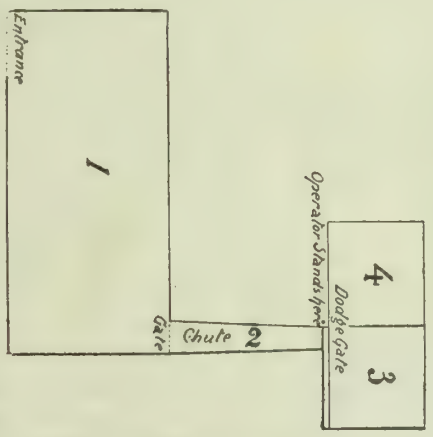
Tulare County Hog-Ringing Devices.

Visalia, March 28, 1892.

To the Editor:—I have read the inquiry of Mr. H. E. Dye of Tulare for the best method of ringing hogs, in your paper of Feb. 13th, also the answer of Mr. C. M. West in the Rural of 26th inst.

I thought almost every hog raiser of Tulare Co. was familiar with the mode of ringing hogs by the use of a frame or lever attached to a chute and dodge-gate in corrals. As I have been a hog raiser for 15 years, and used this apparatus for 12 years continuously, I think I am prepared to say it is the most convenient means of handling hogs. My little son has made a drawing in his way, of the apparatus, which I enclose.

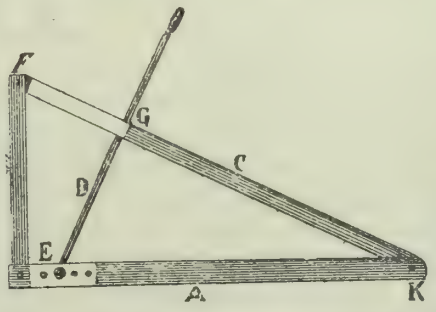
The arrangement consists of a piece of



Corrals and Chute for Hog Ringing.

timber, 2x6, eight feet long, for a sill, marked *A* in the drawing; with a post, 4x4, three feet high, mortised into the sill at *I*; then two braces, *C*, *C*, extending from the top of the post at *F* to the other end of the sill *K*, which should be 2x4, edge up to give strength. Now place the lever *D* in the slot in the sill near *I*, pass a half-inch bolt through the sill and lower end of lever; the upper end of lever passing between the braces *C*, *C*. A bolt should be put through the sill at *L* and *K* and the upper end of post *F*.

The sill should be buried in the ground crosswise the end of the chute at *H*, *H*, as



Lever for Holding Hogs for Ringing.

shown in the diagram of the corrals; the post placed where the operator stands, which leaves the opening between the post and the lever at *E* for the hogs to pass from the chute through the opening *E* to the dodge-gate into the smaller corrals. As the hogs pass through the opening at *E*, the operator draws the lever *D* quickly from *G* to *F*, which catches the hog behind the ear and before the shoulder, holding him tight. Now the man with rings and ringers stands in the dodge-gate in front of the hog, inserts his ring, steps to one side to allow the hog to pass out, while the man with the lever slacks his lever and at the same time reaches over into the chute and slaps the hog with the other hand, when he will jump through the opening at *E*, and another will run in, to be caught instantly in the same way.

Three men can ring 100 to 150 per hour without taking hold of a single hog, after they learn to use the lever properly. The hogs should pass from the large corral 1 to the chute 2; thence to the small corrals 3 or 4, as may be desired, by using the dodge-gate. W. G. Pennebaker.

Cattle to Break Prunings.

Tulare, Cal., March, 15, 1892.

To the Editor:—Perhaps a year ago, in some paper, I saw some one express a wish for a machine to be invented to chop off grape vine prunings. I thought I would see if I couldn't make my cattle do that job. My intention was to pile the vines in the pasture, and when they got dry and brittle to occasionally throw some hay on them to induce the cattle to trample over and break them up. I piled them in a high pile, and without the hay the cattle were soon on top, and by fall the brush was broken up short and nice to go in a chip bucket.

I had a hundred head of cattle to do it, still I believe one cow, if hay was used on the pile, would break up several acres of brush, and thus I believe all tree trimmings can be converted into nice light fuel. The larger pieces will not break, but will be easily chopped up after all the small limbs are broken off.—H. E. Dye.

This experience may be useful, or at least suggestive. What was wanted was a machine which would cut up the prunings so fine that they could be used as a fertilizer, plowed into the orchard or vineyard, and thus restore to the soil some of the fertility taken from it by the growth of the wood. If the prunings can be thus cut up finely, they might be used on heavy soil in regions of heavy rainfall, but probably on loose soils they would do more harm than good. The subject is still commended to our readers.—Ed. Press.

A Leaking Cistern.

Los Gatos, March 22, 1892.

To the Editor:—Last year I had a cistern built of stone and Portland cement—the inside well plastered with the cement to cover the stone. Under a pressure of over five feet, the water seeps through. I was told if I would wash the surface with cement the thickness of cream it would stop the seepage. I applied two coats of wash, which adhered thoroughly well, but the water still oozes out. Now, I wish readers of the Rural Press who have had experience with cisterns would tell me what to do to make the cistern proof against loss of water by seepage. Please answer through the Press columns, that others, as well as myself, may be benefited thereby.—S. H. Herring.

California Beet Sugar.

Los Angeles, March 25, 1892.

To the Editor:—An article on the sugar beet in the N. Y. *Independent* of Jan. 28, 1892, contains an analysis of the beet grown in numerous localities in the United States, but no mention is made of California's interest in the industry. Can it be that the sugar beet business of this State is so insignificant in comparison with that of other States as to be unworthy of notice in a general statement covering analyses of samples from a dozen other sections?—J. F.

We did not see the article referred to. The beet sugar interest in California is the greatest in the United States. If the writer of the article did not state this, he either knew little of his subject or thought it best not to state all his knowledge. There are many sugar beet analyses available in the Reports of the University Experiment Station and elsewhere, or our beet sugar makers could have furnished hundreds of analyses if asked for them. California sugar beets are of exceptionally high sugar value, as any one knows who has any decent information on the subject.

What Shall Be Done with the Well?

Aptos, Santa Cruz Co.

To the Editor:—Kindly enlighten a subscriber on the following subject:

A well has been dug on my place four feet square and water was found at a depth of 60 feet in quicksand. A common wooden curb has been extended into this sand several feet, but I find the supply of water getting regularly lower, until about one foot of it remains. This has happened twice, and deepening the well a second time only results in plenty water for a short time. Shutting off the sand with a tight wooden curb evidently shuts off the water supply at the same time. Query:—What is to be done under the circumstances?—E. C. Willekes MacDonald.

Peanut Growing.

Visalia, Tulare Co.

To the Editor:—We have read with interest Mr. Boynton's article on peanuts. We would be pleased if Mr. B. would give us some information in regard to the mode of cultivation, the proper time to irrigate, and whether the bloom should be covered over every morning with loose dirt, as some parties contend, or will they bury themselves in the earth after the bloom falls off.—W. G. Pennebaker.

We would like to hear more about cultivation and irrigation of the peanut. It may be said at once, however, that the bloom does not have to be covered. This is a superannuated practice. The plant will do its own covering if the ground is loose.

The dairies of California are doing a rushing business just now. Fresh butter, yellow, rich and pure, is so cheap that no one need to buy or to eat oleomargarine.

The Home Circle.

The Measure of Our Days.

In all our walks, in all our ways,
Think not the measure of our days
Is gauged by figures and by rules,
As erst was taught us in the schools;
But, as we help a brother's needs
By noble acts and generous deeds,
By giving comfort where we may,
By lighting up a mourner's way;
The sum of means that we employ
To turn a fellow's ills to joy—
This is the measure of our days.

A veteran in the wars of life,
A prisoned soldier in the strife
Of soul with stingy, envious Time
Is he who makes his actions rhyme
To universal brotherhood.
Though long or short hath been his road,
Centuries or decades his abode
Among his kind, it matters least
So fellows by him have been blest.
His life is measured by his plan
Of dealing with his fellow man.
This is the measure of his days.

And much methinks of time he gains,
For all his labors, all his pains,
For reaching outward far and near
To succor want and shelter fear.
No stingy paddock hems him in,
To mean desires and groveling sin.
A widow's blessing him avails,
An orphan's prayer some good entails,
While stretching outward over man
He converse holds with Nature's plan,
And solving life's deep mysteries,
He grasps eternal verities,
This is the measure of his days. T. C. Rice.

A Soldier's Daughter.

"We cannot hold out much longer."

It was a man's voice in troubled accents that fell on the ears of a young girl, who stood with her shoulder leaning against a hut, within a small stockade in Southeastern Arizona.

Time, soon after the close of the Rebellion, when wars and rumors of wars were still floating in the air along the Mexican border.

"Is it, then, so bad as that, Captain Dashwood?" said Edith Searle, as she approached the stout figure in blue who stood near. "I thought we were in no immediate danger. You so stated this morning, and surely nothing has since occurred to change the situation."

"Ah, is that you, Miss Searle?" said the commandant of the little post. "I was not aware that anybody was within hearing distance. Forget what I said, Miss. We can only hope for the best. We may come out all right yet."

"But is there real danger, Captain?"

"Of course," hesitatingly. "We have never been free from that, and now—"

"And now?" she questioned eagerly, as he hesitated.

"The truth is, Miss Searle, I have just learned that the ammunition is low—almost out, in fact, and, you see, we cannot expect to do much without that."

Captain Dashwood's voice had a tremor in it that did not escape the notice of the young girl. She could see that the danger was even greater than he was willing to acknowledge.

"When the ammunition is exhausted the enemy will come in and take possession, Captain?"

"Certainly, unless something unforseen occurs."

"What is within the range of possibilities, Captain Dashwood?"

"Well, it is possible for Lieutenant Hargle to be on the road westward about this time, and he may take this trail instead of the one to the north. It is only a bare possibility, however, and I dare not entertain hope."

The captain was certainly cast down, as Miss Searle could see, and yet, somehow, the girl had not permitted fear to enter her heart up to this time. Miss Edith Searle was the daughter of a soldier, and had spent several years of her life in a Western fort with her parents. Her father was now dead, and her mother lived in an Eastern State. Edith was now visiting her uncle, Sewall Persons, who lived on a sheep ranch in the Southwest. Indian hostilities compelled the Persons family to seek safety at the nearest military post at Darkwood, where was a small detachment of soldiers under Captain Dashwood, a brave officer, who had seen service in the war for the Union.

On the afternoon of the day Mr. Persons, wife, niece and two sons found shelter behind the stockade at Darkwood, several hundred hostiles appeared and made an attack on the place. They were repulsed, with considerable loss to the savages, and the captain would have had little fear of holding the place against a long siege but for the fact that on the fourth day he made the alarming discovery that the ammunition was nearly exhausted. He was in a gloomy mood at the outlook, when Miss Searles addressed him on the morning in question.

"How far is it to Lieutenant Hargle's post, Captain Dashwood?" questioned the girl.

"Thirty miles."

"So near and yet so far," sighed she, with a pensive look in her dark eyes. "Captain, how would it do to send a messenger to the lieutenant informing him of our condition?"

A half smile raised the drooping moustache of the captain.

"That would do if circumstances permitted," returned he, "but they do not."

"I should think somebody might go—Sergeant Ingham, for instance."

A smile touched his lips at mention of the name of one who had made desperate love to Miss Searle since her advent at the fort. She had met him on several occasions, and quite a flirtation was under way at the time we write.

But the captain shook his head.

"I will not send any one," he said. "It would be certain death for a man to venture outside the stockade."

"Yet it is sure to be destruction to us all in any event," said Edith. "I think some one ought to volunteer to go for help. One might succeed in escaping the Indians; besides, what is one life compared to a hundred? I think I'll speak to the sergeant."

The captain said no more, and a short time later he saw Miss Searle in conversation with the sergeant. That her appeal did not move the young soldier the captain could see at a glance.

"You are a coward!" He heard these words as Miss Searle turned and left Sergeant Ingham, but Captain Dashwood considered the Sergeant prudent rather than cowardly. Young Ingham had proved his courage on many a hard-fought field, and the taunt flung at him by the soldier's daughter cut him to the quick.

"If she cared for me," he thought, "she would not ask me to sacrifice my life in this manner. If my superior should send me, of course I should go, but I will not be made the sacrifice of a girl's whim. It is by no means so desperate a case as the girl imagines."

The "case" was a desperate one, however, as the sergeant learned when he consulted with his captain a short time later.

"It is highly necessary that the siege should be raised, captain," said Sergeant Ingham, "and I would advise one of two things."

"I am ready to receive advice," returned the captain.

"We might make a sortie and perhaps rout the enemy," suggested the sergeant.

"I am fearful to attempt it. Some of the men are sick, and but twenty responded for duty this morning. We have two score women and children dependent on our protection, and it would never do to send our whole force against the enemy. What could ten or a dozen men do against a hundred concealed Indians and renegade Mexicans?"

"A serious outlook, surely," admitted the sergeant. "I see no other way only to send a messenger to-night in search of help."

"I will not ask one of my men to take so terrible a risk," declared Captain Dashwood.

"I am willing to take the risk, captain."

"You, Ingham? I thought ——"

"Never mind what you thought," interrupted Ingham. "I wou'd not allow myself to be influenced by the whim of a girl. I see the danger is real, and I will undertake to find aid for Darkwood to-night. I do not reckon the danger as great as do you, captain. I have a disguise that may aid me, and once beyond the enemy's line, on a fleet horse, I shall be safe."

After considerable discussion, Captain Dashwood consented to the plan outlined by his young friend, and shortly after midnight all plans were ready to be carried into effect. It was a moonlight night, and to cover the movements of the messenger, a sudden and furious fire was opened by the garrison on the position held by the enemy.

Meantime, Sergeant Ingham was not the only one astir on this summer night. Edith Searle, without consulting her uncle, resolved to brave the dangers outside, and seek aid for the beleaguered garrison.

She was an excellent horsewoman, and inherited the courage of her soldier father, and it was not a hard matter for her to resolve upon the course she had marked out. In the small hours of the night the besiegers would be wrapped in slumber, save those left to guard the camp. A quick dash on a fleet steed would quickly carry her beyond danger, and then, with the open prairie before her, she could easily elude the foe.

It was thus that the young girl resolved, and in furtherance of such thoughts she saddled her own fleet horse, and made every preparation for departure.

To get through the gate without discovery was the main trouble. Edith knew full well that she would not be permitted to go should her mad plans be discovered. It was fully two hours after midnight when she ventured to make the sally.

When she approached the man on duty at the gate, leading the horse, she was inwardly trembling for fear her mad project would now be nipped in the bud. What, then, was her astonishment to see the guard unfasten the gate and swing it quickly.

"Go quickly, and may Heaven aid you, Dick! Your disguise is complete."

A moment later the soldier's daughter found herself outside. The crash of guns from the little fort filled her ears as she sprang to the saddle.

"Now, Vim, go!" cried she, giving free rein to her horse.

Away they dashed, followed not a minute later by a horseman from the stockade. Inside of a minute the yells of savages filled the air, and the fire from the little fort was returned. This was on the opposite side, however, and Edith Searle was in the midst of the enemy before her presence was discovered. The fire from the little fort amazed the Indians and Mexicans so much, Edith dashed through their lines and reached the open prairie beyond without receiving a scratch.

Once here the girl tightened her rein, drew a long breath of relief, and galloped like the wind across the moonlit prairie.

She felt that the worst was over, and that she would have little difficulty in reaching Lieut. Hargle, thirty miles away. The morning air fanned her cheek and played with now and then a stray curl that fluttered about her face.

"It wasn't so dangerous after all," declared the girl, as she drew in long, sweet draughts of air. "Captain Dashwood isn't like the soldiers who trained under father, else he would have seen how easy it was to send out a messenger for help."

Even as the words fell from her lips a bullet whistled past her ear, reminding her of the fact that she was not yet out of danger.

Glancing backward, she saw three mounted men in hot pursuit. A thrill of alarm struck to her heart then, and she spoke to her horse, urging him to greater speed. A yell from the pursuers was borne faintly to her ears, assuring the girl that the Indians were satisfied with the situation.

It soon resolved itself into a race for life. Edith Searle was a soldier's daughter, however, and knowing full well she had a fleet steed, she believed she should be able to keep beyond reach of her pursuers, consequently, she did not feel terrified as another might under similar circumstances.

On over the vast stretch of plain raced the beautitul girl and her three dusky pursuers. Morning broke in the east, yet still the race kept up, with scarcely a change in the situation. Edith's horse was laboring heavily, however, and she feared he could not keep to the work much longer.

Occasionally, yells and shouts came from the rear, but the young girl rode on unharmed. This could not last. The end must come soon. The pursuers were now gaining perceptibly.

Edith glanced backward to note the fact that one of the Apaches was several rods in advance of his companions; in fact, he was rapidly gaining on her, and must soon come up, a fact that sent a chill over the young girl, who knew too well the merciless nature of the American savage.

"Ah! Heaven have mercy!"

Edith's horse reeled and fell prostrate, nearly crushing his rider, at which, demoniacal yells fell from the throats of the pursuing savages, who were now sure of their victim.

Poor Edith! The fall partially stunned her, yet she managed to release herself, and struggle to a standing position as the redmen dashed forward, brandishing their tomahawks in anticipation of the bloody work at hand. The girl had only a small pocket pistol with which to defend herself; this she drew and held in a trembling hand, determined to surrender only with death.

A strange thing then occurred. The Apache warrior in advance suddenly turned in his saddle facing his fellows, and began emptying a revolver in their faces. Once, twice, thrice he fired, and the next instant two riderless horses dashed over the plain. The foremost savage had saved the beautiful victim for himself alone, a fact that did not in the least mitigate the danger in which Edith Searle found herself.

The act of the Apache warrior in slaying his fellows did not reassure the young girl in the least. She held her pistol clutched tightly, resolved on selling her life dearly.

Just before reaching Miss Searle, the Indian drew rein and sprang from the saddle, walking swiftly forward. When within a few yards, Edith thrust forward her pistol suddenly and fired.

"Ah! I am shot!" cried the savage in good English, at the same time reeling and falling to the ground.

Edith trembled like a leaf in the wind. An awful weakness seemed to possess her limbs. What had she done? Slain a human being with her own hand! The thought was a terrible one. She dared not look at the prostrate Apache, but turned away.

"Edith!"

It was a faint yet startling voice calling her name. The girl turned and staggered to the side of the man on the ground.

"Edith, I meant to save you," said the man in a husky voice. The girl knelt quickly and peered into the painted face.

"My God!" she exclaimed, "it is Sergeant Ingham!"

She now understood the meaning of the shooting of the two Indians. The revulsion of feeling in Edith's bosom was great. She came near fainting outright. With the memory that she was a soldier's daughter she controlled her feeling, and bent her energies to aiding the wounded man. With her handkerchief she staunched the flow of blood from a wound in the Sergeant's breast.

There was a horrible fear upon her. If Sergeant Ingham died, she was a murderess. It was a terrible thought.

With desperate fear and hope, Edith Searle worked over the man she had shot, and in a little time he seemed better.

Glancing to the south, she saw a troop of horsemen, Indians perhaps. In any event, she should soon know the worst.

The horsemen proved to be the command of Lieut. Hargle. That officer was on his way westward, and had not thought of touching at Darkwood Post. Edith's news, of course, changed his plans.

Leaving two men with Sergeant Ingham, the lieutenant pushed on to the rescue. The siege of Darkwood was successfully raised, and when Sergeant Ingham recovered from his wound, he had won the consent of the soldier's daughter to be his wife.—J. McK. Merrill in Portland Transcript.

The Gospel of Rest.

"'Tis life wherewith our nerves are scant;
'Tis life, not death, for which we pant—
More life, and fuller, that we want."

The gospel of rest that is being preached here and there seems to originate in the merest fragmentary contemplation of life, as if it were viewed, indeed, through the wrong end of an opera glass. Seeing life in its wholeness, we see it is not vacuity, but intensity, that it requires; not inertia, but activity; not idleness, but work; not emptiness, but fullness. The ideal life is not to crowd out and exclude, but to take in, to include. It is he who has many irons in the fire who keeps them all moving. It is he who has many demands who rises equal to each and all. Not a clam lying on the beach, but Victory, flying, is the emblem of the ideal life. It is achievement, not mere existence, that is the true aim.

But the sources of power are to be sought on the spiritual, not on the physical, side of life. Not athletics nor gymnastics, nor diet nor refraining from this thing or doing that thing, give to the individual the strength on which he may at all times rely, and which can be infinitely renewed and infinitely multiplied. Its springs are on the other side of life They are to be found in the World Beautiful—in all that makes for art, for exaltation and for spiritual illumination. Not but that physical and material causes produce certain corresponding effects on their own plane; but these effects are so infinitely transcended by those on the

higher plane that the less is altogether swallowed up in the greater when the greater can be attained. And that it is not attained; that its existence is too often not even recognized by multitudes to whom it would come as the transfiguration of life, is the cause of many a failure, and of a vast amount of misery that might as well be happiness, if only the conditions that produce happiness were recognized and observed.

And in pointing out happiness as an ideal condition, it is not meant to use the term as synonymous with mere pleasure or even enjoyment. Happiness is a spiritual condition, while enjoyment is of the material plane. It is very possible to conceive of one's higher nature as being supremely happy under conditions far from enjoyable to the senses; and it is equally possible to conceive of unhappiness and dissatisfaction of the higher self when in the very midst of the current of worldly pleasures. Personal enjoyment can never be held as a high or a noble or in any sense a worthy aim, but personal happiness implies satisfaction of a higher kind—the satisfaction of feeling one's self in accord with the diviner order, and of longing, however feebly, to be in and of its forces.

Unless a man's higher nature is absolutely benumbed and inarticulate there is no possible happiness in any form of self-indulgence. To enjoy pleasures to which he has no right, which involve extravagance of expense unsuited to his means, or the crowding out of some one else, is an experience which has in it nothing in common with true happiness. The poet Wordsworth well remarked "that there is no real happiness in this life but in intellect and virtue." Only in that high sense can the term be used at all. To mistake happiness for mere pleasure is to mistake the heavenly for the earthly.

"Life is a search after power," said Emerson. But to seek this power through physical culture alone is as if one should seek to increase the speed of an engine by oiling and polishing it, neglecting the application of the steam, which is the only source of its power. True, the machine will be far better for being in perfect repair, but all the utmost perfection of its parts would be useless until the motive power is added. An electric car may come from the shop of the mechanician a marvel of perfect and beautiful completeness, but until the subtle current that propels it is added, it will stand dull and inert on the track.

The motive power of life is spirit, the spirit of man, fed constantly from the infinite strength of the Divine spirit, and when one would increase his forces of activity and usefulness the essential means is to increase spiritual force; and it is increased by drawing on it. The more it is used the larger the resources. "There is that scattereth, yet increaseth." Infinite belief would be infinite force, and then would the days be set to magic and music.

And this is the life that we want, the fuller life of force and ecstasy. The life that is radiant and abounding, and that sees all noble achievements as in vision. If there are days "when the great are near us, when they take us by the hand, and we share their thought," these days may be indefinitely multiplied and become the rule and not the exception. They may become habitual and not phenomenal.

"We ask for long life," said Emerson, "but 'tis deep life, or grand moments, that signify. Let the measure of time be spiritual, not mechanical. Life culminates and concentrates; and Homer said: "The Gods ever give to mortals their apportioned share of reason only on one day."

To gain this life "wherewith our nerves are scant"; to make each day the best of the year; to render the present hour the one that is critical and decisive, is achieved only by spiritual stimulus. The power inflows from art, from divine contemplation, from the uplifting of the heart. Then, only, does one stand in such harmony with all his related forces that he is in the magnetic currents of achievement and of happiness. The body becomes the perfect instrument through which the spirit works. There is not only health, but life, abounding life, because it is fed from the Source of the life more abundant.—Lilian Whiting.

Spice of Life.

—Smith: Did you reply to one of those personal advertisements? Brown: Yes, I once answered one from a lady who pined for congenial companionship. Smith: With what result? Brown: She turned out to be Mrs. Brown.—Boston Jester.

—Intuition.—Fangle: What sort of a dress was that Mrs. Snooper wore to-night? Mrs. Fangle: Demi-train. "That's precisely what Cumso said when he trod on it, but how did he know its name.—New York Sun.

—Mudge: What a paradox woman is! Wickwire: You—don't—say? Mudge: Consider her foot, for instance. The larger it is, the less it appears.—Indianapolis Journal.

—Miss Von Gimp: I wouldn't marry the best man living. Dr. Perkins: No—ah—er—perhaps not, but—er—that is really no obstacle to your marriage with me.—St. Paul Globe.

—"Wasn't it awful? She married a poor dry goods clerk!" "Yes; but just think how handy he will be to send down town to match goods!"—Puck.

CHINESE FARMHOUSE.—A recent traveler remarks that a Chinese farmhouse is a curious looking abode. Usually it is sheltered with groves of feathery bamboo and thick spreading banyans. The walls are of clay or wood, and the interior of the house consists of one man's room, extending from the floor to the tiled roof, with closet-like apartments in the corners for sleeping-rooms. There is a sliding window on the roof made out of oyster shells arranged in rows, while the side windows are mere wooden shutters. The floor is the bare earth, where at night there often gather together a miscellaneous family of dirty children, fowls, ducks, pigeons and a litter of pigs, all living together in delightful harmony. In some districts, infested by marauding bands, houses are strongly fortified with high walls, containing apertures for firearms, and protected by a moat crossed by a rude drawbridge.

Young Folks' Column.

Rose and Lily.

An Easter Story.

[Written for the RURAL PRESS by CAROLINE E. SANDERS.]

Rose and Lily were twins and were just six years old. Why Rose shou'd not have been called Lily, when she was almost as white as our own California lilies, or why Lily should not have been called Rose, when her cheeks were just the color of roses, was hard to tell. They each had bright, blue eyes and curly, golden hair, so no wonder their papa called them his pretty blossoms. He thought them just alike, but their mamma knew there was quite a difference in the little girls, for one thing Rose always led and Lily followed; so, when they got into mischief, it did not take long to find out who started it.

One bright, sunny morning the two little, curly heads were lying close together on the white pillow, when suddenly one pair of blue eyes blinked and then opened wide. Raising her head Rose said, "Oh, Lily, do you know what day this is?"

Another pair of blue eyes slowly opened and she answered lazily, "No, I don't."

"Why, it's Easter," said Rose, enthusiastically.

"Maybe we will get some pretty colored eggs and some Easter cards then," replied Lily, getting a little roused up.

"Oh, I was not thinking of that; but what do you think Dinah told me?" Dinah was the colored cook. "She said the Lawd is rised to-day, so I do 'spect that is what they are trimming the church so bootiful for."

"Do you think, Rose, he will be rised there?"

"Why in course, or what would they fix it up so pretty for?" she answered, contemptuously.

"Then I hope mamma will take us with her."

"But she won't, for don't you 'member how you fidgeted last Sunday, and I heard her tell papa she would leave the *chillen* at home next time. But maybe we could go by ourselves; Dinah says the Lawd loves little chillen, so he *might* take us up in his arms and then I 'spect we would never be naughty any more."

In her excitement Rose sat up in bed and clasped her hands as she talked.

"Well, then, let's go and find Him," replied Lily.

An hour or so later two little girls dressed in white, and wearing garden hats with long blue streamers, stood tightly holding hands at the corner of a crowded street.

"I know we turned a corner like that one, and when we got here we turned another," said Rose in a very confident voice, but looking at the same time rather bewildered.

"O Rose! I am afraid we are lost and will never get home again," said Lily, as her eyes filled with tears.

Oh! don't be a baby, Lil. I'll ask that gentleman to show us the way," and suiting the action to the word, she stepped in front of the gentleman who was coming along and said: "Please stop a minute."

"Why, my little daisies, what are you doing here alone?" he asked, looking somewhat astonished. "What can I do for you?"

"We want to ask you to please tell us where the church is," rep'ied Rose.

"Which church, dear? There are so many."

"The church they are trimming so bootifully because the Laud is to be rised to-day," answered both almost in the same breath.

The gentleman looked puzzled at first, then seemed to have a clearer understanding, as he said to himself: "Yes, this is Easter. How long it is since I have remembered the day!" Then, giving a hand to each of the children, he said:

"Come with me, little girls. There is a church just around the corner; perhaps that is the one you are seeking."

Service had commenced when they entered, and the children quietly took a seat, as they had been taught to do. Feeling sure they had strayed away from home, their guide would not leave them, so stayed until the close.

"The Laud did not rise. This was the wrong church," cried the children as they left. But in the heart of the man who held their little hands, He had risen once more. Light had come again to a soul that for long years had been in doubt and darkness, willfully closing the door to such glad tidings.

A few inquiries from the children enabled him to restore them to their home, where he found distress and consternation prevailing at their absence.

"Do not chide them, madam," said he to their mother. "They strayed off, but not so badly as I have done, and in losing their way, have shown me mine once more."

Up in a Balloon.

N. R. Briggs gives the boys and girls of the *American Agriculturist* the following balloon stories as told by Mamie Allen, whose father is a balloonist. The first trip was made on a public holiday and from their own city, and Mamie says:

"Father had been engaged to give a balloon ascension as one of the attractions of the day. There were six in our party, and at 10 A. M., the appointed hour, we stepped into the big basket or car of the balloon, and while the people were cheering and the band playing we shot up into the clouds. The sight of the balloon to those we had left below was of short duration, for the clouds hung low and threatened rain, and in a few minutes we were sailing along above them in the sunshine and a clear sky. We had a large fish horn that we blew occasionally, wondering what the people below who heard it would think. We could hear plainly the rumbling of trains and the whistles of the locomotives. It was very warm, being in the latter part of June, and we had to fan ourselves to keep comfortable. After sailing along and enjoying this novel sport above the clouds for over two hours, and not once during this time getting a sight of the earth, papa let out some gas and we began to descend slowly through the clouds, landing safely in a field near Cumberland Hill. A cow was grazing near, and seeing our big balloon, she became so frightened that she ran into the woods. We were told afterward that it was three days before she could be induced to come out into the open pasture again.

"Of course, it is decidedly more pleasant to go up on a fair day, when the atmosphere is clear; it is then that one can see long distances. Such a day we afterward enjoyed. It was clear and beautiful, and fully 4 o'clock when our party, which again consisted of six, climbed into the car and ascended toward the sky. In passing over the Providence river, we could see the fishes and the rocks at the bottom of the river plainly; such a thing would have been impossible had we stood on the banks of the river. We could see nearly the whole length of the river, while the shore resorts and a beautiful view of Narragansett bay gave a grand panoramic effect. We landed after a delightful trip near Bridgewater, thirty miles from our starting place. Do we get dizzy when looking down from such lofty heights? No, not at all; there is no such feeling, and none of that unpleasant sensation generally experienced when looking down from the top of some high building or observatory."

An amusing incident took place near Saratoga some time ago, in which two little boys played a prominent part. A well-known lady æronaut gave a grand balloon ascension at that place. After traveling over the country for thirteen miles or more, she concluded to make a landing, and, seeing three little boys playing in a field, she called to them to help her. As soon as the balloon touched the ground, two of the little boys, who had hastened to her assistance, grasped hold of the ropes and basket and held fast, but the third little fellow was afraid of the balloon and would not go near it. The other two were not heavy enough to hold the balloon down till the lady could let out the gas, and as there was a little wind, the balloon bounced up into the air again, then down to the ground, and then up, sometimes a hundred feet or more. All this time the two plucky little boys held fast to the ropes and basket. After skipping and hopping up and down over the fields and fences for over a mile, the lady finally ripped the balloon open with a rope fixed for this purpose, when the great balloon fell flat on the ground like a big bag.

Domestic Economy.

SWISS PUDDING.—One cup fine bread crumbs, two cups milk, three eggs, one tablespoon butter, melted, one-half teaspoon salt, one-half saltspoon pepper, one-half pound cheese, grated. Soak the crumbs in the milk, add the other ingredients, cover with dry crumbs, and bake in a quick oven till browned.

CAULIFLOWER WITH CHEESE.—Shorten the stems of cold boiled cauliflower; place it on a flat dish and set it in the oven; when a little warmed pour over it about an ounce of hot clarified butter mixed with some grated Parmesan or other cheese; put it again into the oven, and let it brown; serve immediately.

PLUM PUDDING.—A small stale loaf, well broken, leaving out any hard part. Pour over it one quart of boiling milk, one cupful of sugar, one tablespoonful of molasses, one teaspoonful each of salt and cinnamon, one-half a nutmeg, one pint of stoned raisins. When cool add four well-beaten eggs. Bake or boil three or four hours. It is very good cold.

BANANA ICE CREAM.—One pint of cream, one pint of milk, half-pound of sugar, yolks of six eggs, four bananas. Scald the milk. Beat yolks and sugar together until light; add to the milk and cook until it thickens, stirring constantly. Add the cream, and when cool the bananas, which should be mashed through a colander.

VEGETABLE SOUP.—Two potatoes, two onions, two turnips, one carrot, a little parsley chopped fine, salt to the taste. Cut the potatoes in quarters, slice the onions, cut the turnips in quarters, slice the carrots. Put all in a stewpan with three pints of water, and salt to taste. Boil it down to one quart. About 15 minutes before it is done add the parsley. Strain it, and serve with light bread or toast.

SPINACH.—Wash thoroughly one-half peck spinach. Cook until tender. Drain, and chop fine. Melt two tablespoons butter and add the spinach, and cook five minutes; then add one tablespoon flour, one teaspoon salt, one saltspoon pepper and one-half cup milk. Simmer ten minutes. The best way to clean spinach is to look it over very carefully while it is dry and then wash in water until there is not a speck of grit to be found. Serve with slices of cold boiled or grated eggs.

BRAISED FOWL.—Singe, draw, wipe and truss. Fry a light brown in one tablespoon oil and one tablespoon butter. Add one small onion, one slice carrot, one sprig parsley, one bay leaf and one quart hot water. Cover, and cook one and one-half hours, basting often. Run a skewer through the legs just below the hip joint and also through the wings of the fowl. Prepare it as for roasting, but do not carry the strings across the breast. By searing in the butter, all the juices of the meat are retained. Do not pierce the chicken with a fork.

FRENCH ROLLS.—Take one-half pint of scalded milk and one yeast cake. Allow this to cool, then add one-half tablespoonful of butter, melted, and the same of lard, a tablespoonful of sugar, a teaspoonful of salt, and a quart of sifted flour. Mix and let this stand over night in a warm place. Knead hard in the morning, then roll it out about an inch thick. Spread this over with butter, and cut as if for biscuit, fold together, put them in a pan, and let them rise again. They must be very light each time. Bake as you would biscuits. Unless you have a late breakfast it is difficult to serve these on time, but they are very nice for dinner, and can be warmed over for breakfast. If desired for dinner, set the sponge about 9 A. M.

STUFFED CUCUMBERS.—Pare four cucumbers, cut in two crosswise. Take out the seeds with an apple corer. Keep in cold salted water until ready for use. Chop enough raw veal to make one-half cup. Cook one-fourth cup milk and a scant one-fourth cup bread crumbs to a paste. Add one-half teaspoon salt, one-half saltspoon pepper, a few drops of onion juice, one teaspoon butter and one egg well beaten. Fill the cucumber with the forcemeat. Put them into a stew pan, add three cups white stock and a bay leaf. Simmer three-fourths of an hour. Melt two tablespoons butter, add one tablespoon flour, pour on slowly one and one-half cups white stock. Add one slice carrot, one slice onion, one sprig parsley, one clove, one bay leaf, one-half teaspoon salt, one saltspoon pepper. Simmer one-fourth of an hour. Strain and add one teaspoon lemon juice. It is not necessary to have a very rich stock for any of these made dishes. Trimmings from any white meat may be utilized for this purpose, as only a slight flavor is required.

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ALFRED HOLMAN.....General Manager

SATURDAY, APRIL 9, 1892.

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[NEW THIS ISSUE.]

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Steel and Iron Pipe—The Geo. F. Eberhard Co.
Hay Presses—J. F. Hill, Sacramento.
Water Pipe, Pumps, Engines, Etc.—Joshua Hendy Machine Works.
Hay Presses—Hawley, King & Co., Los Angeles.
Green Bone Cutter—Petaluma Incubator Co., Petaluma.
Floral Show—California State Floral Society.

☞ *See Advertising Columns.*

The Week.

The serenity of the Pacific Coast weather becomes more notable as the distressing news has come from day to day during the past week, of the hurricanes, cyclones and other meteorological disturbances which have visited the whole interior regions, from Colorado eastward to Chicago Small country hamlets have been almost obliterated, and larger towns and cities have lost many structures. Notable losses of life have occurred and great property values destroyed. Not only for a day, but day after day, such storms prevailed and a conspicuous act of the last day was the passage of a tornado through the World's Fair grounds at Chicago, doing considerable damage to smaller structures but fortunately only demonstrating the strength of the large ones. While all these depressing events are transpiring, the clear skies and warm sunshine of California become more precious and the delights of residence beneath them more apparent.

All crops are progressing favorably under most propitious conditions. Fruits are coming on rapidly and the outlook is for early maturity, which is always of value to us in our competition with the Eastern fruit product. Another favoring condition may be found in the reports that the Eastern fruit crop promises to be late this year. Last year there was a coincidence in ripening east and west which operated to the disadvantage of our shippers. It bids fair to be different this yerr.

THE SHEEPMEN PROTEST.—Last week a large number of flock owners appeared before the Fresno County Supervisors asking them to urge the Secretary of the Interior to hold the matter of setting aside certain mountain lands in Fresno, Tulare and Kern counties for a national park in abeyance. The sheepmen are very much opposed to the measure, and say it was taken in consequence of information supplied to the Government by persons here who are ignorant of the ill it would work. It is estimated that if the relief sought be refused and the park is established, the loss to the sheep industry of that region would be about $1,000,000 annually.

For Lower Freight Rates.

The issue for lower freight rates is being energetically pushed, and judging from appearances the chairs in which the useless Railway Commissioners have so long reposed are becoming somewhat uncomfortable. They are speaking to the public in reply to the onsets of the Traffic Association, and without attempting to judge of the force of their utterances, we must express satisfaction at the fact that they have been sufficiently awakened to say something. Anything is better than silence.

It looks very much as though the Commissioners would have plenty to do to explain why they permit our local railways to charge so much more for transportation than Eastern roads charge for the same articles for similar distances on similar grades. The Traffic Association has furnished them yards of comparative statistics showing that such is really the case, as all intelligent people have long held. We have not space to go into these showings exhaustively, but take a single line of comparisons which come close to the agricultural producers of this State. Here are some of these differences on 100-pound lots in agricultural implements, the distance in Nebraska being 106 miles and the California distance only 99 miles, the figures representing cents:

	Nebraska rates.	California rates.
Self-binders	.35	.50
Horse rakes	.35	.74
Mowers	.35	.50
Plows	.35	.50
Potato diggers	.70	.74
Gang shovel and sulky	.70	.74
Potato planters	.35	.50
Reapers	.35	.50
Field rollers	.27	.50
Seed drills	.70	.74
Hand corn planters	.35	.74
Reaping sickles, in bundles	.35	.50
Scythes, in bundles	.35	.50
Scythe snaths	.35	.50

So it goes through a long list, and on longer distances the differences are even more marked. In feed-cutters: In Nebraska they are carried at the rate of 35 cents per 100 pounds for a distance of 106 miles, and in this State the charge from San Francisco to Pajaro, 99 miles, is 74 cents per 100 pounds. The rate is double the Nebraska rate and more. In harrows, the rate in Nebraska for 106 miles is 52½ cents per 100 pounds, and from San Francisco to Pajaro the rate is 74 cents per 100 pounds.

It would seem that such showings would convince the Railway Commissioners, if anything can move them, that it is time they did something to inform themselves what are current prices for transportation, and not sit idly by and allow local railway managers to charge all the traffic will bear without any regard whatever to what the service is really worth.

The State Floral Show.

We alluded incidentally last week to the flower show of the State Floral Society, which will be held in the Mechanics' Pavilion in this city, on May 11th to 14th, inclusive. In our advertising columns this week, the formal announcement of the exhibition is made, showing that the affair is to be made acceptable to visitors, both by music and flowers. There is much more, however, which will appeal directly to the interest of RURAL readers. There will be awarded premiums to a value of $3000. These will be divided into classes, so that amateurs employing skilled labor, amateurs who do not indulge in professional gardeners and professional florists do not compete with each, but each class of flower growers is in competition with itself, except in certain open awards, for which all can strive. The premiums are also hung up for different plants and flowers in each class, so that each grower can choose his line of exhibit according to his own taste or hobby. The awards are generous in amount, as something over $400 is offered for roses alone in the different classes.

It is to be hoped that the coming show will attract attention throughout the State. The society does not adopt the carnival features of other displays, but shows flowers for their own sakes, the idea being to increase a love for floriculture, and to elevate the art itself, by educating all flower growers and flower lovers. It is the only display of the kind, which is maintained upon this plan, on the coast, and the society aims to make it worthy of the State and as popular as similar shows are in the great Eastern cities. To do this, the cooperation of all is desired, both in competition for the awards, in patronage of the fair and in membership in the society and attendance upon its monthly meetings. In all these lines of favor, it appeals to the public.

A CHANGE IN THE WEATHER SERVICE.—It is announced that Mr. Kerkham, who has been in charge of the Pacific Weather Bureau, will now return to his position in the Central office at Washington. Mr. Kerkham has made many important changes in the local service, and has extended it in many directions. It is reported that Lieut. Finley will return to this coast, and he will be cordially welcomed.

The Wool Industry.

The low range of prices quoted for this season's wool is inducing holding by growers in the hope of securing better prices later on in the year. Whether this hope will be realized is, as yet, an open question, and each side of it has strong advocates. There is not the least question of a doubt but what the consumption of wool shows a large gain per capita compared with two decades ago, yet it must also be conceded, with the concession based on statistical returns and other equally as reliable facts, that there has been a phenomenal increase in the number of sheep the world over, which causes the wool clip to exceed the world's requirements. This is particularly the case with cotton-selling at very low figures, and also with the introduction of improved machinery, not only making it possible, but actually practicable, to turn out goods mixed with shoddy and also with cotton, bearing a close resemblance to woolen goods, which can be, and are being sold at retail at from one-third to one-fifth of the price woolen goods can be placed at to net a profit.

In the United States and the older settled countries, there has been no marked increase in the number of sheep, due largely, if not entirely, to former cattle and sheep ranges being too valuable, owing to the steady expansion of the country's railroad system, to admit of keeping pasture for the exclusive use of large bands of sheep; but in Australasia, South America and Africa, the large waste of land admits of sheep husbandry to an almost unlimited extent. This is the better understood by referring to the latest returns. Australasia, in 1860, had, in round numbers, 20,000 000 sheep; in 1870, 50,000,000, and in 1891, 114,000,000. These figures, taking the average fleece at six pounds each, show a most remarkable gain in the wool clip. The Argentine Republic, Cape Colony, Africa and Asia, while not showing quite so rapid an increase as does Australasia, yet the gain is said to be very considerably ahead of the United States.

Great Britain and the United States being the largest consumers of wool, to them we naturally turn for the key to the present situation. In 1870 the clip in this country aggregated 163,000,000 lbs. and the imports 38,634,000 lbs., against in last year (1891) a clip of 303,401,507 lbs. and imports of 119,390,280 lbs. While the domestic clip increased in 21 years about 250 per cent, the imports within the same time increased over 300 per cent. The data for Great Britain we have not at hand, but it is safe to say that the figures for the past 21 years do not show so large a gain. This opinion is based on the fact that in 1889 Great Britain's clip aggregated 316,667 bales (over 200 lbs. to the bale) and the imports 2,091,894 bales, while in last year (1891) they aggregated domestic 352,381 bales and imports 2,186,155 bales, an increase of only about 5 per cent. In 1872 the average price of wool in the English markets was $135 per bale and in 1891 $65 per bale. In this country the average price of domestic Merino wool was 64 cents per pound and in 1891 33 cents per pound, so that the decline in the United States has been very nearly as great as has been the decline in England. The decline in prices is due to the causes given in the fore part of this article.

ALFALFA.—The high prices now prevailing for alfalfa seed will give another impulse to the ruling disposition toward alfalfa-seeding in regions well adapted to the plant. There will be made a considerable addition to the alfalfa area this year. The tendency toward decreased profits from raisins and other dried fruits has naturally drawn the attention of interior valley farmers to the profits from well-kept alfalfa fields, and alfalfa has shown up well in the comparisons which have been made. While we fully believe that the depression in fruit prices is only temporary and quite surmountable, it is just as well to have more alfalfa and more animals to eat it. In the midst of the rush after special lines of production, we have never lost faith that a wise diversification of products will be the surety of our agricultural prosperity.

FARMERS' INSTITUTE AT LIVERMORE.—Arrangements are progressing for the holding of a Farmers' Institute at Livermore on Friday and Saturday, April 15th and 16th. It will be announced by the officers of the Alameda County organization in the county papers at the close of this week, and we hope all our readers in the district will give attention to it. A good number of prominent speakers has been secured, but the list is not available as we go to press. Many subjects of interest to the people of Southern Alameda county will be discussed.

SAGE BRUSH LAND FOR CHICAGO.—A feature of Idaho's exhibit at the World's Fair will be a practical illustration of the system and benefits of irrigation. A large section of sage brush soil will be transported to Chicago. Through this ditches will be run, and trees, fruits and flowers will be grown in the soil by the irrigation system. Prospective Idaho settlers are expected to be especially attracted by this exhibit.

The State Press.

San Diegan: "The opening of the canal will compel American railway managers to prepare for competition."

Stockton *Mail:* "Nothing could be of greater advantage to the increasing commerce of this valley than the construction of a waterway for the cheap transportation of its products to market."

Stockton *Mail:* "The general opinion appears to be that the Board of Railroad Commissioners is an expensive fifth wheel to the vehicle of State. Experience proves that it is impossible to elect a board that will not fall under the influence of the railroad company, which is a sad reflection upon the prevailing morality in official life in this State."

Kern County *Gazette:* "Among other things to be voted for at the coming election is a proposed amendment to the Constitution, extending the sessions of the Legislature from 60 to 100 days. It is to be hoped that the proposition will be defeated. A sufficient amount of injury can be done in 60 days, and there is no good reason for extending the time."

Visalia *Delta:* "The chief of the Bureau of Forestry in the Agricultural Department at Washington has presented the draft of a bill to the Congressional Joint Sub-Committee on Agriculture, Forestry and Public Lands, which, if it becomes a law, will effectually preserve the forests from destruction, and, at the same time, accord to the lumberman, miner, farmer, stockraiser and sheepman all the privileges that could in reason be asked."

Biggs *Argus:* "The bill prepared for the protection of forests on Government lands has been well designed, and if it becomes an enforced law, which of right it should, it will be the means of not only protecting the young trees, but it will perpetuate the flow of springs, streams and rivers. It recognizes Government forest lands not only as watersheds, but as a source of convenience and wealth in their use by the people within proper limits. The licensing system, properly administered, will prevent the wholesale destruction of forests by lumbermen."

Looking to California.

New York *Sun:* The people of the United States are to-day looking to California as the great fruit State of the Union from which to draw their supplies of fresh, canned and dried fruit. They are also looking to California as the great winter resort, possessing the finest climate in the world. They are looking to California as the State to furnish them trainloads of oranges. And now the Italian Government declares that California is the only place on the green earth that they need fear as a competitor in raising citrus fruits. In the near future California will command the markets of the world, having left ancient and modern Rome and her succeeding country far behind in the great citrus race.

The Poor Farmer of To-Day.

[An address before the Farmers' Institute at Medford, Oregon, by Hon. T. T. Geer, of Macleay, Oregon.]

In 1836, when my honored uncle, R. C. Geer, of the Waldo Hills, was a single man, he became infatuated, as was quite natural, with a neighboring farmer's daughter, and he decided that nothing would adequately satisfy his sense of gallantry toward her that would fall anywhere short of making her a present commensurate with the warmth and extent of his budding passion. Other considerations might come and go, but he was determined that his present should at least be costly. It was one of those peculiar junctures in life when money is no particular object. He looked about him, and finally decided that, come what might, his girl should have a new calico dress at his expense. It was during those good old times before the farmers were imposed upon by anybody; in short, it was during those days when farmers were having everything just about their own way. He was a man grown then, and had hired out for a year to a neighboring farmer, but was only getting $6 per month for his work. It was singular, too, seeing that now, during these days of degeneracy, farm hands get from $15 to $20 per month; but any comparison would spoil my story.

His next move was to inquire the price of calico, and the merchant told him that, since he wanted it for so worthy an object, he could have it for 30 cents a yard. This would have been a stunner under ordinary circumstances, but it only spurred him into renewed determination. He then consulted his charmer to know the fewest number of yards it would require to make her a dress, and she told him in all candor that, seeing it was him, she would try and make six yards meet the requirements of the case; and she did it, but it took him several months to recover from his financial setback, which was only rendered endurable by the knowledge, as he now says, that she looked better in that dress, to him, than any woman does nowadays in the most gorgeous array, though the finer dresses cost less now than the calico dress did then.

He worked eight days to pay for a calico dress of six yards. His girl was at that time doing farmhouse work for 75 cents per week—the customary pay for such work. I have, in recent years, known many girls to receive $4 per week for similar work. With calico at fifteen yards for a dollar, the present average price, a farmer's hired girl can buy sixty yards for a week's wages. In the good old times, my future aunt could buy two and a half yards for her week's work.

The difference between 60 and 2½ is the exact extent to which, in this respect, we farmers are groaning under increased burdens during these latter days. Since I have been a married man I have paid for calico at the rate of seven yards for $1. If my memory is not faulty, my wife in those days made herself very pretty dresses with the dollar's worth of calico. A few years after, however, we could get 12 yards of calico for $1. The greatest change I have noticed, though, was that while the number of yards in a dollar's worth increased 40 per cent, it still required the entire dollar's worth to make the women folks a pretty dress. Several times during the past few years I have bought twenty yards of calico for $1; but what exhausts my powers of comprehension is why it still took a dollar's worth to make the same woman a dress. So, out of sheer desperation born of necessity, we farmers do sometimes feel justified in crying over "growing" girls.

Now, this sample of decrease in the price of calico is only a counterpart of what has occurred in nearly every other article which comes into daily use in the farmer's household. If we buy nails at four cents per pound, which we do, and less, and our fathers paid twice as much, which they did, then let us as farmers rejoice together over the fact. If we buy, as we do, all kinds of agricultural implements made now largely of steel for 40 per cent less money than we did ten years ago for similar ones of inferior make, we should cheerfully say so and congratulate each other that we, too, are sharing the benefits of modern civilization.

Eleven years ago I bought a wire self-binder for $300, and paid for it with wheat at 66 cents per bushel. This last year my neighbor bought improved twine binders of steel frames for $165, and paid for them with wheat at 90 cents. In other words, 11 years ago it took 460 bushels of wheat to pay for a wire binder, while now 160 bushels will buy a steel frame twine binder. To make it still plainer, one bushel of wheat this year has three times the purchasing power that it had 11 years ago, and the decrease in price of all kinds of agricultural implements has been equal to that as to harvesters. Should we not rejoice over these facts? I move that we do.

The winter before I was married I was living alone in one of the most thickly settled portions of Eastern Oregon; namely, Grand Ronde valley. I read several books through that winter, and among them Josephus' works, which were in very fine print, and I did all my reading by firelight made of pine knots. I bought coal oil then in quart bottle lots—that is, one quart at a time—and it cost me three bits a quart, so I could not afford to read by its aid when pine knots were lying around loose. I kept that same bottle for the same purpose for more than two years after I was married, and we rarely lit the lamp except when we had company. Now we have in our house three or four lamps, and most farmers have, each of which will hold as much as that bottle did, and a can doesn't last as long as a quart did then. It then cost $1.50 a gallon, while now it sells for 20 cents. Let us rejoice.

I also remember the first wagon I ever owned. I had been married several years and we had always gone to church, etc., on foot; but I had a chance one day to trade two horses for an old wagon that had evidently crossed the plains in '47, so I traded. It had no bed nor brake, but if I remember correctly, it had a tongue and four wheels; so I made a buckboard seat, and the next Sunday we (that is, my wife and two babies and I) went to church under the new dispensation. I was actually ashamed to drive up to the church door, for I knew there were dozens there who would say to each other that I was putting on style. But when I first hitched to that wagon and drove away, I was as happy as I will ever be again until I reach and enter the shining portals of Paradise.

We used that wagon for several years, and were as well fixed as anybody in the community, with very few exceptions. During those years there was but one buggy in the whole country, and its owner was regarded as a nabob. The improvement in the condition of farmers is shown by the fact that when at our country church three weeks ago, there were 32 teams hitched around the church and but one wagon, the others were either buggies or carriages. Since then I saw a funeral procession wending its way to our country churchyard with 27 teams in line, and each one was hitched to either a buggy or carriage, and they were all owned by farmers. Thirty years ago such a sight as this would have been impossible.

Now, I believe it does us good to stop in our work sometimes long enough to recall these facts and look them over. We are surrounded by so many luxuries that our fathers never dreamed of that we are somewhat spoiled, and we are sometimes disposed to neglect returning thanks. If any class of men in the world should be contented and stimulated by a cheerful ambition, it is the farmers of Oregon. We are masters of the situation, for the reason that any man who owns 40 acres of land, or even 10 acres, is a king among men. It is a possession that neither succumbs to flood nor flame, nor do thieves break in and steal; it is "incorruptible and fadeth not away."

I rejoice that I live in a time that enjoys all the blessings that follow civilization—Christianity, churches, schools, books, newspapers and universal education. Our fathers and grandfathers, especially those of them who were pioneers in the great march which plucked "this Oregon of Ours" from the blight of the wilderness and the grasp of barbarism, were men of noble mould, and I never tire of rehearsing their numberless virtues. They sacrificed their comforts, and even their lives, that we might live under better conditions; and while we render them unceasing homage, let us also not fail to appreciate to the fullest extent the manifold blessings and privileges of our own time.

Being a devout Christian myself, I believe, in common with all other Christians, that it is the preconceived intention of the divine economy that the children of men should grow better as generation succeeds generation. There is no place in my heart for the doctrine of mental or moral despondency. I believe there are millions of men living to-day who are better morally than Adam ever was, because he fell the very first time he was tempted, and men nowadays sometimes do not. My message to the farmers of Jackson county is to cultivate cheerfulness and contentment, because the times and conditions justify it. The gospel of gloom is as repelling in its influences when applied to agriculture, as to theology.

Of all the centuries that have rolled from the hand of God, like grains of sand, the nineteenth stands preeminent for matchless results in contributing to human comfort.

The State Agricultural Society and the World's Fair Display.

Sacramento, April 2, 1892.

To the Editor:—From press reports I note that the World's Fair Commission have decided to join with the Mechanics' Institute Fair, in San Francisco, this year for the purpose of encouraging a congregation of agricultural exhibits from which to select California's show of products; as an inducement for which the Institute will issue medals for premiums. I also notice that some of the daily papers have designated the action as a "blow at the State Agricultural Society as they wanted the show made at the State Fair."

This idea of getting together an exhibit of agricultural products in 1892, to be shown at the World's Columbian Exposition in 1893, originated with the State Agricultural Society, as will be seen by our report to the Governor for 1891. In this report we offered the World's Fair Commission our assistance and the benefit of our experience in collecting agricultural exhibits, and invited correspondence upon the subject. As we are the direct representative of the State in matters of this character, we desire in every way possible to lend our aid in the collecting of a representative exhibit of agricultural products, and being in touch with this interest, deemed it an advantage not to be overlooked by the World's Fair Commission who are using the same funds as we are, and who should cater to some extent to the class of people they expect reciprocation from, and use some of their funds in such a way as the producer may obtain a little direct benefit.

In our Society we have a formulated plan, in fact a regular organized system for collecting and exhibiting agricultural products by counties, for which is given cash awards to the extent of $5000,

Our suggestion to the World's Fair Commission was to add about $2000 of the State's money to be used in conjunction with our amount as premiums; the best use it could be put to in the way of preliminary expenses, as by the time inexperienced men are sent throughout the country to gather exhibits, twice, yes three times this amount will be expended, and an inferior exhibit obtained, and we would perform all the work, and have it distinctly understood with exhibitors that their exhibits would be forwarded to the World's Columbian Fair, thereby giving the Commission the advantage of showing a collection of premium agricultural products.

Had our suggestion been received with favor, the additional inducement to the producers would have been sufficient to warrant them in spending a little time in getting together the cream of this year's production, which would have given the Commission a larger variety to select from, that could in no other way be as easily obtained,

Medals and diplomas as premiums are better fitted for industrial products than are they for agricultural exhibits, as the manufacturer by his display attracts trade; but the agricultural exhibitor must have cash awards to partly pay expenses of gathering, packing and handling his productions, which cannot be realized upon in any manner after exhibition uses.

The exhibitor of agricultural products is actuated four-fifths by public spirit, loyalty to his State and pride for his particular locality. It is not a question of trade with him; hence the State makes annual cash appropriations to assist the cultivator of the soil in showing California's capabilities, that the entire State may be benefited thereby.

No, the State Fair is in no way injured, or likely to be injured, by any action of the World's Fair Commission. We offered (not solicited) them cooperation, and the benefit of the $5000 cash premiums of the State's money offered through us, which, by the addition of some of the same money, they could obtain a more extensive and comprehensive exhibit than by the plan they have adopted. We speak from experience, which the Commission may have more of after it is too late to make amends.

In our offer we were not actuated by any desire to increase our resources, but only to enlarge the possibilities for a grand exhibit, which, of course, would inure to the benefit of the Commission.

As far as the State Fair is individually concerned, we have no fear of the result, as we know the exhibitors of agricultural products will be on hand as usual to contend in sufficient numbers for the cash awards, and to make the State Fair a success.

Our endeavors will be, as they have been in the past, to enhance the value of California's soil by encouraging the exhibition of products, which during the existence of the California State Agricultural Society have been made more prominent, and attracted more attention than any other plan yet devised. The money appropriated by the State is used exclusively for awards to the producers of our commonwealth, and the expenses of conducting the institution, together with permanent improvements necessary, comes entirely from our own resources, and for the amount of benefit this institution is to California, it costs less to maintain than the cheapest of the many commissions supported entirely by the State.

Edwin F. Smith, Sec'y.

Concerning roads, the Inyo *Register* says: "It is a simple matter of business foresight; simply a question between bolstering up a road this year, doing the same next season, and the next, or by spending a little more money at one time, secure roads that are no longer bills of undiminished expense and sources of annoyance or danger. When will this subject receive the general consideration its importance demands?" So far, good; but the *Register* does not go far enough. Roads full of mudholes are more costly than good roads, because the expense of transportation over them is greatly increased.

Patrons of Husbandry.

What's Woman's Work.

[By Mrs. H. H. Woodman.]

We've heard the cry, from sea to sea,
What's Woman s work? what shall it be?
Yet every Patron in the land,
Knows we've always had a hand
In organizing every Grange,
And why these questions? it seems strange.

We've worked in every way we could,
And done what every sister should
To help along this noble work,
And never have been known to shirk;
We've made our speeches, essays read,
And often in the singing led.

We've helped our brothers build our halls,
And decorate the barren walls,
And placed therein our emblems true,
For Husbandman and Matron too;
We've voted with our brothers there,
And helped to count the ballot fair.

We've brought our flowers rich and rare,
And put them under Flora's care;
Ripe fruits we've gathered in their prime,
And placed upon Pomona's shrine;
The grains and grasses fully ripe
Fair Ceres guards with sickle bright.

The *Juveniles* we've watched with care,
That naught but good should enter there;
For well we know their plastic mind,
If molded right will soon combine
And keep our Mystic Grange secure,
From evil doers we are sure.

But as we work with brothers true,
We find there's more and more to do;
For work has been the lot of man,
And woman too, since *time began*.
I'm *sure* we've always done our share—
No Grange can work unless we're there.

Paw Paw, Michigan.

The Secretary's Column.

[A. T. Dewey, Sec'y S. G of C., No. 220 Market St., S. F.]

Committe on Legislation.

In accordance with the requirements of a resolution of the last session of the State Grange, P. of. H., recorded on page 100 of the printed Journal, the following committee is hereby named to do the work provided for by the resolution: J. V. Webster, Chairman, S. T. Coulter, J. H. McKune, Chas. Wood, C. W. Norton.

The Chairman and members will please attend *at once* to the important work before the committee, and the Secretary will notify, under seal of the State Grange, each member of his appointment. E. W. Davis,
W. M. C. S. G.

Santa Rosa, March 22, 1892.

Patrons who have suggestions to make to this committee should forward them to the Chairman or some member at once. It is expected all Patrons will do their duty and assist this committee and all others promptly.

James D. McDiarmid, member of Pleasanton Grange, Manistee Co., Mich., has lately settled with his family at San Jacinto, San Diego Co., and wishes information about the Grange in California, being hopeful of establishing a new Grange. Encourage him, all who can.

State Lecturer Huffman, Brothers Ketchum and Noyes of Stockton, Mary Merrill of Waterloo, A. N. Judd of Watsonville, and W. B. Ewer of Temescal were among the P. of H. at the Nicaragua Canal meeting, S. F., March 29th.

Live Oak Grange turned out splendidly at the recent meeting addressed by Master Davis and Past Master Coulter.

What the Grange Has Done.

Grand Master Davis was present at the meeting of San Jose Grange on Saturday last, but was suffering from the shock of the news of the death of a favorite nephew. He spoke briefly as follows:

People sometimes say that they knew no value attached to the Grange. Now, if we can show one good thing it has done, we completely answer this objection. During the 25 years' life of the Grange there are 25 prominent mile-stones, showing not only one good thing, but 25 good and remarkable things, and these are some of them:

It organized the farmers never before organized. There are now 1,500,000 meetings of Grangers held every year—estimate the power of these.

It has opened a field of usefulness for women and brings them forward so that man can say of woman, "You are the peer of anything that draws the breath of life."

It prevented the reissuing of the patent on the sewing machine, a saving of a round million a year, and will see that the telephone follows in the same line, or that it be taxed in some measure equal to its productive value.

It secured the passage of the Interstate Commerce bill, of which we do not receive the benefit received by the people of the East. The Grange will oppose its repeal.

It secured a position in the Cabinet for a Secretary of Agriculture.

It has done much to secure the new ballot laws, of which California has adopted a very good one.

It has caused a great increase in the appropriation for public schools. He who thinks to do anything in the world without a complete education deceives himself.

And along this same line the Grange proposes to work. There are trusts to oppose. It will denounce credit, mortgages, fashion and everything else that induces prodigality of expenditure. It will labor hard for a mutual insurance plan to take the place of the organized robbery now going on. It will strive to send only farmers to the legislature and to Congress—send men who have families and homes, and reforms will come.

From Master of National Grange.

Delta, Ohio, March 21, 1892.

To the Members of the Order of Patrons of Husbandry:—The National, State, Pomona and Subordinate Granges of our country have repeatedly indorsed the policy of electing United States Senators by a direct vote of the people. The amendment providing for it will be submitted to the various State legislatures in the near future, and be ratified by those bodies, if the people do their duty.

But why wait for this change in the Constitution? We need this reform now! The people should have more live men in the Senate who are in close touch with them! There are several members of that body who should be retired to enjoy the wealth which was the means of their elevation to an important position, for which they had no especial fitness.

These men never would have been chosen by popular vote. We should do the next best thing to a direct vote under an amended Constitution, which is to insist upon the nomination of candidates for United States Senator in States which will elect this year, by the various political parties with which our members are connected.

If we will agitate this matter sufficiently at once, political parties will hardly disregard the wishes of the people. If we will move, others will join us, and the movement will become irresistible. The farmer fills a larger space in the eye of the shrewd politician than ever before; and now is the time for action. A few weeks more, and it will be too late for this year.

We should also take a lively interest in the nomination and election of representatives. It is of no use to petition to men who turn a deaf ear to our cries. Nominate friendly men in your party conventions! Elect friendly men at the pools, and then all your reasonable demands will be granted. Retire every "people-be-damned" man, in convention if you can, at the polls if you fail in convention. Ballots are even more effective than bullets. If the people fail to make proper use of the former, the time may come when the latter must be used to "Keep the Jewel of Liberty in the Family of Freedom."

No more important campaign was ever entered upon by a patriotic people than the one just before us. The people must learn to distinguish between sound argument and sophistry. They must not mistake the railing of the demagogue for the inspired eloquence of the true patriot and honest citizen. No Order or organization has done more to qualify farmers to make wise use of their political power than that of the Patrons of Husbandry. We are proud of our past, intensely earnest at the present, very hopeful of the future. Fraternally yours, J. H. Brigham.

The Picnic Season.

The Grangers of California will open their season of picnics about April 14th. The first picnic will be under the auspices of Enterprise Grange, Sacramento county, April 14th. April 30th, Chico Grange will picnic. Yuba City Grange will have its picnic May 4th. Pacheco Grange, Contra Costa county, will celebrate May 2d; Pescadero, May 7th; Glen Ellen, May 7th; Dixon, May 6th; Merced, May 14th. Two Rock and Lodi will celebrate about the middle of May.

The Grange and Its Work.

At a meeting of San Jose Grange, on Saturday, 2d inst., Rev. S. Goodenough, Chaplain of the State Grange, spoke as follows:

The Grange is not a new institution. It has been tried. When a new machine is built the test is looked forward to with interest. When a cruiser is launched there may be some doubts as to its performance, but a trial will clear them away, and if successful, the nation feels safe to trust it. The Grange has long ago passed this trial stage, and appears before the country as a tested institution. The Grange has never failed. In its history there is no record of defeat. It is known as an intelligent body, and when it takes a stand the people know that their stand means something. When a committee of the Grange goes before the Legislature or Congress to ask for anything in the interest of farmers, all the parties are willing to grant them a respectful hearing and to grant their request, if possible. The farmers demand their fair share of the benefits of their labor—to receive a fair equivalent for what they produce. This is not selfish, for they rob no one in doing it. The farming interest is the largest in the country. The farmers of the country and their families number at least 35,000,000. When the farmer is prosperous every branch of business and every class of people are also prosperous. Then, in seeking their own benefit, they assure the profit of every one, and are thus not selfish, for all are prosperous in return. Labor represents everything. Labor is all there is of anything. There is no value that is not represented by labor. Once in the history of the world there was but little in the way of population. Then the command went forth, "Replenish the earth; have dominion over everything," etc., and in obeying this command, all value came to the world. My coat suggests the labor of the tailor. The cloth suggests the labor of the weaver, and the wool the labor of the farmer, the foundation of all value. It is said that the average value of the labor of every person is $600. Not every one receives the value of his labor—it may go to enrich some one else. Hope and peace are the weapons of the Grange, and working these on the principle of justice and friendship, it must be respected and must succeed.

Farmers' Alliance.

An Omission.

The following introductory paragraph of the National People's Party platform, adopted at St. Louis, got left out of the daily reports published at the time and has recently been furnished by President Cannon:

"In order to restrain the extortions of aggregated capital, to drive the money-changers out of the temple; 'to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty for ourselves and our posterity,' we do ordain and establish the following platform of principles:

"We declare the union of the labor forces of the United States, this day accomplished, permanent and perpetual. May its spirit enter into all hearts for the elevation of the Republic and the uplifting of mankind.

"Wealth belongs to him who creates it. Every dollar taken from industry without an equivalent is robbery. 'If any will not work neither shall he eat.' The interests of rural and urban labor are the same, their enemies are identical."

Cannon For Congress.

Ventura Observer.

It is our candid judgment that the Alliance can elect a Congressman from this district, and State President Cannon, as we have previously said, should be the man. He is well qualified for the place, and would make a faithful and industrious member, far superior to the man now there. We do not know that Mr. Cannon would want the nomination, but he has certainly earned it and could in consequence of the present position he holds to the Alliance and his general qualifications to make a canvass and to fill the place, command a larger vote than any other man in the organization in this district. He can get a large vote in this county from all parties.

Mr Geary and the Canal.

At the Napa County Alliance meeting, held at Calistoga on the 21 inst., a letter from Congressman Geary was read, wherein Mr. Geary stated that he approved the Alliance's stand on the Nicaragua Canal, and would vote that way. He also approved the idea that fractional lands in California be donated by the General Government to the State to sell to holders of land to which it joined for road purposes—that is, the proceeds to go entirely into the county road fund.

Alliance Meetings in Yolo.

On the evening of the 15th of April there will be a mass meeting in the Opera House at Winters, under the auspices of the Yolo County Alliance. Marion Cannon will be present. A convention will be held on April 16th, in Odd Fellows' Hall, conjointly by delegates from Yolo, Napa and Solano County Sub-Alliances.

Napa County Alliance.

The following are among the resolutions adopted at Calistoga on Saturday last by the Napa County Alliance Convention.

Whereas, W. H. Mills, President of the State Board of Trade, and General Land Agent of the C. P. R. R. Co., inspired by the manager of the company he represents, has written several articles and made several able speeches, showing the astounding increase instead of decrease in the concentration of land in California into the hands of the few, which is so inimical to the growth of the State; therefore,

Resolved, By the Napa County Alliance, that we endorse Mr. Mills' views and efforts in opposition to land monopoly, and that we give due credit to any and all who advocate and work to break up the vast landed estates in California, that they may become the happy homes of thousands of citizens, where they are now the abode of the coyote and jack-rabbit, and wherever farmed, done so by a nomadic husbandry of no benefit to themselves nor to the State.

Resolved, That the Napa County Farmers' Alliance and Industrial Union heartily endorse the position taken by our Worthy State President, Marion Cannon, at the Nicaragua Canal Convention which met in San Francisco on March 29th, wherein he stoutly maintained that if the people furnishes the means to build the said canal, that the people (Government) own and control the same; be it further

Resolved, That it is the sense of this Alliance that we heartily thank E. D Beard of Napa, a delegate to said Convention, for the grit he, too, showed in getting up and to speak in the interest of the people, after seeing one man sent to the Napa Insane Asylum for speaking in the interest of the people (Cannon) by the chronic office seeker, M. M. Estee; and be it further

Resolved, That we censure M. M. Estee for the course he pursued in said Convention, in the sole interest of the privileged few, as against the people, and that we have reason to rejoice and congratulate the people of California that M. M. Estee's long drawn out chase after office has never given him a more responsible office to betray than our Board of Supervisors (no doubt at his request) in the so-called Traffic Association of San Francisco.

The Farmers' Alliance people are pushing their organization and cause. Marion Cannon, the State President, is out and is making fine speeches. Mr. Cannon used to live in Nevada county. He carried on a blacksmith shop in Omega in the early days and was County Recorder one term.—Grass Valley Telegraph.



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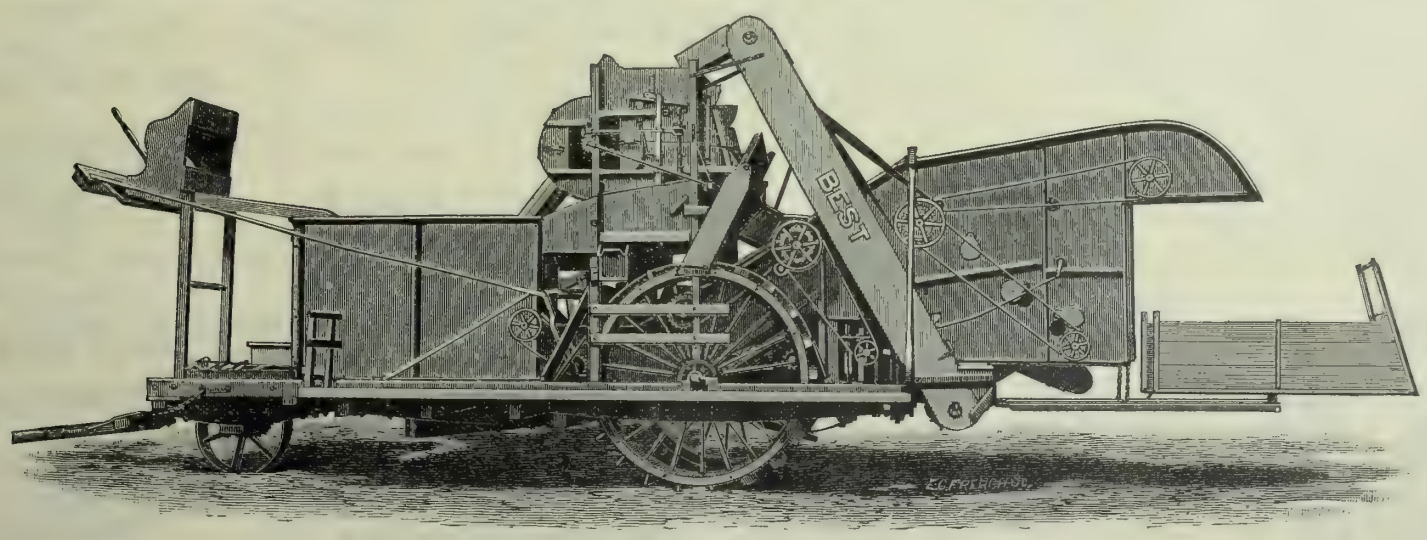
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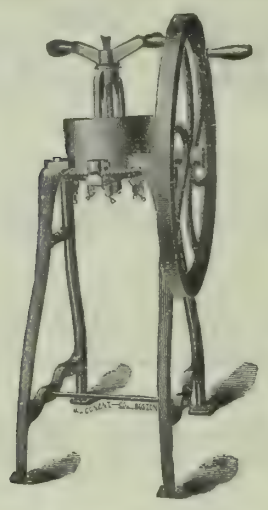
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DANIEL BEST AGRICULTURAL WORKS,

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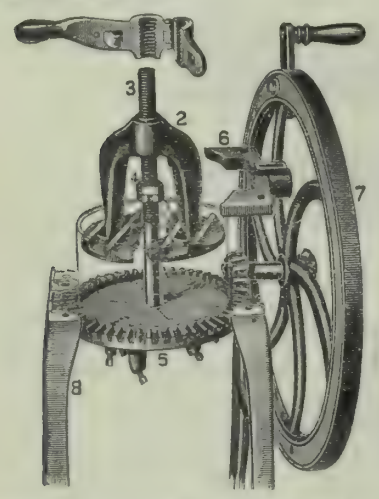
The Mann Bone Cutter.

It is gratifying to have one's good opinion of an article endorsed by his readers, says *Farm-Poultry* for December, as our frequently expressed good opinion of Mann's Bone Cutter has been endorsed by users, both by letter and by word of mouth. A recent case was that of a poultry farmer in North Middlesex, whose farm we visited last week. As we were looking through the buildings, he stopped beside his No. 8 cutter, put his hand affectionately upon it and said: "*There's* something, now, that you cannot praise too highly. It is *a perfect* machine, admirably adapted to its purpose, and as nearly right as though it grew so!"

The steady increase in orders has compelled Mr. Mann to move his machine shop to larger quarters, and he is fortunate in being now located in a roomy, well-lighted building of three stories and basement, he has purchased for his purpose. Here we see the various sizes and styles of machines in process of putting together and shipping in one department, while the various "parts" are being manufactured in blocks of 50 or 100, as circumstances require.

The different experiments required to determine the best size or shape of each piece or part are well illustrated by the different specimens Mr. Mann takes pleasure in showing his visitors, and one realizes how costly these experiments must be when he sees machine after machine that was built, tested, and thrown aside as "not right." It would puzzle a mechanical engineer to suggest improvements without their carrying with them some sacrifice in weight or increase of friction which would more than counterbalance the advantage gained, the points of ease of working (avoiding friction) combined with the perfect performing of the task assigned are kept constantly in view.

Mr. Mann makes two sizes of power machines for factories cutting bone and shipping it away to poultrymen who prefer to buy the cut product rather than cut it themselves, and this branch of his business is doubtless destined to increase. It isn't easy or convenient for every poultryman to get a supply of fresh bones, or spare the time to go for them, or cut them after they are got. They can be collected in large quantities more economically and cut by power very rapidly, and it will become a customary thing for establishments handling butchers' trimmings and waste to cut up the bones and gristle into food for fowls; to convert waste material valued at half a cent a pound into poultry food worth three cents a pound, would seem to be a profitable business, and it is sure to extend rapidly.

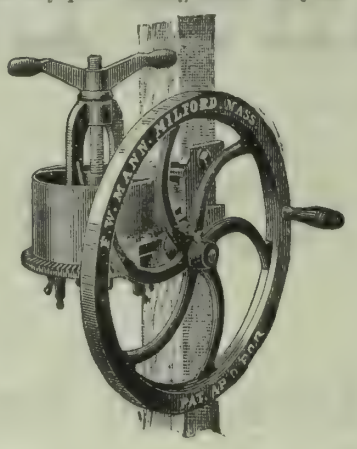


Skeleton Cut, showing construction, the cutter plate, the six knives and a late improvement—the split-nut feed handle.

Mr. Mann makes two styles of hand cutters, one having one balance wheel and crank, the other two. Another style of machine is without legs, being fitted to be bolted securely to a post in the barn, or some convenient outbuilding.

This post machine can be made for somewhat less money than the one on a stand. Many men have a convenient corner or niche in which such a machine can be permanently secured to advantage, and where it is instantly available when wanted; we incline to think the post machine destined to great popularity.

That the manufacturer has full confidence in this machine is shown by his giving a written warranty with every one sold, guaranteeing to replace any part breaking within two years.



Of the value of cut bone for poultry food we have frequently spoken, and need not speak at length here. It furnishes a most essential food-element, promotes egg-laying, promotes the physical health so that the fowls will be in "better condition," and their eggs will not only show a higher average of fertility, but the chicks hatched from them will be stronger, more vigorous. It is an *economical* as well as a most valuable food, hence we are serving our readers' best interests in urging them to buy a bone cutter, and giving their fowls this treat. They will pay well for it in better health, greater egg yield, more profit; in short, cut bone is a substantial "lift" along the road of "profit from poultry."

We will add that we have seen letters from some of the most prominent poultry men in the State, who are using these cutters and who pronounce them to be all that is claimed for them.

Petaluma Incubator Co., Petaluma, Cal., are Pacific Coast Agents, and will mail free a Catalogue.

Carbolineum is attracting a good deal of attention as a Wood-Preserving Paint, and it will therefore be of interest to our readers to learn that continued experiments and trials have fully demonstrated the important qualities of this antiseptic compound, which so thoroughly protects all kinds of wood. The adulteration of paints and oils, now so extensively practiced, has done much to give *Carbolineum* such a strong hold, because it is cheaper than ordinary so-called oil paints, and affords a much better protection against dampness and against the changes of weather. In support of this claim, Messrs. Muecke & Co., 319 California St., S. F., the general agents for the Pacific Coast, have documentary evidence showing that wood impregnated with Carbolineum was as sound as ever after a lapse of 17 years. The article is invaluable on Shingle Roofs, Posts, Weather-boards, Sills, Barns, and for like purposes. Carbolineum imparts a nice brown (nut brown) color, and prevents the shrinking or swelling of lumber so treated. But in other directions Carbolineum merits also attention. In Germany the farmer gives his plows, if rusty, an application of Carbolineum shortly before plowing. The friction of the soil against the shares will at once make them shine brightly. *Chicken Ranchers* treat the Sills, Walls and Perches of chicken houses with Carbolineum, because it is proven that the fowls will not be troubled any further by lice, on account of the disinfecting properties of the stuff.

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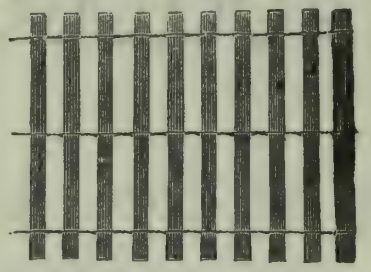


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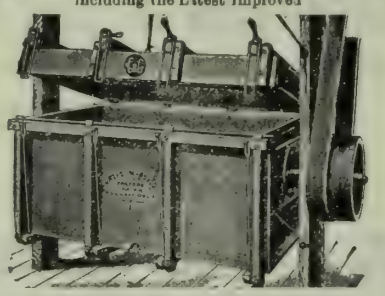
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Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

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Stock will be shown on two Saturdays, April 9th and 16th. Sale takes place on

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Promptly at Noon, rain or shine. Lunch at 11. Sale and Lunch under cover if it rains.

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EVERY ANIMAL PUT UP WILL BE SOLD without limit or reserve, exactly after the manner of the First Souther Farm Sale.

ON EXHIBITION DAYS, April 9th and 16th, Saturdays take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

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Good Health.

Artificial Light and the Eyes.

Medical men consider that forced and undue recourse to artificial light must have a permanently deleterious effect on the eyes. Eye defects are, it is said, unusually prevalent. Oculists testify to an immense increase in their practice during the last quarter; on the other hand, however, we hear of no abnormal demand for spectacles. The best artificial light for the eyes, says the *Optician*, is a subject that should prove of interest to all classes. It has been dealt with very fully by Mr. Gustavus Hartridge, who deems it essential that a good artificial light should have the following qualities, in order that it may have no injurious effects upon our eyes: 1. It should be of sufficient intensity to produce a good illumination, while it is important that no direct rays shall fall upon the eyes; for in the case of a very strong light such as the arc, if the unprotected light be exposed to it for any length of time, congestion of the eyes, with spasm of the pupil and considerable temporary exhaustion of the retina will take place, and will make itself evident by great dazzling and obscurations of the vision, together with swelling of the eyelids; while in some cases serious injury has been inflicted on the retina, and permanent loss of central vision has occurred. This result may occur from exposure of the eyes to any very intense illumination, and even gazing at the sun has produced the same permanent injury in a few cases. 2. That the light should be absolutely steady and of constant quantity; nothing is more fatiguing to the eyes than the constant flickering which occurs with many gas lights and with unprotected candles. The interruptions which are so liable to occur in the "arc" light is one of its great disadvantages, while the incandescent light has been, by improved mechanical arrangements, rendered nearly absolutely steady. 3. As little heat should be generated by the illuminator as possible, the oxygen contained in the air should not be used up, and the products of combustion should be reduced to a minimum, since heat and the products of combustion are extremely irritating to many eyes. These conditions, Mr. Hartridge considers, are most nearly fulfilled by the incandescent electric light, since it contains only a small amount of irritating rays, is fairly steady, gives off but little heat and no products of combustion, while at the same time the oxygen is not consumed. The difficulties at present are in placing the light in such a position, and in shading them in such a manner, that no direct rays can fall on the eyes; experience alone can overcome this difficulty. The point always to be aimed at is to arrange the light in accordance with the requirements of the room; a system of lights intended to illuminate equally a whole room cannot be expected to be the best illumination for special purposes, such as reading and writing. When the light is required for reading or writing, it should be conveniently placed so as to throw the rays on the book by means of a suitable shade. The light should, in all cases, be subdued. The present mode of hanging the incandescent light with a small porcelain saucer shaped shade above, though probably economical as regards the illumination, is decidedly objectionable. It must be conceded that the electric light, judiciously placed, and carefully shaded, has advantages not possessed by any other artificial illumination. Not only is it the best light for strong and healthy eyes, but even those eyes that are unduly sensitive or the victims of disease may work longer, and with less risk and discomfort, than with gas, oil or candles.

Treatment of Influenza.—Cyrus Edson of the Health Department of the City of New York, publishes a monograph on la grippe and its treatment (D. Appleton & Co.). Three indications are to be fulfilled: 1, means must be taken to assist the system to rid itself of the poison to which the attack is due; 2, pain must be relieved, and 3, not the least important, depression must be counteracted. The first indication is obtained by means of castor oil, or two compound rhubarb pills. Three or four three-grain powders of phenacetine are usually sufficient to relieve headache and muscular pains. Salol, two and one-half grains to each dose, may be added to the phenacetine with advantage. He deprecates antipyrine and its congeners, which serve to augment the depression, and recommends instead Hoffman's anodyne, which is diaphoretic, diuretic and stimulant. To overcome depression during and after the disease, he recommends the free use of tonics. He repeats Prof. Laffont's (of Lille) recommendation of coca preparations, those of Mariani being given the preference. During the disease a hot grog, one-third Mariani wine of coca and two-thirds sweetened water, is administered, taken very hot, several times a day, the slight diaphoresis induced being a valuable addition to the tonic action. The editor of the *Satellite*, from which this excerpt is taken, recommends the exhibition of coca in the early stages of the disease, with a view to counteract the impending asthenia and curtail the disease.

Reduction in Postage.

March 28, 1892.

To the Editor:—Our Postmaster General is working hard to secure the passage of a system of free delivery to every farmer's door. This will call for a large increase in the present force, and an enormous additional expense to the postal system. I doubt very much if the average farmer desires it or will really be benefited to an extent at all proportionate to the cost. If our worthy Postmaster General desires to serve the isolated farmer, let him introduce a bill renewing the postage rate on parcels that was in force in 1870, but was repealed by the efforts of the express companies. That rate of 8 cents a pound on merchandise enabled the farmer and all the members of his family to secure the thousand and one little necessities or luxuries that are now denied him by the high postal and express rates. At present, the postoffice charges are 16 cents a pound, while the express companies *very* liberally charge 15 cents for points in the State removed from the railroad, and as much more from distant points as the traffic will bear. The nurserymen, seedsmen and florists patiently waited for relief, but when they found the express lobby all powerful and their efforts useless, they established agencies in Canada, shipped their goods there in bulk and had them mailed back to the United States at the Canadian postal rates. Immediately, the express companies set up a hue and cry about the smuggling system, and the government sent agents to detect the parties that they might be severely punished. They experienced no difficulty in finding them and in discovering that an American citizen had a perfect right to avail himself of the privileges granted a Canadian by the United States, but denied an American, and the natural result was, the express companies lost their case, and the seedsmen got a reduction of 8 cents a pound on postage. The government has lost nothing, on the contrary, it has been the gainer; and so, too, it would be, if the people, as a whole, were given a rate on merchandise in 5 pounds and under packages of 8 cents a pound. Our Postmaster General is one of the largest merchants in the United States and would himself be immensely benefited by it. The Alliance now has its representatives in Congress to work for it, and California at last has, in Mr. Caminetti, a representative whose time is not all taken up in looking after his private railroad interests but one that, knowing the wants of his people, is ever ready and willing to introduce and secure the passage of any bill that will benefit the masses. To-day, more than ever, the agricultural classes need all the help that can be given them; and to-day, more than ever, they are in a position to secure what they ask for, and if a general demand were made for an 8 cents a pound rate on packages to 5 pounds of merchandise, the farmers would be granted it, and every home be benefitted in its ability to supply themselves with innumerable articles that go to make home home-like and life worth living.

E. H. Schaeffle.

Stone should never be used immediately after quarrying. It should be exposed to the weather for a month anyhow before it is used. It thus becomes seasoned and will wear much better. When left to season the under side of the rock as it lay in the quarry should be exposed to the sun When you buy stone for paving or similar purposes insist on its being turned over, that is reversed from the way it was in the quarry before it is laid. The reason for this is that the top surface is much softer, it being of later formation, stone forming from the bottom.

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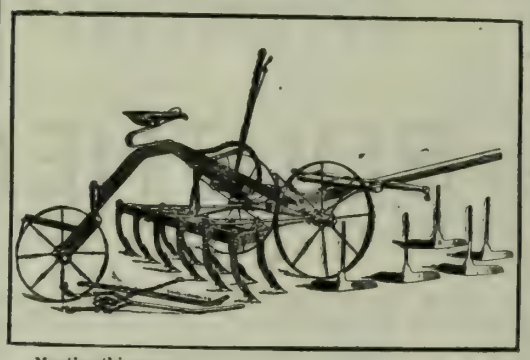
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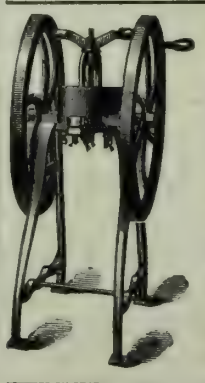
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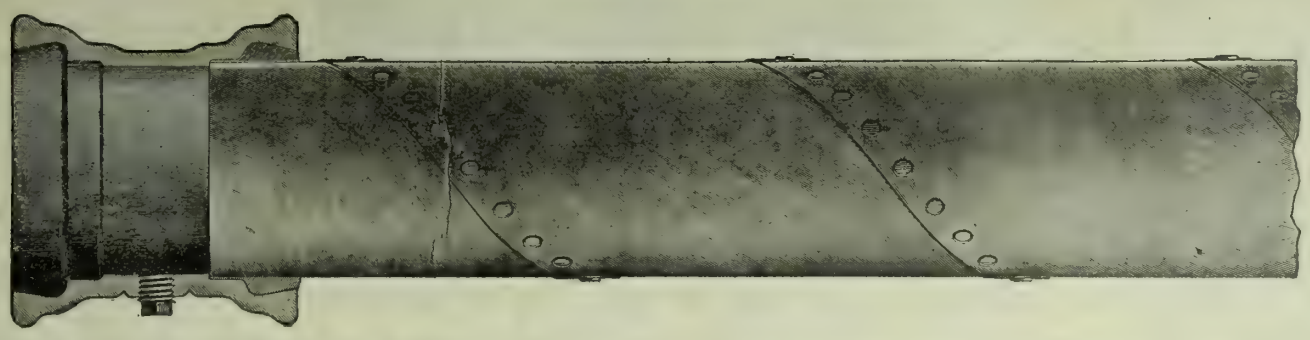
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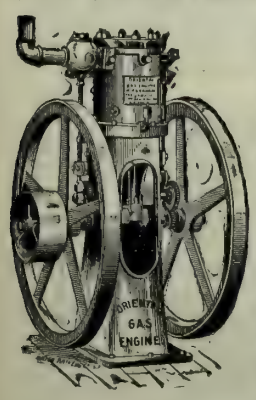
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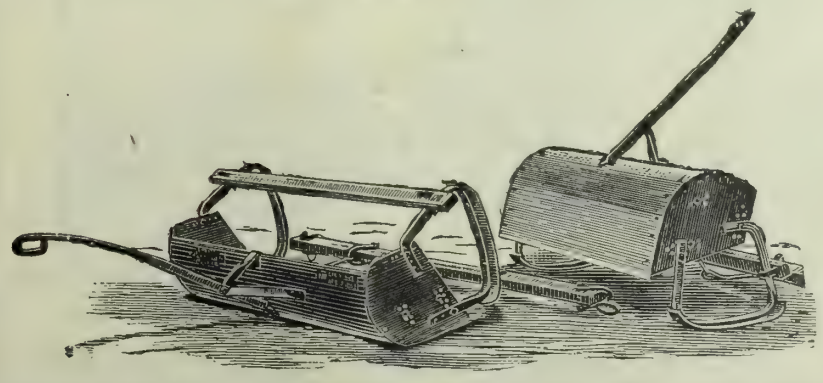
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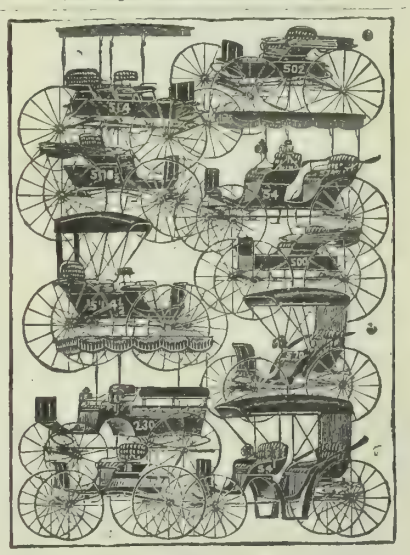
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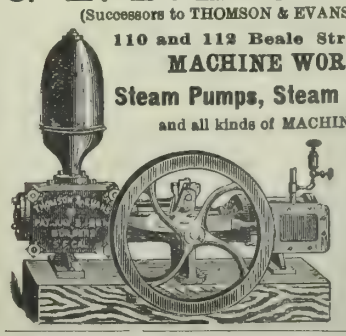
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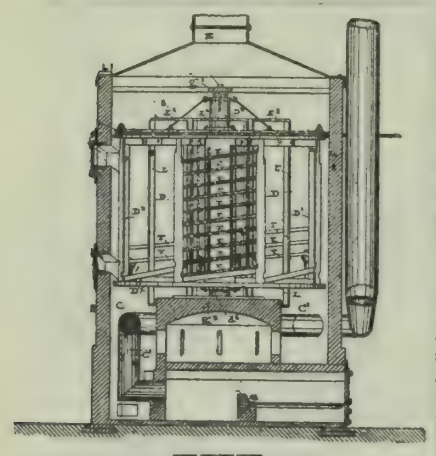
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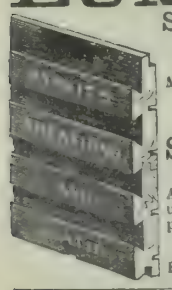
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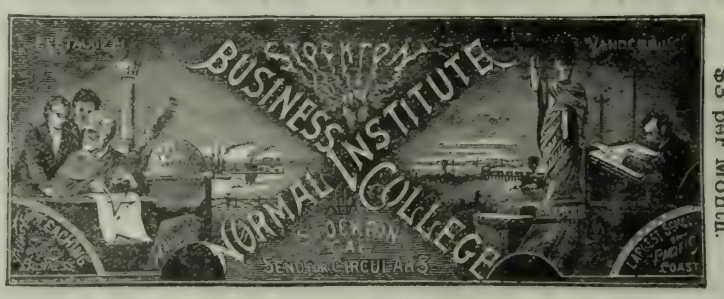
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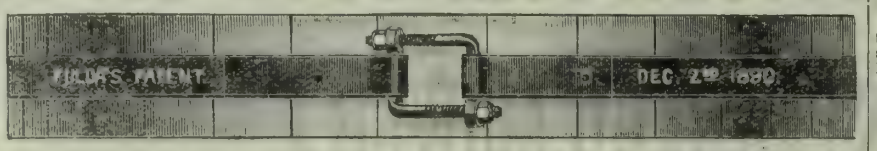
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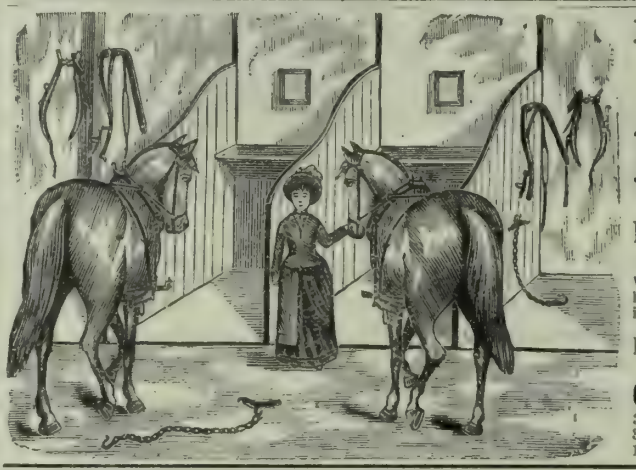
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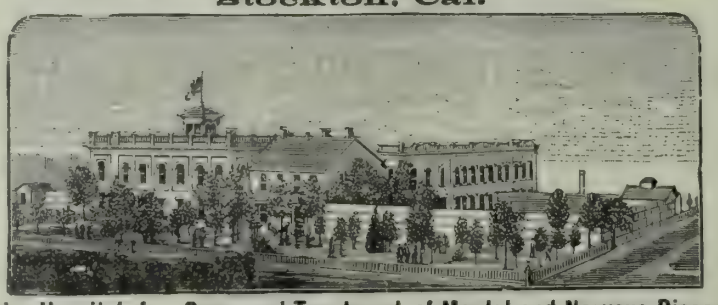
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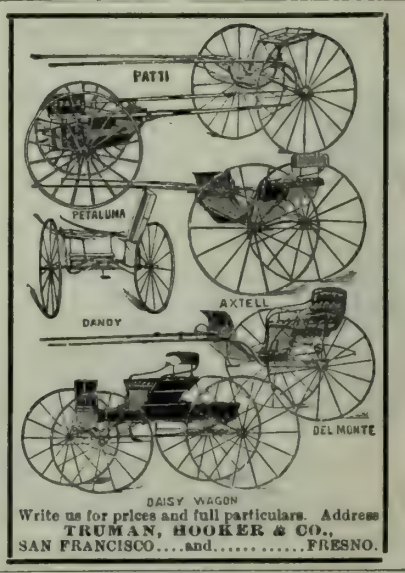
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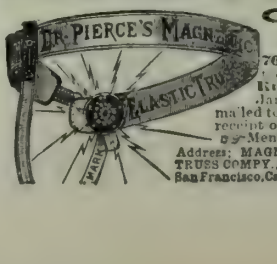
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Entomological.

Remedies for Insects and Fungi.

STATE UNIVERSITY,
BERKELEY, April 4, 1892.

TO THE EDITOR:—The many requests for information regarding remedies for insects and fungi induces us to bring together a few of the more valuable remedies which do not seem to be generally known or used in this State.

For all insects that eat the leaves of plants there is no better or cheaper remedy than one of the arsenites. Under most conditions Paris green is the safest to use. London purple is also usually satisfactory. Sometimes injury to the plant results—a sort of burning of the leaves, and it does not always depend on the strength of the mixture. The arsenites are, however, safer than the caustic compounds which have been so much used. One pound to 200 gallons of water is generally used in the Eastern States, and will be safe here with the proper method of spraying. Peaches and other stone plants, however, require a weaker mixture, say one pound to 300 gallons. For applying Paris green or London purple the nozzle should not be held close to the plant, but far enough off so that the force of the stream will just carry the drops to the leaves, and no more should be applied after it begins to drip. Finally, the vessel from which the mixture is pumped should be kept constantly stirred, for the poison settles very quickly.

For codlin moth the same can be said, and there is no danger from the poison on the fruit if a moth or so passes between spraying and picking.

A very little white arsenic added to the ordinary washes for scale insects makes them more effectual, but care must be had not to put in too much so as to injure the foliage.

For all insects that live exposed on the plants, whether they eat the leaves or suck the sap, a very satisfactory remedy is kerosene in the form of an emulsion. There are several methods of making emulsions. The most satisfactory are as follows:

1.

Milk.....One part.
Kerosene.....Two parts.

Heat the milk to boiling, add the kerosene and mix it for five to ten minutes by pumping through a spray pump. The emulsion so produced is like clabber and when cool becomes almost as thick as butter. When mixed with water the whole becomes milky and no oil is found on the surface. To use this emulsion add 10 to 15 times as much water and spray. If only a little is wanted for garden plants, the stirring can be done in a bowl with an egg beater.

2.

Soap solution.....One part.
Kerosene.....Two parts.

Make the soap solution by dissolving soap in water at the rate of one-half pound to the gallon. Prepare the emulsion in the same way as the milk emulsion. These proportions are for good soap; a larger quantity should be used in the case of poor soaps, especially with the soft mixtures sold as whale oil soap.

3.

Soap solution.....Eight parts.
Kerosene.....One part.

This emulsion does not require so much stirring, and for using add only about twice as much water as emulsion. It is somewhat easier to make, but is more expensive.

For most fungi, as a preventive measure, Bordeaux mixture is the best thing known. This is made of equal parts of lime and copper sulphate or bluestone. Slake the lime and dissolve the bluestone, and when they are cool pour the whitewash into the bluestone solution. Use about a pound each of the two substances for making five gallons of the mixture. After mixing well and straining, it is ready for use.

C. W. WOODWORTH.

Protecting Trees from Sunburn and Borers.

JULIAN, SAN DIEGO CO., 1892.

TO THE EDITOR: I notice occasionally in the PRESS an article on how to protect young trees from the borer. We, the people of the Julian apple country, have had a long experience with the borer, so I will write you what we now have decided is the best remedies used by us, after trying a great number of washes.

The first trees set out here some twenty years ago nearly all died by the borers, but we being of little experience in fruit-raising, laid it to the nurserymen selling us refuse stock of old and wormy trees. Many were the curses that the nurserymen got.

Now we wrap with newspapers, digging the dirt away at the bottom of the trees, and wrapping the young tree with a newspaper from about three inches below the surface up to the first limbs. When the paper is wrapped tight we crowd the dirt back at the bottom and never tie the paper. In most every case the paper stays on until the next spring. Rabbits will never eat through the paper.

Another good way is to take old barrel staves, or nail-keg staves, or any pieces of worthless boards, put them in a wheelbarrow with a saw and go along the row of young trees. Shove a piece of board down in the dirt on four sides of the tree; cut a notch on each side of each board about one inch from top; then take two strings and tie a hard knot at each notch, and you have a shade that will keep the borer's eggs from hatching and the rabbits away for years; and also it will keep the singletree, to quite an extent, from barking the tree. Thrifty trees after three years in the orchard will not need wrapping. H. F. WILCOX.

Guavas.

Since the advertisement of the Aloha nurseries was printed on page 347 of this issue, Mr. Fred C. Miles, manager, writes us that they wish to withdraw Villa Franca, Lisbon and Eureka lemons, Shamrock orange and banana bulbs from their present offering, as these supplies have run out. Next week, an announcement of strawberry guava plants, five and six years old and bearing, will appear in their advertisement. The production of guavas has constantly increased in this State during the last few years, and fine guava jelly has been made for home use and for sale. One variety at least, the strawberry guava (*Psidium cattleyanum*), has been proved hardy and productive over a large area of the State. Those desiring to try the plant should note the offer by the Aloha nurseries at Penryn.

Rural Health Retreat.

This large and leading medical and surgical sanitarium, near St. Helena, has steadily increased in dimensions and importance during the past 15 years. It is conducted more upon the principle of a large and well regulated home for those seeking pleasure and health who are merely a little overworked, (or for other not overpressing reasons require a slight change only) to those who are suffering serious ills or difficulties.

Its location, within three miles of the center of the town of St. Helena, on a spur of Mount Howell, is most decidedly picturesque, healthful and pleasant. Having frequently visited this institution during years past, the writer can conscientiously, and with pleasure, speak very favorably of the straightforward, as well as kindly, manner in which both the gentleman and lady managers and their faithful helpers attend to their daily duties, sincerely evincing a true regard for the comfort and welfare of their guests, whether of modest or high station in life.

Marked success has attended the Rural Health Retreat the past year. Its patronage has been very large and has naturally demanded more help in the medical department. The Board has now secured the assistance of Dr. Maxson and wife. Doctors W. H. and Hattie Maxson's long experience in the large sanitarium at Battle Creek, Mich., the success of their sanitarium at Fresno, and their past two years' experience traveling in Europe, warrant the managers in promising the most efficient medical assistance at the Rural Health Retreat of any institution on the coast. They are confident that their lady patrons will find in Doctor Hattie Maxson all they could desire in kind attendance and competent medical advice.

Doctor Burke, who has been laboring hard in the Retreat for over two years, with little or no recreation, we learn, has found it incumbent upon him to take a rest for a time. However, he will not leave until the new physicians have fully gotten hold of the work, so that all who come may feel assured of being well cared for.

A Successful Land-Clearing Machine.

We learn from Joseph Trays that he is using a land-clearing device on his place known as the California Stump Puller, with which he is highly pleased and speaks of it as the greatest labor-saving device of the age. Mr. Trays has used the machine sufficiently to clear ten acres, which was thickly covered with oak stumps, and says he can pull a stump six feet in circumference in two minutes.

The machine is operated by horse power, and when set will clear from 2 to 5 acres, according to the length of cable used, without changing its position.

The cable, which is not much larger than a clothesline, yet having enormous strength, is what is known as English patent plow steel cable and is imported by the manufacturer of the machine specially for his purpose. Mr. Trays says that the work done is much better than it would be possible to do it by hand, as all the roots are taken out clean, the ground is well broken up, and the plow meets with no obstructions.

Fine American Chromos.

L. Prang & Co. seem to have taken unusual pains in their Easter art presentations to the public this year. The firm is steadily progressing, in fact, in all its varied and extensive lines of fine art productions and a standing credit to American enterprise the world around.

Additional Fraternal Matter.

The Secretary's Column.

EXECUTIVE COMMITTEE MEETING.

The full board met at the office of the Secretary, April 5th. Visitors: Amos Adams, H. A. Brainard, S. E. Watson, Mr. Mills, Mr. Stone and D. A. Ostrom.

The subject of Grange lecture appointments was discussed and changes in the programme announced made, providing that E. W. Davis and B. F. Walton shall address a public meeting of March Grange at Pennington on Monday, May 2d, and Gridley Grange on Tuesday, May 3d. Some other necessary changes will probably be decided on and published later.

The matter of Grange papers was discussed with H. A. Brainard, Amos Adams, S. E. Watson and others, and the *California Orchard and Farm* and *Pacific Tree and Vine* were recommended.

Bills (including expenses, etc., of lecturers in the field) to the amount of $292.10 were allowed.

Under authority of the last session the committee appointed Thursday evening, October 6th, for conferring the Fifth and Sixth Degrees at the next annual meeting in San Jose.

FINANCIAL STATEMENT.—The funds of the State Grange, April 1st, stood as follows: General fund, $682.59; Lecturer fund, $2233.78. Total, $2916.37.

SPEAKING AND FEASTING.—Temescal and Eden Granges will receive State Grange lecturers (names not yet positively decided upon) and hold meetings in the forenoon, Harvest Feasts at noon, and open meetings in the afternoon, respectively, on Thursday and Friday of next week. It is hoped that there will be a large attendance of visiting Patrons, farmers and their families. Able speakers will certainly be present, including, most likely, the State Grange Master and Overseer. Dixon Grange will have more of the same kind on Saturday the 16th.

SUDDEN AFFLICTION.—E. W. Davis, W. M. of S. G., on Saturday, April 2d, while just arranging notes for speaking at the public meeting of San Jose Grange, received a telegram containing the sad news of the death of his little nephew, son of ex-Mayor Davis of Oakland. Mr. Davis, completely overcome, immediately started for Oakland. The child's illness was very sudden, and the sympathizers of its parents and relatives, numerous and sincere.

JOINT STATE DISCUSSIONS.—Mrs. B. Scofield, of Cornelius, Oregon, Chairman of State Committee on Woman's Work in the Grange, by joint arrangement of the California, Oregon and Washington Granges, furnishes the following questions for discussion in the Subordinate Granges during April and May:

1. Is it a fact that the farmer of to-day is more oppressed than in former years? If so, what are the causes?
2. How can the farmer receive a better return for his industry?
3. Should the farmers unite and control the offices of the nation?

It is expected that each Grange in these States will debate these questions and report to the local and fraternal press.

Lecturers in the Field.

Thos. M. McConnell reports a good meeting at West San Joaquin Grange, at which he says Dr. Caples made a telling speech. Daniel Flint, B. F. Walton and C. P. Berry have met with good cheer along the line of their march. Overhiser, Webster and Geo. Steele have been doing good work in Monterey and San Luis Obispo counties.

FRATERNAL VISITATION.—Tulare Grange paid a fraternal visit to Selma Grange on the 2d inst. Addresses were made by Mrs. Kinney, Mrs. Smith and the venerable Mr. Tuohy. There was the usual social accompaniment, and the occasion was an entire success.

President Cannon on the Canal Convention.

In a private letter to a friend and associate in the Alliance, President Marion Cannon writes from Ventura, date April 4th, as follows:

"I will make that a black day for the canal company. When I gave my approval to the memorial they had spent a month in writing, they knew there must be something wrong in it, and after recess they found the little joker in this sentence: 'It should be *built* and *forever managed* and controlled by the United States.' This would not do. It would deprive them of millions in building it with their 'Construction Co.,' and if the Government should '*manage*' it forever, their power to rob the commerce of the world would be destroyed. So they struck out the words 'built and managed,' which left them in full control of the construction and management, and of course I would not vote for it after these words were stricken out. This amendment exposes their hypocrisy in claiming that they were willing for the Government to control it. When I had shown them how the Pacific railroads had treated the Government and the people after building and giving that corporation the road, and how they had used the money filched from labor to corrupt our people, our legislators and our courts, and after I had shown them the futile attempt of the Traffic Association, with their $10,000 expert, to get any relief even from the Railroad Commission,—when I had shown these facts and attempted to apply them to the Canal Company, they choked me off and would not give me five minutes to finish my speech. I stood upon that floor the representative of over sixty thousand wealth producers of this State, who are more directly interested in the construction of that canal than all the lawyers and politicians in the State. I also stood there the representative of over ten millions of the wealth producers of the United States, and was denied five minutes of their precious time, and then all the subsidized press howled that the State President was most effectually sat down on. Well, I want all these people to understand they have not hurt the State President, but when the wealth producers of this State sit down on these would-be millionaires, they will come to the conclusion that a Kansas cyclone has struck them. I am satisfied with the proceedings of the convention. It gave the Canal Company a black eye, and they will be totally blind after a few more rounds with the Farmers' Alliance."

PRESIDENT CANNON will doubtless be among the visitors from abroad at the quarterly session of the State Executive Committee of the F. A. & I. U., opening in S. F. Monday A. M., April 18th. Chairman E. M. Wardall, of the State Central Committee of the People's Party, will be in attendance at their meeting at People's Party Hall on Saturday A. M., April 16. Mrs. C. E. Kinney (lady member) will be present for the first time.

A PEOPLE'S PARTY CLUB of 20 members, including a number of young men, was organized last Saturday evening at Irvington by Mrs. K. L. Nevins. This is the first club formed outside of Oakland in the county.

RARE PLANTS.—Mr. H. J. Rhodes has made another return from the Hawaiian Islands, and will go to his home in Los Angeles. Mr. Rhodes brings some rare plants, among them two magnificent *cycas media* in full frond and standing nine feet high. He has not yet decided what disposition to make of these specimens. He brings also others of the same species of smaller size and other plants and bulbs.

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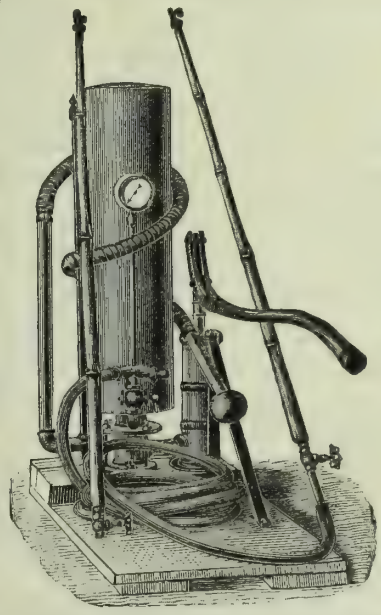
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 6, 1892.

General trade the past week has been restricted by light obtainable supplies of wheat, higher prices and light supplies of barley, and wool growers not disposed to sell at current quotations put out by buyers. The increasing supplies of spring vegetables are attracting more buyers, who will increase steadily in numbers as the season advances. The money market is slow in the absence of any marked demand. This is witnessed in the falling off in exchange balances, the past week, of over $5,000,000 when compared with the like week in 1891. In that latter week there was an engaged tonnage for wheat loading in port aggregating over 60,000 tons register against a little over 18,000 in this year. This is a serious falling off, which is readily reflected in the money market. Other farm products were moving freely in 1891, while now they are slow; but then better times are looked for with a feeling of confidence based on past experience. The low price and unsettled markets for silver has very much to do with the present dull situation in leading farm products.

Foreign Grain Review.

NEW YORK, April 4.—The Mark Lane *Express* says: There is an average decline of 1s in English and foreign wheats. California cargoes are pressed for sale at 3s 9d. American flour has lost 1s. Corn is weak; American on passage, 20s. Barley is depressed, foreign grinding, 21s. At to-day's market English and American flour dropped 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June.	July.	Aug
Thursday	.....	7s03 d	7s03 d	7s03 d	.....
Friday	7s03 d	7s02½d	7s01½d	7s01½d	7s01d
Saturday	.....	.....	.....	.....	7s01d
Monday	7s05 d	7s02 d	7s00½d	7s03½d	.....
Tuesday	7s03½d	7s01½d	7s03½d	7s01¾d	7s01d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	
Thursday	37s3d	37s3 1	37s3d	Market for P. S. Weaker.
Friday	....37s3 1	37s00	37s5d	Inactive weather fine.
Saturday	.....	.....	.....	
Monday	....36s8d	37s00	37s6d	Weaker weather brilliant.
Tuesday	....36s8 1	36s3d	36s3d	Slow.

To-day a cablegram is as follows:

LIVERPOOL, April 6.—Wheat—Red is firmly held while white is very dull. California spot lots, 7s 5d; off coast, 35s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, more demand; on passage, slightly better; Mark Lane wheat, very slow.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug
Thursday	154½	147⅞	147⅞	140⅞	....
Friday	154⅞	149¼	149⅞	148⅜	....
Saturday	....	....	151¼	....	....
Monday	156	151	148⅝	148½	14 3
Tuesday	156⅜	151½	148⅝	148⅛	148⅛

The following are to-days' telegram:

NEW YORK, April 6.—Wheat—94½c for April, 91⅛c for May, 89½c for June, 89⅛c for July, 89½c for August, and 87½c for September.

CHICAGO, April 6.—Wheat—86⅛ for May and 80¼c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H	L.	Seller 1892. H.	L.
Thursday	154½	154½	143½	141½	140⅜	139½
Friday	154½	153⅜	141½	141⅜	139½	138½
Saturday	153	152⅜	....	....	138⅜	138
Monday	152⅜	152	142½	142½	139	138
Tuesday	152½	152½	....	....	138½	138

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal Session: Buyer season—100 tons, $1.53; 1000, $1.52½ ₱ ctl. Regular session: Buyer season—700 tons, $1.53; 400, $1.52½; 100, $1.52½. Buyer August, 100 tons, $1.42 ₱ ctl. Afternoon—September—100 tons, $1.04. Seller 1892—100 tons, $1.38½ ₱ ctl.

BARLEY.

	Buyer Season. H.	L.	*May H.	L.	June. H.	L.
Thursday	99	97½	93½	93½	....	....
Friday	97½	97⅜	....	....	....	....
Saturday	98½	98	....	....	....	....
Monday	103½	100	....	....	....	....
Tuesday	105	102½	....	....	93½	93½

*New crop.

The following are to-days' recorded sales on Call.

Informal: Buyer season—200 tons, $1.07½; 200, $1.07½; 100, $1.07; 100, $1.06½ ₱ ctl. Regular session: Buyer season—300 tons, $1.06½; 500, $1.06½; 200, $1.06½; 100, $1.0 ⅞; 100, $1.06 ₱ ctl. Afternoon—Seller 1892—100 tons, 88½c; 100, 88½c. Buyer season—100 tons, $1.05½; 200, $1.05½; 100, $1.05½; 100, $1.06½; 300, $1.06 ₱ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, April 4.—Unpeeled peaches are not in stock. Prunes are active and firm. Five carloads were taken this week. Fifties to sixties, 9c; sixties to seventies, 8c; seventies to eighties, 7½c; eighties to nineties, 7c; smaller, 5½@6c. Raisins, unchanged. The movement is unimportant. Apricots—Light supply; strong as last quoted.

Eastern Wool Markets.

NEW YORK, April 4.—The demand is generally tame. Buyers are well stocked. The outlook for the new clip is not brilliant at this moment. Sales at New York—328,500 domestic; 39,000 of white was Spring California at private terms; 408,000 foreign. At London sales opened at 2½@5 per cent lower, with some recovery at the close. Cloths are in good demand. Underwear is quiet. Boston sales, 1,366,000 domestic; 710,000 foreign. There is little California pull on hand. The Philadelphia market is dull and easy for buyers.

Eastern Hop Markets.

NEW YORK, April 4.—Hops went up Thursday, closing strong, helped by a steady but not large local demand. There is an advance for Coast and State 9s of 1@1¼c; choice, 26½@27c; fair to prime, 24@25½c; common, 20@23c. Nineties range from 13@18c; olds, 6@10c. Exports for the week are 549 bales. Exchange call price closed, May, bid, 24½@27c; June, 26¾@28c; July, 27@28¾; August, 25@29c. Little was done, but sellers are confident.

Miscellaneous.

NEW YORK, April 4.—Lima beans are weaker; $1.75 per bushel is the extreme; $1.60 was refused for 5000 bags of recent Pacific Mail arrival, which were held at $1 65.

Mustard seed—California brown, 4¾@5c; yellow, 5@5½c. These rates are only exceeded by choice Trieste.

Wheat Crop of the World.

The U. S. Agricultural Department furnishes the following comparative tables of the production of wheat:

WINCHESTER BUSHELS OF SIXTY POUNDS.

	1891.	1890.	1889.
North America:			
United States	611,780,000	399,262,000	490,560,000
Canada:			
Ontario	33,611,074	25,282,000	19 288,983
Manitoba	23,922,598	14,000,000	11,922,511
Total	669,313,672	428,493,412	521,777,494
South America:			
Argentine Republic	33,069,030	41,703,683	11,350,000
Chili	14,187,500	18,567,360	12,768,750
Total	47,256,700	60,271,043	24,118,750
Europe:			
Austria	41,143,75	51,440,667	42,000,000
Hungary	126,268,750	165 345,000	94,020,333
Belgium	14 187,500	19,573,075	19,000,000
Denmark	3,713,472	5,776,512	5,000,000
France	232,360,236	338,902,124	316,268,369
Germany	126,253,563	94,899,840	82,000,000
Great Britain	74,400,714	75,656,617	75,576,383
Ireland	2,815,437	2,639,399	2,680,838
Greece	5,675,000	12,378,240	5,000,000
Italy	126,254,563	126,610,746	103,832,354
Netherlands	3,713,47.	6,189,120	5,675,000
Portugal	8,252,160	8,252,160	8,512,500
Roumania	53,073,684	63 954,240	44,784,853
Russia	169,108,708	197,739,200	188,535,989
Poland	12,680,920	22,313,12?	
Servia	7,945,000	10,315,200	5,000,000
Spain	71,349,094	70,143,360	75,622,213
Sweden	4,551,35?	3,956,043	3,708,045
Norway	412,698	412,608	283,750
Switzerland	4,041,766	2,475,84?	2,270,000
Turkey	33,008,640	37,735,720	39,725,000
Total	1,121,558,740	1,316,177,644	1,119,495,627
Asia:			
India	255,434,667	235,345,600	243,076,549
Asia Minor	37,029,375	37,134,720	36,887,500
Persia	2,963,400	22,993,440	22,500,000
Syria	12,343,122	12,378,24	12,768,750
Total	325,437,567	307,552,000	315,232,799
Africa:			
Algeria	21,281,250	22,693,440	22,500,000
Cape Colony	4,126,081	3,713,472	3,800,000
Egypt	11,14 ,416	8,252,160	7,945,000
Tunis	4,256,25?	4,256,250	
Total	40,803,996	38,915,32?	34,245,000
Australasia	33,874,606	42,480,131	26 205,957
Grand Total	2,238,245,681	2,203,889,552	2,041,075,627

* Official.

Cereals.

Geo. A. Abel, official inspector of the Produce Exchange Call Board, reports the following stocks of grain, etc., in city Call Board warehouses at the close of March, and on the first of that month:

Tons.	March 1, 1892.	March 31, 1892.	March 31, 1891.
Wheat	1,068	2,182	6,904
Barley	13,837	12.718	7,997
Oats	4,609	2,566	2,020
Corn	2,564	1,893	1,638
Bran	225	249	275

The receipts in March, 1892, were 33 674 tons wheat, 10,837 barley, 1340 oats, 460 corn and 2831 bran.

The stock of wheat March 31, 1892, in all Call Board warehouses was as follows:

	Tons.
San Francisco	2,182
Stockton	39,136
Port Costa	24,505
Total	65,823

As against 126,491 tons on March 31, 1891.

The report of the Belgium Department of Agriculture makes the yield of the Belgium crops 21 hectolitres per hectare against an average of 25 hectolitres for the two previous years. Taking the official figures of the production of wheat in Minnesota and the two Dakotas, the movement and estimated consumption indicates that the farmers have sold all their grain. The production of the three States is 131,300,000. The receipts at principal points, country elevator stocks and estimated consumption and seed, as given by the Minneapolis *Market Record*, amount to a total of 132,600,000, an apparent deficit of 1,300,000. As there seems to be no lack of supplies in the country, something must be wrong with the figures for the crop. The first revised figures for the population of British India are given at 288,159 000. The number of people per square mile is 168, against 165 ten years ago. The production of wheat in India is less than one bushel per capita, the crop last year being 255,000,000, and this year it is estimated at 225,-000,000.

LONDON, March 26.—*Dornbusch* says that the latest reports from France are that serious damage has been done by cold weather in several provinces and unsettled weather is materially retarding spring work.

The imports of wheat into Germany for the month of January were 5,808,000 bushels, as against 2,224,000 bushels for the corresponding month last year. The imports of rye were 1,056,000 and corn 1,656,000 bushels.

The Melbourne *Argus* says that the weight of wheat for the new crop in Victoria has been settled upon as 63 pounds to the bushel, the same as the South Australian average. The new crop is estimated at 13,387,000 bushels, with 375,000 bushels remaining from last year's production.

It is estimated that 8,600,000 bushels of wheat can be supplied by Eastern Siberia as soon as navigation opens.

Dornbusch, published at London, Eng., says that at the middle of March it was seldom the condition of agriculture had been so backward as it was this season.

Yesterday's cable from London gives the following: Wheat and flour on passage to United Kingdom, 3,216,000 qrs; Continent, 1,270.000. Imports of wheat into the United Kingdom during the past week, 171,-000 qrs.; flour, 305,000 bbls. Shipments of Indian wheat during the past week United Kingdom, 42,500 qrs.; Continent, 42,500. English country markets, mostly slow. Stocks in London, April 1st: Wheat, 525,000@550,000 qrs.; flour, 700,000@725,000 bbls.

There are several more charters reported for next season loading. The large disengaged tonnage in port assures us of a liberal supply of freight room for next season's large wheat crop. Present advices from the agricultural districts warrant the assertion that the crop will be the largest on record. Considerable is said to have been beaten down by recent storms; but with the improved machinery now in use, this counts for little, for it can be harvested.

The local wheat market has continued sluggish. While prices moved up slightly in sympathy with an advance in the market value of silver, yet as soon as the latter began to decline, wheat eased off more in proportion. The writer is firmly impressed with the belief that while the range of prices for wheat will probably go slightly lower, yet it will be temporary only, and that when a recovery sets in, we will see much higher prices for both that cereal and silver, and that, too, before harvest sets in. There is nothing, at this writing, to justify prices going below $1 50 per cental on Call for buyer season wheat, and this option is hardly likely to fall below this figure except through cross orders. There is a strong bear selling chiefly by leading English houses for their correspondents abroad; and of course silver and everything else, to unfavorably affect the market, are brought into play with which to facilitate their movement on the bear side. The available supply of wheat in this State, Oregon and Washington is very small for this season of the year.

The local barley market continued to rule low up to and including Saturday last, but on Monday, under strong bull manipulation, prices on Call were advanced, with still higher ranges for buyer options on Tuesday. The available supply in this State, and also up North, is conceded to be light, barely enough to meet current wants up to the time when new will be available. This opinion is in keeping with the writer's heretofore expressed views on the situation. The export movement continues free, as does the home consumption. Crop prospects are of the best.

With better prices for barley, and light receipts with depleting stocks, oats show a stronger tone. The consumption or feed demand is large, if anything considerably more than it was at this time in 1891. The crop outlook on this coast is favorable for an increased yield over last year's outturn.

Corn is steady. The demand is slow, but, then, receipts are light. It is said that the crop this year in California will show a decided increase over that in last year.

Buckwheat and rye are firm, with a fair inquiry ruling for the latter.

Feedstuff.

The market for ground feed shows more strength, with an advance in bran, middlings and roll barley. The consumption is free for the time of year. With natural pasturage so good as it is at present, prices should go down, but they do not. This fact is accepted as going to prove that there is a large increase in the consumption requirement.

Hay shows a stronger tone under moderate supplies and a good demand. Crop advices continue uniformly good. It is generally claimed that the yield will be all of from 20 to 30 per cent more than it was in 1891, but this is more than offset by an increase in feeding to work animals, dairy cows, and for fattening purposes.

Live Stock.

The market for mutton sheep is lower under freer offerings and a lighter demand. It is said that cold rains in last week killed large numbers of sheared sheep in Nevada, but we are unable to get the report verified. Bullocks are barely steady. It now looks as if lower prices will soon rule. Calves are lower. Hogs are steady.

Dairy Produce.

The following shows the receipts of butter, cheese and eggs at this port in March:

Sources—	Butter, lbs	Cheese, lbs.	Eggs, doz.
California	1,180,9.0	381,000	287,146
Oregon	6,500	1.400	360
Eastern	900	191,800	71,250
Totals	1,188,700	574,200	358,756
January	502,200	476,900	420,345
February	622,550	313,500	250,765
Three months	2,312,350	1,364,600	1.029,866

During the first three months of 1891 the receipts were 2,466,300 lbs butter, 1,427,400 lbs cheese, and 891,-285 doz. eggs. In the past quarter there was a comparative decrease in butter and cheese and an increase in eggs.

Butter is weak, with shading in prices the order. Creamery (square rolls) is in good demand at from 1 to 1¼ cts. over the range for dairy or round rolls. The demand from up North begins to show signs of falling off.

Cheese continues firm, which does not often occur at this season of the year. Receipts are large and steadily increasing, but somehow or other it goes out, and consequently stocks do not show any decided increase.

On Friday and Saturday last the egg market strengthened and sold to higher figures, with 21@22 cts. touched for very choice. Yesterday the demand was slower, with no increase noted to-day. It is claimed that supplies are being held back in expectation of better prices next week.

Fruit.

Strawberries are coming in more freely, causing prices to shade off. With warm and clear weather, the receipts will show a decided increase, which will necessarily cause lower prices to rule.

Choice to fancy apples are about out of the market. The varieties offered are poor to good. The demand is slow.

Limes and lemons are in fair supply only, but as the demand is slow the market does not show much if any firmness.

The receipts of oranges are lighter, particularly that of frosted, which are creating a stronger market with better prices paid for choice to extra choice. Highland and Redland (San Bernardino county) oranges are fetching the highest figures.

The dried fruit market is firmer for the more choice of each kind of fruit, but as the season is towards its close, sellers do not haggle for an advance, believing it to be the better policy to clean up all available supplies before the new season sets in, and it now looks as if they will be successful.

Raisins are unchanged. The stock in this State is said to be lighter than it was at this time in 1891. Shipments to the East and to distributive points up north are fair for this time of the year.

Vegetables.

In garden truck there are increasing receipts of peas with lower prices ruling. Asparagus is higher under a free local demand together with free shipments up north. Rhubarb is fairly steady. String beans are slow coming in. We still have to depend on Los Angeles for cucumbers, tomatoes and green peppers, and in consequence high prices rule.

Onions if choice good keepers are readily placed at outside figures; poor keepers continue in buyers' favor.

Old potatoes are a drug in the market. Only choice good keepers of the best varieties find customers. New potatoes are declining steadily. The receipts are heavy.

For poultry the market is strong and higher for all kinds, under light receipts and a good demand.

The receipts of beans are free, but prices are no lower.

Nuts are steady with a fair demand for the season.

Honey is scarce and higher.

Mustard seed will fetch an advance on quotations, but there is none offering for sale.

Hops are in good demand, but like everything else, when prices are higher growers have very little to sell. For next season's crop an advance is bid on previously reported sales.

The wool market is sluggish. Growers are slow to accept the lower bids and buyers say that in view of the off sh markets at the East they do not feel justified in paying more.

Miscellaneous.

From reliable advices up to April 6, the following summary tonnage movement is compiled:

	On the way 1892.	1891.	In port 1892.	1891.
San Francisco	200,390	251,573	*125,724	64,566
San Diego	15,686	14,717	8,510	.....
San Pedro	3,547	8,717	....	21,59)
Oregon	23,857	27,720	23,674	
Puget Sound	9,899	27,903	.....	
Totals	253,379	330,637	157,908	86 156

*Engaged for wheat, 1892, 13,267; 1891, 60,691 †For new crop loading, 5,161

The statistics of produce exports from this port from July 1st to March 31st, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,976,073	10,295,780
Flour, bbls	838,605	896,811
Barley, ctls	786,333	208,535

Produce Receipts.

Receipts of produce at this port for 7 days ending April 4, '92, were as follows:

Flour, qr. sks	32,649	Bran, sks	6,094
Wheat, ctls	22,9 9	Buckwheat "	....
Barley, "	43,638	Middlings "	2,936
Rye, "	97	Chicory, bbls	50
Oats, "	....	Hops, "	....
Corn, "	2,358	Wool, "	4,767
*Butter, "	1,150	Hay, ton	1,216
do bxs	734	Straw, "	79
do bbls	....	Wine, gals	211,310
do kgs	....	Brandy, "	4,100
do tubs	50	Raisins, bxs	2,576
do ½ bxs	403	Honey, ca	....
*Cheese, ctls	811	Peanuts, sks	63
do bxs	22	Walnuts "	....
Eggs, doz	39,460	Almonds "	121
do Eastern	12,000	Mustard "	....
Beans, sks	13,932	Flax "	....
Potatoes, sks	4,384	Popcorn "	....
Onions, "	1,490	Broom corn, bbls	....

*Over'd. 100 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to April 4, '91.	July 1, '91 to April 2, '92.
Flour, ½ sks	245,975	381.562
Wheat, ctls	1,267,239	1,206,284
Barley, "	265,057	39,491
Oats, "	312,450	370,359
Wool, bales	5,918	6,011
Hops, "	443	431
Rye, sks	....	8,853
Potatoes sks	73,558	117,248

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, April 6, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 80 @ 2 05	Extra, City Mills	4 80 @ 5 00
Butter	2 40 @ 2 80	Do Country Mills	4 75 @ 5 00
Pea	2 20 @ 2 80	Superfine	3 00 @ 3 30
Red	1 90 @ 2 15	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	4 @ —
Small White	2 25 @ 2 65	Do Choice	6 @ —
Large White	2 20 @ 2 45	Do paper shell	7 @ —
Lima	1 60 @ 2 10	Almonds, soft shl	10 @ —
Wld Peas, blkeye	1 30 @ 1 50	Paper shell	12 @ —
Do green	1 30 @ 1 50	Hard Shell	6 @ 7½
Do N Les	1 25 @ 1 40	Brazil	6½@ 8
split	3 85 @ 4 15	Pecans small	11 @ 13
BUTTER.		Do large	14½@ 16
Cal. Poor to fair, lb	12½@ —	Peanuts	1½ @ 3
Do good to choice	18 @ —	Filberts	10½ @ 12½
Do Giltedged	— @ 19½	Hickory	7 @ 8
Do Creamery rolls	19 @ —	Chestnuts	11½@ 16
Do do Giltedge	— @ 20½	**ONIONS.**	
Eastern	15 @ —	Silver Skin, Choice per ctl	1 00 @ 1 25
CHEESE.		Fair to Good	75 @ —
Cal. choice mild	11½@ 12	Cut	40 @ —
Do fair to good	9½ @ 11	**POTATOES.**	
Do gilt edged	— @ 13	Early Rose, ctl	25 @ 40
Young America	— @ 14	Burbank Seedling	20 @ 45
EGGS.		Do do Oregon	50 @ 1 00
Cal. ranch, doz	19 @ —	Do Humboldt	40 @ 75
Do do selected	— @ 21	River Reds	15 @ 35
Do store	18 @ —	New	60 @ 1 25
Eastern	18 @ 20	Sweets	— @ —
FEED.			
Bran, ton	16 00 @17 00		
Feedmeal	26 00 @28 00		
Gr'd Barley	23 00 @24 00		
Middlings	18 00 @19 50		
Oil Cake Meal	— @25 00		
Manhattan Food ₱ cwt	1 50		
HAY.			
Wheat, per ton	13 00 @ —		
Do choice	14 50 @ —		
Wheat and Oat	12 00 @ —		
Wild Oats	11 00 @ —		
Cultivated do	12 00 @ —		
Barley	11 00 @ —		
Alfalfa	10 00 @ —		
Clover	11 00 @ —		
Straw bale	45 @ 60		
GRAIN, ETC.		**PROVISIONS.**	
Barley, feed, ctl	90@ 1 05	Cal. Bacon, he'vy, lb	9½ @ —
Do Choice	1 00@ —	Medium	10½ @ —
Do Brewing	1 06½ @ —	Light	12 @ —
Do do Choice	1 15 @ —	Lard	9 @ 11
Do do Giltedge	1 17½@ —	Cal. Sm'k'd Beef	11½@ —
Do Chevalier	1 05 @ 1 40	Hams, Cal salt'd	10 @ —
Do do Giltedge	1 45 @ 1 50	do Eastern	12½@ —
Buckwheat	1 70 @ —	**SEEDS.**	
Corn, White	1 21½ @ 1 26½	Alfalfa	12 @ 12½
Yellow, large	1 23½ @ 1 26½	Clover, Red	14 @ 15
Do small	1 23½ @ 1 26½	White	20 @ —
Oats, milling	1 42½@ —	Flaxseed	1½ @ 2
Feed, Choice	1 38½ @ —	Hemp	3½@ 4
Do good	1 30 @ —	Mustard, yellow	3½ @ 4
Do fair	1 22½ @ —	do Brown	3 @ 3½
Surprise	1 50 @ —	**WOOL.**	
Black Cal	1 10 @ 1 40	**SPRING, 1892.**	
Do Oregon	1 20 @ 1 27½	Humb't & Men'cino	— @ —
Gray	1 20 @ —	Sac'to valley	16 @ —
Rye	1 60 @ —	S Joaquin valley	11 @ 14
Wheat, milling, Gilt edged	1 61½ @ —	Cala'v & F'th'l.	14 @ 16
Do Choice	1 58½@ —	Oregon Eastern	10 @ 17
Do fair to good	1 56½ @ —	do valley	— @ —
Shipping, cho'ce	1 52½ @ —	So'n Coast, def	10 @ 12
Do good	1 50 @ —	**HONEY.**	
Do fair	1 47½ @ —	White Comb, 2-lb	10 @ 13
Common	1 45 @ —	do do 1-lb frames	12 @ 14
Sonora	1 45 @ 1 57½	White extract'd	6½@ 7
HOPS.		Amber do	5½ @ 6½
1891 Choice to Ex.	24 @ —	Beeswax, lb	22 @ —
Fair to Good	20 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, April 6, 1892.

Limes, Mex	4 00 @ 4 75	Str'berries, pr dr	50 @ 1 00
Do Cal	60 @ 75	Beets, sk	— @ 1 00
Lemons, box	1 00 @ 3 00	Carrots, sk	35 @ —
Do Sicily	5 50 @ 6 50	Okra, dry, lb	15 @ —
Oranges, Seedlings	— @ —	Parsnips, ctl	— @ 1 25
San Bernard'o	2 00 @ 2 75	Peppers, dry, lb	8 @ 12½
Riverside	1 75 @ 2 25	Do green	20 @ 35
Los Angeles	1 50 @ 2 00	Turnips, ctl	50 @ —
Do Navels—		Cabbage, 100 lbs	40 @ —
San Bernard'o	3 50 @ 4 50	Garlic, lb	2 @ 3
Los Angeles	1 50 @ 3 00	Squash, Mrft, tn	9 00 @11 00
Riverside	3 00 @ 4 00	Do Summer, lb	1 00 @ —
Duarte	3 00 @ 4 00	Tomatoes, box	1 75 @ 2 25
Oranges frosted and poor sell at a decline of $1(@$1 50 per box on the above quotations.		Asparagus, box	1 25 @ —
		Do choice to ex	2 00 @ 2 25
Apples, box	50 @ —	Peas, green, lb	1 20 @ —
Do choice	1 50 @ —	Do sweet	2½@ 3
Do extra choice	2 00 @ —	Rhubarb, box	75 @ 1 25
		String Beans	15 @ 15½
		Cucumbers, doz	40 @ —
		Mushrooms	10 @ 30

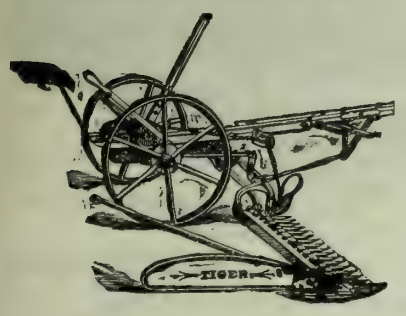
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BEEF.		**MUTTON.**	
Stall fed	6½@ 7½	Wethers	9 @—
Grass fed, extra	6½@ 7½	Ewes	8½@—
First quality	6½ @ —	Do Spring	10 @12½
Second quality	6 @ —	**HOGS.**	
Third quality	5½ @ —	Light, ₱ lb, cents	5 @ 5½
Bulls and thin Cows	2½@ 3½	Heavy	4½ @ —
VEAL.		Feeders	3½ @ 4½
Range, heavy	5 @ —	Stock Hogs	3½@ 3½
Do light	6 @ —		
Dairy	7½@ 9		

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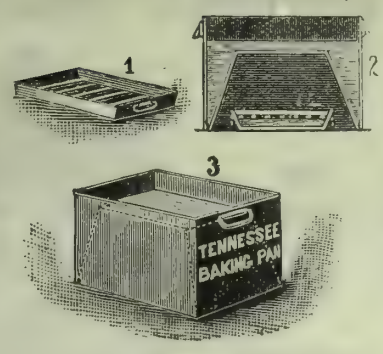
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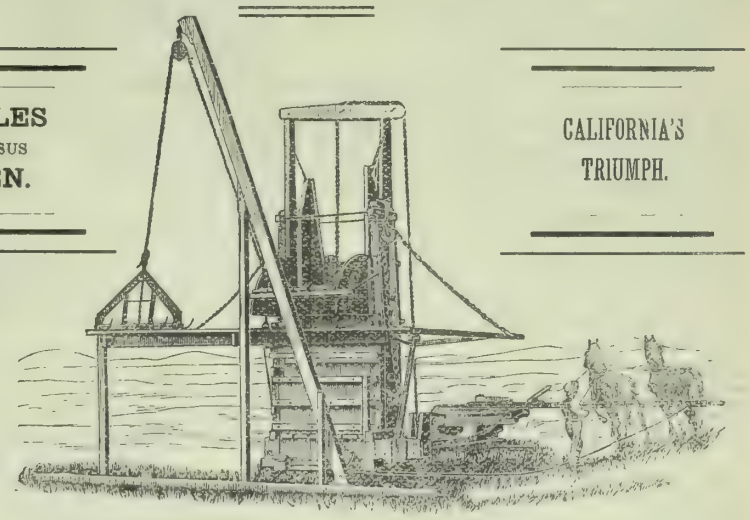
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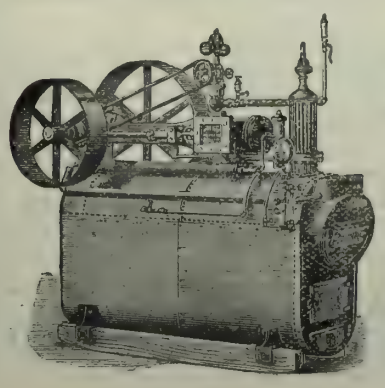
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Raising Fish for Market.—S. F. Hoover has two reservoirs well stocked with carp and catfish. The first were planted about two years ago, and now he thinks there must be two or three thousand. They are fed nothing, but do well. Some of them are lusty fellows, one caught by Mrs. Hoover the other day weighing nearly eight pounds. There is a good demand for them in town, there being no trouble to sell as many as can be caught. The fish are much better than those taken from the warm, sluggish water. The reservoirs are fed by an artesian well, from which supplies are drawn for irrigation, hence the ponds are pure at all times. The fish multiply and grow rapidly.—Tulare Register.

Oats vs. Coal.—It has been suggested that engineers try another method of comparing electric power with horse power. Electric power is calculated on the basis of a pound of coal—that is, the greatest amount of energy that can be obtained from a pound of coal and converted into mechanical energy. This being so, it is argued, why not calculate animal horse power on the basis of oats and hay? How much mechanical energy can be obtained from a pound of oats or hay? That is the question, and what is the relative cost of hay and oats and coal? These are economic questions, and many stockholders of street railroads would like to know the answer.—Electrical Age.

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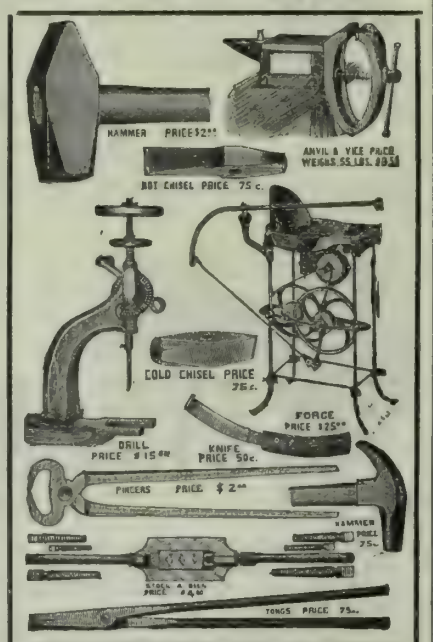
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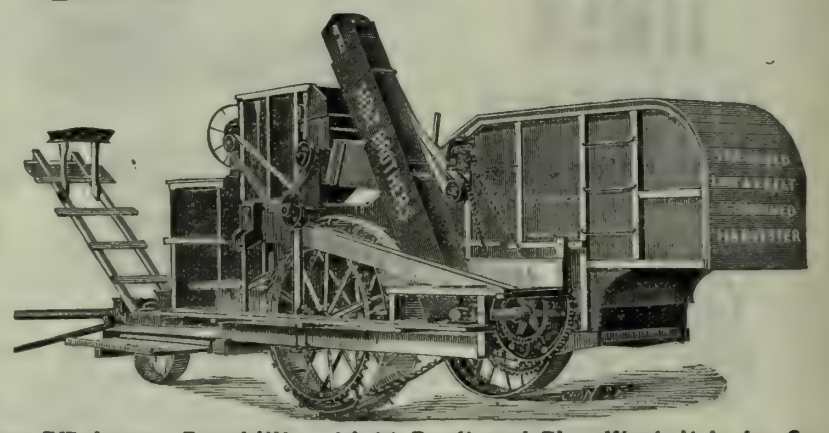
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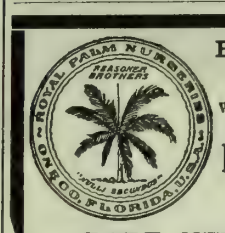
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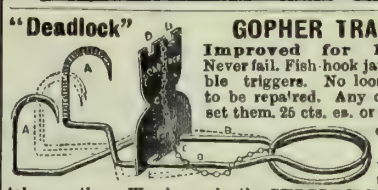
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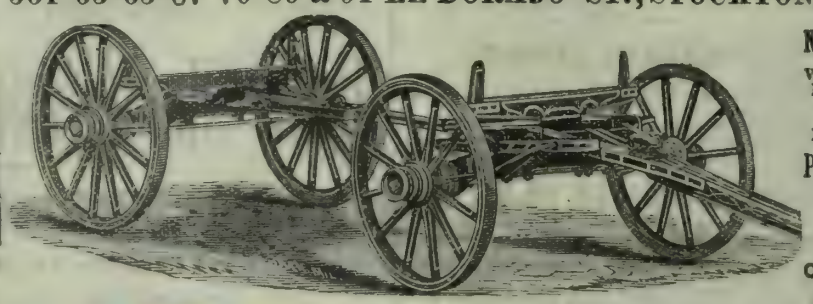
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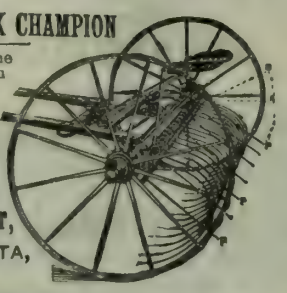




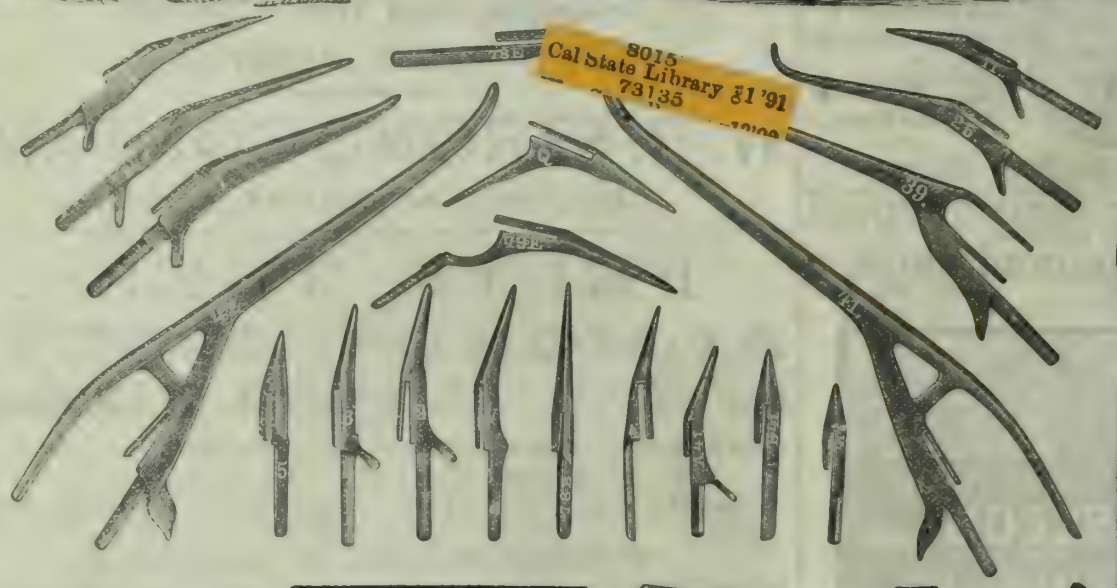
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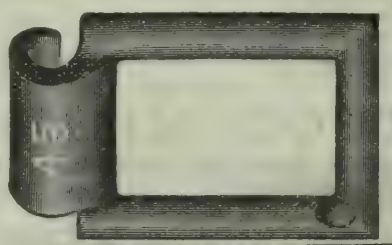


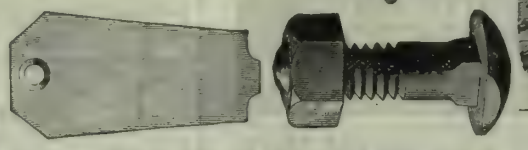






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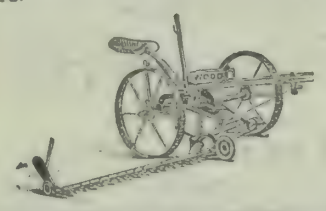
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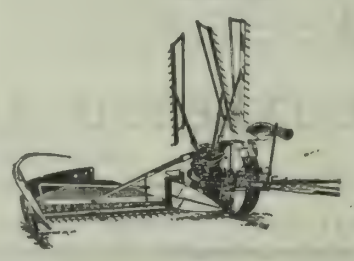
CORNWALL, CAL., Feb. 2, 1892.

Messrs. FRANK BROTHERS, San Francisco, Cal. Gentlemen:—THE WALTER A. WOOD MOWER that I bought of your agent, Mr. Markey, is a splendid machine. The low draft makes it a light running mower. I DID LARGE AND HEAVY WORK WITH IT LAST YEAR, and, with the exception of the natural wear, it is as good as new. I doubt if it has a superior. Respectfully yours, A. F. HERRICK.

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LIGHT COST.
LIGHT WEIGHT.
LIGHT RUNNING.

LIGHT ENCLOSED GEAR REAPER.



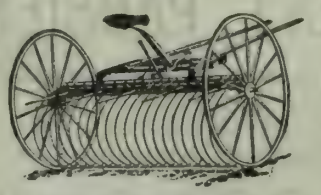
Adapted to any and all crop conditions and fitted for work where other reapers fail

Easily adjusted while running, simple and very strong.

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8 10, 12 FT. SIZES.

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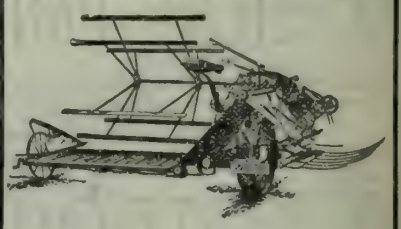
Easily handled by any one who can drive.

Manufactured for long service and good work.

GOLETA, CAL.

Messrs. FRANK BROTHERS, San Francisco, Cal. Gentlemen:—THE WALTER A. WOOD MOWING MACHINE that I purchased of you was duly received, and we started it up this morning, and find that it has not lost any of its old prestige, and THE IMPROVEMENTS ADD TO ITS LUSTRE. I have claimed for the last 20 years, and do yet, that THE WALTER A. WOOD MOWING MACHINE IS THE BEST sent to California, and would rather have it by $20 than any other machine now in use. Very truly yours, W. N. ROBERTS.

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SINGLE APRON BINDER.

Platform Frame and Drive Wheel of Steel.

Using but oneD raper it is Wonderfully Light Draft.

The Binder is Entirely Automatic, is sure in its work and a great saver of twine over other types.

The Walter A. Wood Binder affords a cheap and easy method of harvesting.

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Worked on Steep Hills Where Others Failed.

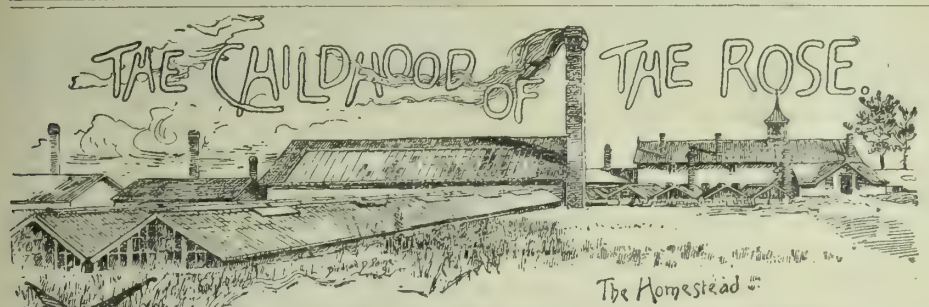
HALF MOON BAY, Jan. 29, 1892.

Messrs. FRANK BROTHERS — Gentlemen:—Your letter received stating that you are desirous of hearing from us regarding the WALTER A. WOOD TWINE BINDER. We think it is the best binder made. We cut grain on steep hills where other binders could not cut the year before, and hardly ever misses a bundle Regarding its draft and elevation, it is the best we have seen, in fact, we prefer the Walter A. Wood binder to any binder made yet Yours truly,

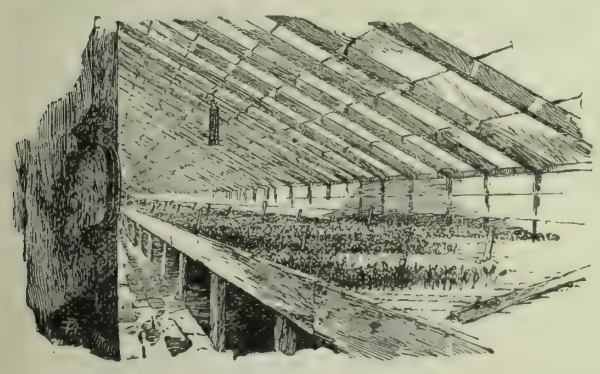
CEREGHINO & DEBENEDETTI.

PACIFIC RURAL PRESS

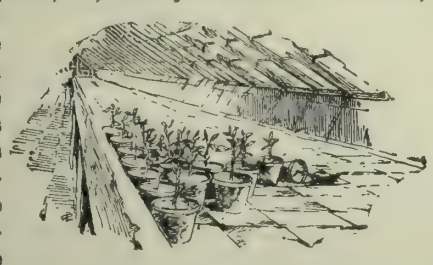
Vol. XLIII. No. 16. SAN FRANCISCO, SATURDAY, APRIL 16, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.



ANY readers of the RURAL who received the neat packages in which Eastern rose growers send their plants by mail in as fresh verdure as they displayed in the far-away propagating houses, will be interested in an illustrated account of the way in which the plants are grown for the mailing trade. Perhaps, also, some California propagators, who are thinking about the arts of small-plant shipping, may also get a point from the views we present.



It should be stated at the outset that there is probably no rosebush in the world which can compare in vigor and quick returns to the planter with the rose plants grown in the open air, which are furnished by our California propagators. Their prices, too, are very reasonable. There are, however, planters whose means are small and whose remoteness makes express charges appalling, who are greatly benefited by the possibility of securing, postpaid, desirable plants at a cost of a few cents each. It is true they require time to establish themselves, and must also be more carefully planted and cultivated; but usually the amateur of limited means is patient and a good gardener. While, then, we have a strong preference for a good-sized bush, grown from a strong cutting in the open air, we still recognize the fact that many could have few roses except by the cheap free-by-mail route.





The establishment of which partial views appear on this page, is the largest and best known in this country—that of the Dingee & Conard Company of West Grove, Pa. Their roses are finding their way by thousands to all parts of this coast, and their beautiful publications are always welcome in California homes, where floriculture is appreciated and enjoyed.

First, there appears a corner of the great glass-covered farm devoted to roses and other ornamental plants. Next below is a stretch of bench, upon which the tiny twigs are set in sand, as closely as they can stand, to strike their first rootlets. Then comes a bunch of small pots in which the rooted twig finds its first solitary habitation, solitary, except as interlopers in the form of weeds and other undesirable growths may dispute the space with them. Another picture shows how their privacy is secured by the friendly hand which plucks away the intruders. Next comes the last stage of the rose beneath the glass, and where, having attained good size and strong foliage, through changes to fresh soil and larger pots, it awaits among its fellows, the hands of the packer, who gently knocks off its shell, washes its roots, and packs it, in cool, damp moss, in a box in which it can traverse a continent or an ocean, and show its bright green foliage to the eager eyes which have counted the days since the order was sent to the propagator.

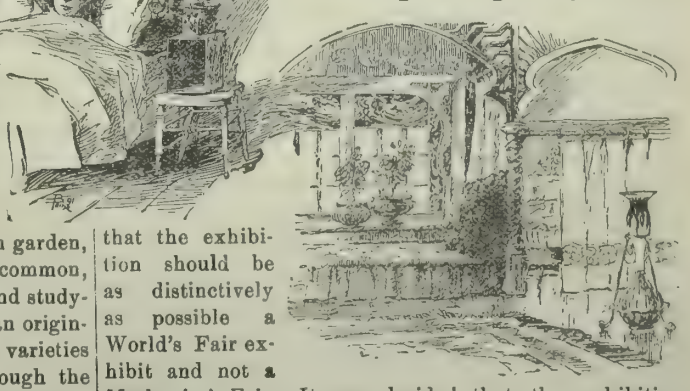


Last of all is the sentiment of the story. The tiny bush has found its way to the bedside of the poor sufferer in a hovel, on a mission of cheer, or has found lodgment in a rich vase in the window of the mansion.

The Dingee & Conard Company are, as has been stated, the largest growers of roses in this country, and they were first to develop the mail business. There are, however, other establishments working in the same line and contributing to a vast result, viewed commercially or otherwise. Unfortunately, the commercial phase is the only one which we can measure accurately. The census bulletin on floriculture shows that, of all plants grown, roses are in greatest demand, and a single firm sent out a million of them in 1889. There were, in fact, nearly fifty million rosebushes propagated during that year.



Of this vast number of new rose plants, California, no doubt, took far more than her share would be upon a basis of comparative population. Rose-growing is rapidly advancing in nearly all parts of the State, and it is little wonder, because only the mountain-top counties have to consider hardiness. We can grow nearly everything of the rose kind in the open air and have winter bloom of the most magnificent description. Not only are roses being planted freely in all gardens, but everywhere there are private collections, increasing continually. The suburban garden, with upward of 200 named varieties, is becoming common, and the growers take deep delight in acquiring and studying the new varieties which Eastern and European originators are bringing out in such numbers. These varieties usually find first entrance to our gardens through the mailed package, and the fancier can well afford the time and care required to build up the infants into bushes of magnificent proportions.



FRUIT FREIGHTS.—At a meeting of the Transcontinental Association in Chicago, April 19th, fruit freight rates for the coming season will be decided upon: $1.50 per 100 pounds, eight day's time to New York, is needed.

A Dress Rehearsal for the World's Fair.

It is an excellent idea to have a preliminary collection and exhibition of the material which will be sent as the California State exhibit at the World's Fair. It will give form and definiteness to the proposition which could not be otherwise secured. Having the material which is offered on display, will show in what respects it should be supplemented and in what way also the installment at Chicago can be improved in style or arrangement. Even if the effort in this city in connection with the Mechanics' Institute should have the special authorization of the California Commission, the opportunity at the State Fair for display should not be disregarded, but should be employed to the fullest extent by the Commission. In fact, it would seem the part of wisdom for the Commission to work all along the lines of the county and district fairs this fall, and make the Chicago exhibit the grand resultant of all local forces.

Arrangements for the dress rehearsal in the Mechanics' Pavilion are increasing. It is especially desirable that the display should be as large and complete as possible on the opening day, and, to secure that result, as well as to spur the various counties toefforts to excel it, was decided to offer the following prizes: To the county having the best exhibit in place by September 3rd, $500; to the county making the most effective and original exhibit by that date, $250; to the county exhibiting the widest range of useful products by that date, $250. The regular prizes, aggregating several thousand dollars, will be arranged hereafter.



It was urged and generally conceded that the exhibition should be as distinctively as possible a World's Fair exhibit and not a Mechanics' Fair. It was decided that the exhibition should be known as "The World's Fair Exhibit for California."

We trust this matter will command the attention of the County Commissioners and others. It should be the greatest exhibition this State has ever seen, and it will be a boon to see it to all who will never get nearer to Chicago.

Correspondence.

Correspondents are alone responsible for their opinions.—Ed.

Benefits from the Coyote Bounty.

Nordhoff, Ventura Co., April 5, 1892.

To the Editor:—In the issue of April 2d the Rural invites correspondence on the practicability and merits of the present law offering a bounty for the destruction of the coyote. As to the proportionate ravages before and since the passage of the "scalp law," it would, perhaps, be somewhat difficult to give, or even to approximate the true ratio or percentage of damage. The observations of the actual settlers of the various localities would, of course, be the only mode of determination; hence the invitation issued by the Rural. In some localities few, if any, wolves have been destroyed, while in other localities the notorious pests have been made to feel "the strong arm of the law."

In this locality, I think the ravages have been not more than one-third to one-half so great as it was before the enactment was passed. But we are suffering yet from the coyote. The question may be asked, Who are suffering from this sly and treacherous animal? The answer is, Every man, woman and child in the State. One of the prominent journals of the State asserts that it is a protection to the few and must be paid by all. That is not true. Every stock-raiser suffers, as every young calf, sheep of any age, goat, pig, and poultry of all kinds may fall a prey to this marauder; neither are small children safe from its attack, when passing to and from school through a sage-brush region. Notwithstanding they seldom attack children, yet who would be willing to send a small, lone child through a woodland or brushy country infested by a band of wolves that had been, through extreme vigilance, kept from the flocks or farmyard for a few days. I have, myself, lost from the ravages of this animal enough hogs and poultry to reduce the profits thousands of dollars. One of the citizens of this county lost 100 turkeys during one summer, although he lived in a wide valley many miles from hills or timber. The turkey will not bear close confinement; death is a mere matter of time if it is closely confined. Yet the townsman, even if he is not a Russian, wants a "slice off Turkey." If the above producer had saved five of his 100 turkeys, and been able to sell them for $10 each, he would still be the loser. But this loss makes the price of turkeys higher. Now, who is the loser! The consumer feels the loss as prices advance, and the producer never makes so much off a mere remnant at the highest price offered, as there is a limit, above which the public cease to be consumers; then both producer and consumer are losers. Thousands of dozens of eggs are at times shipped to this coast from the Atlantic States, principally from ravages from this sly wolf; many hundreds of thousands of dollars are sent East for hams and bacon and lard. Who is the loser? The consumer feels the loss through the increase in price, and the California producer feels it still more, and last of all the State feels the loss of these hundreds of thousands, while the bounty is but little more than one hundred thousand for the destruction of this animal. Who is the gainer while every individual in this State is the loser? The Eastern trader, of course; he makes money out of our misfortune.

We say, kill off the wolf, and if it costs us some little money to do so, it will cost us much more to keep him. Of course this scalp bounty is not expected to last long, as the coyotes will be few in number, and consequently, the bounty merely nominal. Or, if they are still plentiful, do as men do in other warfare—kill them off, as it is cheaper than to keep them.

It is said that over 20,000 have been killed. We hope it is more. But suppose none had been killed, would they not have multiplied to 50,000 or more? Great heavens! What would the people of California pay to prevent the turning loose of 50,000 ravenous wolves in addition to what we already have? We know what it has cost the people of this State, which is not much over ten cents for each individual. Yet we hear more talk about this small amount than we have ever heard of extravagant salaries and other useless State and Governmental excesses, although they are not so very great.

If this notorious animal that can look up and down, sidewise and behind him, all at the same time, could only be trapped easily (as other animals can), his destruction would be swift; but seldom can he be caught in this way. Again, it is only now and then he can be poisoned. Dare touch anything with your hand and he stands aloof; he will "touch not, taste not" of that poisoned article, unless desperately starved.

Perhaps it is because he gets every day what man gets Sundays and holidays only—chicken and turkey. One was shot on my farm whose aesthetic palate had been tickled by that portion of animated nature known as the bovidæ, oveæ and gallus, for in his capacious stomach was found a portion of a cow or calf, a piece of sheep, and a piece of Plymouth Rock fowl. Yes, it was all there; the beef was covered with hair, the mutton with wool, and the Plymouth Rock chicken with white speckled feathers; and he had just killed a duck at my place for variety. We have heard that the coyote has one redeeming quality, and that is, he loves the flesh of the rabbit. We are not acquainted with any kind of flesh that he does not like, if he can kill it himself; but every one knows how difficult it is for a dog to catch a rabbit in chaparral or very thick, heavy brush, where the rabbits generally stay. They seldom if ever catch them; neither does this animal, known as the wild canine, often take one; he finds other flesh which falls an easier prey. If he found no other prey but rabbit, he would soon become extinct.

I, myself, have been a sufferer from the ravages of rabbits in vineyard and orchard; but either from disease among rabbits or something unknown to us, the destruction has been decidedly less since the "scalp law" passed than it was before, or ever 20 years since, as I have been continually planting trees and vines and had ample opportunity for observation.

From coyotes there is undoubtedly more than $10 loss to the State in stock and poultry, where there is a gain of $1 by devouring rabbits. H. J. Dennison.

[It is important to bring out such facts as these and to have the subject thoroughly discussed before the next meeting of the legislature. We hope others will participate in the discussion.—Eds. Press.]

Notes from Sierra Valley.

Beckwith, Plumas Co., April 8, 1892.

To the Editor:—Our winter closed in about us unusually early, the first snow coming Dec. 3rd. Prophesies were soon made that the early storms would secure us a good season. For many weeks however, there was no more storm, and our winter was as near an ideal winter in a north land as can be imagined. The valley lay under from a foot to eighteen inches of snow, from early in December until the last of February; this being very good for the grain sown in the fall. The roads were smooth as glass and there was from 50 to 60 days of nearly perfect sleighing. There were some very cold days in December, but after that there was just enough stinging cold in the air to set one's blood to circulating finely. There was little wind and the whole winter was thoroughly enjoyable. The winter was also an unusually fine one for feeding beef stock.

The very first of March, while there was still snow in the valley, the sandy loam of our side hill ranches was ready for the plow, and all the push which every ranch could command was utilized in the turning the furrows. By the 27th of March most of the plowing, and a little of the seeding was done. On that date there began a storm, which heavy skies had been for same time forecasting. The threatening finally culminated on March 26th, in one of our heavy southwesters, such as we had not had all the winter, and which brought a fall of 12 or 14 inches of snow on the 27th. Since that time (that is for the last eight days) there has been but one day free from storm. A massive snow man now rears his ungainly form near our house, giving evidence of the rare sport the storm gives to the children.

The first of April, meadows and newly plowed fields laid under two or three inches of snow. The weather is still blustery with occasional flurries of snow. Could the flowers which came to visit us so early this spring, have had thoughts, they must have felt, tucked away as they were under nature's white counterpane, they they too were made victims of All Fools' Day. Birds too, came earlier than usual this season. Meadow larks and robins have frequently been brought to grief from seeking our valley for their summer quarters, while our winter had not yet lost its hold. But this year the sparrows have come earlier than I have ever known them, and have seemed to have an unusual sense of comradeship in coming close about ourdoors, and a bluebird driven by the storm, sought shelter in one of our bedrooms. We tried in vain to coax it into some feelings of neighborliness, but after a time we gave it its liberty, the storm having for the time passed by. The little creature showed its enjoyment of its freedom by flying far and long, we did not know it so resembled the swallow in its length of flight.

There is one question which has been presenting itself over and over in these long stormy days. That is, where does this multitude of birds secure sleeping apartments? We accept the song and brightness of our feathered friends, why should we not inquire as to their sleeping accomodations? Those who have investigated the matter, find the general opinion that most birds roost in trees and bushes, wide of the truth. Snowbirds in the East make for themselves funny little dug-outs under the roots of grass, or what is more likely, make use of those the field mice have dug, or they roost under crooked sticks which they arch over with dry leaves, and form for themselves small spaces sheltered from the rain. The meadow larks, long before nest building time, have been found roosting in the grass; and several varieties of sparrows have their bedchambers on the ground, and not in trees. This is true in the East, and I am sure the same is the case here. The devices of our feathered friends to secure comfortable sleeping quarters, is so interesting as to make one feel almost sorry that advancing years and accompanying rheumatism keeps us from investigating their habits. But of one thing I am sure that our numberless feathered visitors have not had their bedchambers in our trees, for the nightly snows which have come during this long storm, have so laden the trees that they have assumed fantastic shapes and forms, their branches sometimes coming near the ground.

The account of all this snow may make those in warm climates feel like shivering, but it is better for us than rain, and is all going straight into the ground. The people in this locality feel some interest in the boom at Amadee. The town at the termini of the N. C. & O. R. R. has sprung up like a mushroom in a night. Fine medicinal springs are one of the features of which it boasts.

Mary P. Arms.

The Dairy.

A Progressive Dairyman in Orange County.

Among the efforts being put forth to develop the resources of Orange county there is none more worthy of notice and public encouragment than the graded stock farm and creamery of Henry West, of McPherson. Mr. West is one of the earliest settlers of that village, and enjoys an enviable reputation for honesty and indefatigable industry.

Six years ago he owned one of the most productive fruit ranches in the Santa Ana valley, which he had brought into bearing by sheer hard work at the carpenter's bench and the practice of the strictest economy. The vine disease, scale bug, and a slap from the tail end of the boom, left him with an unproductive ranch and a lively mortgage which pegged away night and day, Sundays included; but these adverse circumstances have only succeeded in spurring him on to renewed efforts, and if his vital system does not snap with the strain imposed upon it he will certainly come out on top.

In procuring animals to stock his ranch, Mr. West journeyed east to Pennsylvania and other points, and purchased two registered Jersey bulls, one registered Holstein bull and several registered Jersey and Holstein cows. He was not satisfied merely to obtain the pure breeds, but examined pedigrees and selected descendants from the aristocrats of the Jersey and Holstein families who had made the highest record in qualities that make those breeds so valuable and profitable. As a matter of course he had to pay fancy prices; his freight bill alone would have purchased double the number of ordinary stock in this State.

Mr. West takes pardonable pride in exhibiting his stock, pointing out to the uninitiated, the distinctive features and marks that are peculiar to the best families of those beautiful animals, and also in producing documentary evidence in proof of their high claims.

The creamery which is under the supervision of Mrs. West, is a perfect model of cleanliness and system, although at present on a small scale it is furnished with the most elaborate and expensive machinery, refrigerator, etc., for the production of cream and butter. The cream is separated from the new milk by centrifugal force; it is poured into a cylinder that is revolved by a crank. The cylinder has a rotary motion of over 6,000 revolutions per minute, which separates the cream from the milk and ejects them into separate streams into vessels set to receive them. The cream is then laid away in the refrigerator till it is reduced to the proper temperature to churn. Everything is reduced to a perfect system in which the clock, thermometer and weights and measures take an important part.

Mr. and Mrs. West read all kinds of books and newspapers that relate to their business and make its technics their constant study. As a result, their butter has already gained an established reputation, and has a ready sale of ten cents per pound in excess of common butter. J. E. Curry, of Tustin, takes the whole product of Mr. West's creamery, and Sam Tustin, the manager of the Tustin store, recently informed me that he would take a ton a week if he could get it, for, exclaimed that gentleman, there is always a demand for good butter.

Mr. West uses the same precise methods in feeding and tending his stock as are used in the creamery. The food is all weighed and fed at stated intervals. He crushes his own grain and cuts his fodder by treadmill, using his bulls for motive power. The bulls do not seem to object, and it is an excellent means of exercising them.

A silo for making ensilage will be erected by Mr. West as soon as his means will allow. Apropos of the silo there is certainly an easy income to a man who is the owner of a few acres of land under the irrigating system who will raise corn and make ensilage for sale to families who keep one or two cows.

Through the efforts of Mr. West, our valley will soon be in possession of a superior breed of milch cows which will eventually run out the old Texas and mongrel stock. He is surely a benefactor to the neighborhood, and deserves to be financially successful. Contrast the nature of the man, who, with nothing but pure grit, muscle and borrowed capital, is building up the resources of our county, with the tight-fisted parasite who will venture his hoarded capital upon nothing that will bring him heavier returns than our present exorbitant rate of interest for loaned money.—Cor. Santa Ana Blade.

Records of Pure Butter-Fat.

Yorkville, N. Y., March 28.

To the Editor:—The Holstein-Friesian Association of America has taken another forward step that must commend itself to every one interested in the improvement of dairy cattle. At its annual meeting held on the 16th inst., it adopted the following amendment to its Advanced Registry Rules:

"A cow shall also be eligible, to this registry, on a record of pure butter-fat, determined by a composite test of samples of her milk, of equal quantities, taken from each and every milking for a period of seven consecutive days; the sample, in each and every instance to be taken from the whole milking after it is thoroughly stirred and mixed. This composite test shall be made by the Babcock, or other equally accurate apparatus or method, approved by the American Association of Official Agricultural Chemists. The total amount of milk produced by the cow during this period of seven consecutive days, shall be multiplied by the per cent of pure butter-fat thus found in the milk, and the product shall be the record. The requirement for entry on such a record shall be —— per cent of the present requirement for entry on a record of marketable butter, of a cow of the same age at calving. Full particulars shall be reported and affidavits made as in cases of milk records and marketable butter records."

A committee, consisting of Messrs. S. Hoxie, L. T. Yeomans and David H. Burrell, was appointed to fill the blank in the above amendment. This committee is corresponding with practical butter-makers, and with scientific men, for the purpose of ascertaining the proper per cent to be inserted. Letters have been received urging that it be filled with 83⅓. This would make the requirement of a full age cow 12½ lbs. of pure butter-fat. A prominent investigator has suggested 13 pounds. These amounts would be equivalent to perhaps from 14 to 16 pounds of marketable butter, as records are usually made, the variation depending on the amount of water and other matter, other than pure butter-fat, that butter, as variously made, contains. The requirement for a heifer calving at just two

years old, if the blank be filled with 83⅓, would be 7½ lbs. of pure butter-fat; between this age and full age, the requirements would increase in the same ratio as those of marketable butter records. Perhaps I ought to add that a brief report of the care and food is a matter of record at the option of owners in all cases of advanced registry.

This amendment will greatly reduce the trouble and expense of making records, and if universally adopted, will do away with all injustice between breeders, resulting from the varying per cent of water and other foreign matter, that records of marketable butter necessarily contain. Besides these advantages, if other associations of breeders of dairy cattle will adopt a similar record, it will afford a basis of comparison of the different breeds, that will go far toward settling their relative merits as butter producers. Further, we might reasonably hope, in such an event, that the making of "wild cat" or unsubstantiated records would be abandoned. S. Hoxie, Supt. Advanced Registry.

The Botanist.

The Ferns of Napa.

Many readers will recognize the initials appended to the following article as belonging to the Rural's Napa correspondent, who writes so fluently of field crops and other industries. In the article below, from the Napa *Register*, A. W. R. shows another side of his make-up, and one in possession of which many Rural readers will sympathize with him. Fortunately, many of the forms described occur in other parts of the State and will be recognized by readers.

In shaded canyon, in sheltered dell, in many a rocky, moist nook in this county grow, in charming gracefulness and in goodly variety, that class of plants which for all lovers of beautiful vegetation have a peculiar fascination—lovely ferns. Even on the rough, barren, rocky, mountain sides may be found one or more varieties seemingly setting at naught one law that seems to govern fern life, that of abundant moisture.

Probably few counties in this State, other than our own, possess a greater variety of fern life. Commencing to put forth the delicate fronds soon after the first rains of autumn, one kind succeeds another, in their appointed season, with the regularity of clock work, till, in the late spring months, all have sent up their tender shoots from the dark ground to the light and warmth of the cloudless sun. By the time the tardy comers have made their appearance the *avant couriers* of the yearly-recurring procession have passed their prime and have made preparations for closely folding together their fronds and retiring from view.

The coarser varieties of ferns one may readily find in most any shaded, moist locality; the finer, more delicate kinds, in secluded nooks. Not promiscously does nature bestow her favors. Not to the careless eye does she reveal her choicest treasures. Patient, careful search in out-of-the-way places often reveals a surprising wealth of vegetation, which well repays the effort required for its finding.

It has been said that in the whole United States there are probably less than 100 varieties of ferns, and of these about one-half are found in California. Scarcely 20 of them can be considered peculiar to the Pacific coast.

POLYPODIEÆ.

The fern that earliest responds to the long deferred fall rains is the *Polypodium Californicum*, a leathery, evergreen fern, whose life is prolonged till late in the season. It is often found growing on rocky surfaces where the soil is thin, its large rootstalk creeping here and there beneath a thick carpet of velvety moss. This variety is found in California, from San Diego northward. The fronds are usually of ample size, from 10 to 18 inches high and from 3 to 5 inches broad.

By far the finest of all our *Polypodia* is the *Polypodium Scouleri*, which grows on trees and stumps, more rarely on the ground. It sometimes grows to the height of two feet; fleshy, evergreen, with sori (or fruit dots) one-fifth of an inch in diameter. This fern has been noticed growing on fir trees, at a height of from 150 to 200 feet above the ground, in Oregon.

THE GOLD FERN.

The beautiful gold-back fern (*Gymnogramme triangularis*) is an old acquaintance with ramblers in our woods and canyons. They are now growing rapidly, and frequently, fine specimens may be obtained. Later in the season they will be numerous. The stalks are slender, blackish brown, polished, and, in full-grown specimens, from six to eight inches long, with fronds five angled, from two to five inches long and nearly as broad. The upper surface of the fronds is of a deep green color, with surface nearly smooth. The greatest beauty of this fern lies in the wonderful coloring of the under side of the frond, which is usually a clear, sulphur yellow, but varies from a deep orange to a pure white, owing to the powdery coating. Specimens which are of a very light color, are frequently called silver ferns, but are considered by botanists to be a variety of the gold fern. Only two species are known to exist in the United States. This fern is common to California, and is said to occur as far north as Vancouver Island.

ADIANTUMS.

Just now the *Adiantums*, or family of Maiden-hair ferns, are making rapid growth in sheltered, moist localities. No bouquet of ferns gathered in our woods or canyons is considered complete without many fronds of the bewitchingly graceful variety, *Adiantum Emarginatum*, of which variety we have three species.

By far the most beautiful species of the whole genus is *Adiantum pedatum*, the so-called five-fingered fern. It grows in moist, rocky places, from Santa Cruz northward as far as Unalaska. It is common in the Atlantic States, from North Carolina to Canada, and is also found in Japan. This is one of the most delicate and graceful of our ferns. Like several other varieties found in this county, it has its peculiar habitation and is obtained only in favored localities, as in Sarcos Creek canyon, at the falls of Spencer creek, and a few other places near Napa. It makes, when potted, a beautiful ornament for the conservatory or the drawing-room, its feathery fronds being perennially green.

THE WOODWARDIA.

The tall *Woodwardia*, or "Chain fern," so popular for decorative purposes, is quite a common fern, evergreen, hardy, growing to perfection in shaded, well-watered ravines. Through the winter months, when it is difficult to obtain other ferns, this vigorous-growing variety can be found in considerable quantity in the localities it selects for its home.

This variety is a member of the genus *Aspenieæ*, of which there are about 60 species, finding its greatest development in the Southern hemisphere.

Woodwardia Radicans, full grown, has strong stalks, 8 to 12 inches long, with fronds standing 3 to 5 feet high, the pinnæ being from 8 to 15 inches long, and from 2 to 4 broad. The sori are oblong. It is found from Long valley to Southern California. The type is found in Maderia and along the Mediterranean countries in India and Java. In our own country it is found in almost every State. It bears transplanting readily, as the roots are always vigorous.

THE LADY FERNS.

One of our most graceful ferns, delicate, finely serrated, is the Lady fern. There are to be found, within a short distance of Napa, several varieties of these.

Asp. Felix foemina and *Asp. commune* are the ones most common, but they are not found in every locality. Like several other kinds of ferns they choose their own company. Some fine specimens have been gathered along Sarcos creek that would rank with choice specimens from foreign lands. The frond is ample, delicate, from 2 to 4 feet high, the pinnæ being from 4 to 8 inches long, sori short. They make splendid plants for the house and have a silent though expressive language, all their own.

The sword fern, *Aspidium munitum*, is one of our hardiest varieties, and is popular for decorative purposes. The stalks are often a foot long, pinnæ very many, 3 to 4 inches long. It is one of the handsomest American ferns, and like many others, subject to considerable variation, sometimes called Shield ferns. *A. Californicum* has fronds long and narrow, and is quite common.

LACE FERNS.

Near the falls of Sarcos creek may be found, at this season of the year, the delicate *Cheilanthes gracillima*, appropriately called the "Lace fern." This fern grows in crevices of rocks or cliffs where there is considerable moisture, and is found in many portions of California. *Ch California* resembles the above and may readily be taken for it. This variety is found in moist, shady ravines in the Coast Range.

One naturally seeks for ferns in moist, shady places, but the home of the genus *Pellæ*, *P. Ornithopus*, seems to be partial to rocky, mountain sides. The latter variety is often called the Birdtrack fern. The fronds are very rigid, from a few inches to a foot long, the lower pinnæ bearing from a few up to 15 or 16 pairs of trifoliate pinnules. This is an odd kind of fern, devoid of gracefulness, but having an individuality all its own. It is common throughout California, growing mostly on dry hillsides, in tufts, among rocks, exposed to a long summer's sun The pinnæ, when trifoliate, as they almost always are in a state of nature, strangely suggest the claws of a bird's foot, whence the specific name.

This fern belongs to the family of Cliff brakes, and a cousin is *P. Andromedæfolia*, which, though often found among dry rocks, loves moisture more than the former. It sometimes is called the "Coffee fern," as the pinnæ, when well fruited, resemble the coffee bean in shape and color. The stalks, growing in a clump, are from 2 to 12 inches long, about equaling the ovate, usually tri-pinnate fronds. It makes a very pretty pot-fern. This comprise the varieties of the "Cliff ferns," found near Napa, though *P. densa* is said to be found in the Coast Range. Our local varieties are easily obtained along the hills bordering this valley on the east.

BRACKEN.

Everybody who has ever strolled along the foothills or on the sides of our mountains is well acquainted with *Pteris aquilina* (Linnæus), the common brake, or "Eagle fern." It is too coarse for bouquets or for nice decoration. It is to be found throughout this State and northward to Sitka. In one form or another the common brake occurs in almost every region of the earth. In Northern California and Oregon it forms thickets as high or higher than a man's head, and of many acres extent. In some localities the young fronds are boiled and eaten as a substitute for asparagus.

There are to be found in our county a few other species of ferns, most of which are small, delicate, fragile, but quite attractive. The principal species have been named. In the canyon back of the "Hermitage" (Asylum farm), along Sarcos creek, by the shaded banks of Spencer creek, and near the falls of that stream; in Hagen's canyon, and also in a rough gorge on the west face of Bald mountain, back of the Plass place; in Milliken canyon, along Dry creek and by streams that have their source in the redwoods, the above-named ferns may be found in greater or less profusion in their individual habitats.

No more attractive plants can be obtained for the house or conservatory than some of these wonderful creations, and all, or nearly all, will grow well in shaded, moist nooks in the flower garden. For little care, no plant of our fields or canyons will afford more pleasure or satisfaction than these. A. W. R.

Poultry Yard.

Poultry for Commerce.

This topic comprehends poultry for market and eggs for quoted prices. Any of the breeds will give handsome returns if provided quarters suitable to their needs, and proper care; but experience with thirty seven different kinds, running through a series of many years, leads me to the conclusion that light Brahmas, Plymouth Rocks, Wyandottes, Langshans and Leghorns are the most desirable of all domestic fowls. For market eggs, sold by the dozen, Leghorns lead all others; if sold by the pound, the light Brahmas would lead, as they are a better winter layer, when prices are higher; their eggs are also very large, and are heavier according to size than many others. They reach broiler age at eight to ten weeks; roaster age at seven to eight months. The cockerels are more tender and juicy at eleven months than a dunghill at seven, and are sought for by hotel men and restauranters in lieu of turkeys. The

PLYMOUTH ROCKS

Are good average layers, if not bred too large. The medium-sized birds are better producers than the overgrown ones. They are an excellent breed from which to produce early broilers and summer roasters at seaside resorts. They will each lay 120 to 130 eggs and raise a clutch of chicks. Allowed to indulge the instinct of incubation nearly all sitting breeds will lay more eggs that if deprived of it, so that the brood is so much clear gain. The Rock is a rapid grower, an excellent eater and forager, and if well bred is on middle ground between the larger and smaller breeds; handsome, alert, clean-legged, and, like the Brahma, yellow of skin, a feature greatly desired nearly everywhere in this country, but shunned in Europe, for table purposes. I find the Rock but poorly bred in Southern California, from an esthetic view, they being a smoky, dirty cuckoo color, instead of that bright, attractive, violet hue so much prized and cultivated by the true fancier. Very ugly is the Rock if this color is not attained; very beautiful, when blue.

WYANDOTTES.

I do not believe the Wyandottes will ever become as popular as the Rocks, for the reason that they are not so easily bred to beauty of feather, the cuckoo being the easiest of all parti-colors to breed true. In the North, however, they are bred very true to ground color and lacing in a few hands, and are sought after because of their rose comb, which seldom becomes frosted with mercury at 20° below zero. Wyandottes are 8½, 7½, 6½ and 5½ pounds in weight; if "standard," being about one pound lighter than the Rocks. Nothing except a Langshan grows into good, fat broilers sooner than a Wyandotte, and by many they are known as "the broiler bird." They lay from 130 to 140 eggs, hatch and rear a brood of chicks, moult quickly and begin business in early spring. They are not as nervous as the Rocks, and are better mothers. And yet, if not bred to "standard" requirements they are but a scraggy lot, and the owner quickly disposes of them. When the ground color of feather is silver grey, or golden, as the variety may determine, with a black lacing, the bird is handsome indeed—clean of legs, yellow of skin, plump and square of body; they have merit.

THE BLACK LANGSHAN.

No bird among fanciers has become so popular in so short a time as the black Langshan. It is a large bird, among the best of winter layers, handsome of plumage if bred to the green-black, rapid growers into broilers, have pink-white feet and white skin. This latter feature detracts from their market value in this country, but makes them a favorite in England. Breeders of this bird are numbered by tens of thousands in this country. Its national club has issued the best and completest catalogue ever put out upon poultry.

Here we have the large breeds, the medium size and the small, and such as will insure eggs the year round, for as the large breeds are in moult and do not lay, the Leghorn has not begun to moult and is yet dropping eggs; and by the time the former are through moulting and have begun to lay, the Leghorn will have begun to moult and stop laying. These breeds give the largest carcass, the quickest growers into broilers, the greatest number of eggs. There is little or no need to add any other breed for table—that is for table use alone—as the Langshans and Wyandottes and even the light Brahmas are greatly to be prized for this alone; but if birds are desired for table especially, either the Houdan, Indian Game or Dorking are the best, in the order named. With these birds the average yearly product should be—

12½ dozen eggs at 30 cents a dozen	$ 3 75
4 pairs chicks, 28 lbs., at 25 cents a lb	7 00
Total	$10 75

Cost of production—

Keeping of hen	$ 1 25
15 eggs for incubation	35
Growing 8 chicks to 35 lbs. live weight, at 9½ cents per lb	3 32
Interest on investment and casualties	75
Total	$ 5 67
Net gain	$ 5 08

These figures may be relied upon. There is money in poultry. It is not child's work. It is business when business is made of it. It can't be overdone. Look at prices in the far East—Massachusetts, for instance. I received a letter on March 8th, from a friend, who asks: "What is the matter with the East? Eggs have been 55 cents per dozen for two months, and never lower than 30 cents." And yet there are 50 birds there to one here. They are bred there by hundreds of thousands every year.—S. L. Roberts in Great Southwest.

Horticulture.

Pruning Deciduous Fruit Trees.

J. Luther Bowers, the field manager of the California Land and Improvement Company, in Little Lake valley, Mendocino county, writes for the Willets *News* as follows:

"Nature has her own way of pruning. When we go out into the timber, there we find the work of nature. Our huge redwood trees have been touched by the hand of Nature. When young, these trees were crowded, and the small branches along the trunk die and drop off, and in this way the tree is pruned, and if it was not for this mode of pruning we would not have any of the nice clean lumber free from knots. In many other ways nature prunes our fruit trees; for instance, go out during the season of peaches and look at a loaded peach tree that has never been pruned, and what will you see? A portion, if not all, of the tree broke down from the load of fruit it has borne, the next season we will see nice vigorous sprouts, while another tree, under similar circumstances, that did not break down with its fruit, we will see scarcely any growth at all.

We will now follow these two trees up another season and see how they will show up. On our tree that broke down we will see some very fine peaches, and on the other one we will find a lot of poor ones; the latter tree has made but very little wood growth, and the former has made a good wood growth and has been increasing in vigor, and if kept pruned will become a fine fruit tree. In our large orchards that we are setting this season, we are cutting all of our trees back to 15 inches, so as to try and have our trees head out as close to the ground as possible. Our prunes, peaches and plums will prune so as to have them in the form of an egg set on the large end, and apples, pears and cherries to the form of an egg set on the small end. These two systems of pruning takes great a deal of care and patience, and must be followed up every year on the following plan: The first year, cut back to within 15 inches of the ground; the second year, during the early winter months,—November and December,—cut back last year's growth at least two thirds, leaving a central shoot at least six inches higher than the rest; this one shoot is the foundation for the future tree. Always avoid forks; or, in other words, avoid having two limbs of equal diameter coming out at the same place. Cut one off a great deal shorter than the other, or cut it off entirely. Any limb that has a less angle than 45 degrees from the leading shoot should be cut off. If the limb or branch is anything near the diameter of the leading shoot, if smaller, there is no danger of it splitting off, and should be so pruned as to make a side limb. Some of what might have been the finest orchards in the State, were spoiled when they were or were not pruned the second year. The third year, our leading shoot will have formed a nice top. Always prune early. Now, in November or December, when the ground is in the right condition to plow. Never prune when frozen. We will cut the last year's growth with a sharp pair of good shears, commencing on the lower branches, and here we will give our tree its egg-shape form. At this time, it requires a great deal of judgment, for the same treatment will not do for all trees.

"A cherry tree and a peach tree cannot be pruned alike. Plum, prune and cherry grow on spurs and require two years to develop fruit buds, while the peach forms its fruit buds on the first year's growth. The sharp thorns found on the prune and plum should never be cut off, for these are the fruit spurs. At this pruning, we will cut out every branch that crosses another one; for if we do not do it now, in after years we will have to cut off a large limb.

"This year, on our peaches, prunes and pears, we will leave on every one that the trees will bring to perfection. We do not believe that a tree properly pruned will ever be hurt by the fruit that it bears. The fourth year, we will prune about the same as we did the third year, only we will cut every branch back two thirds. This year, we expect a good crop of fruit. All following years, we will prune as we have this fourth year, and our trees will stand any load of fruit they will bear, and never break down under the load of half-ripe fruit. Our trees will bear large specimen fruits, such as will bring the highest price on any market.

"An orchard pruned on the above plan, will be something pleasing to the eye; and the straight rows will look as though they had been pruned to a line. At some future time, we will show how we are going to cultivate this orchard."

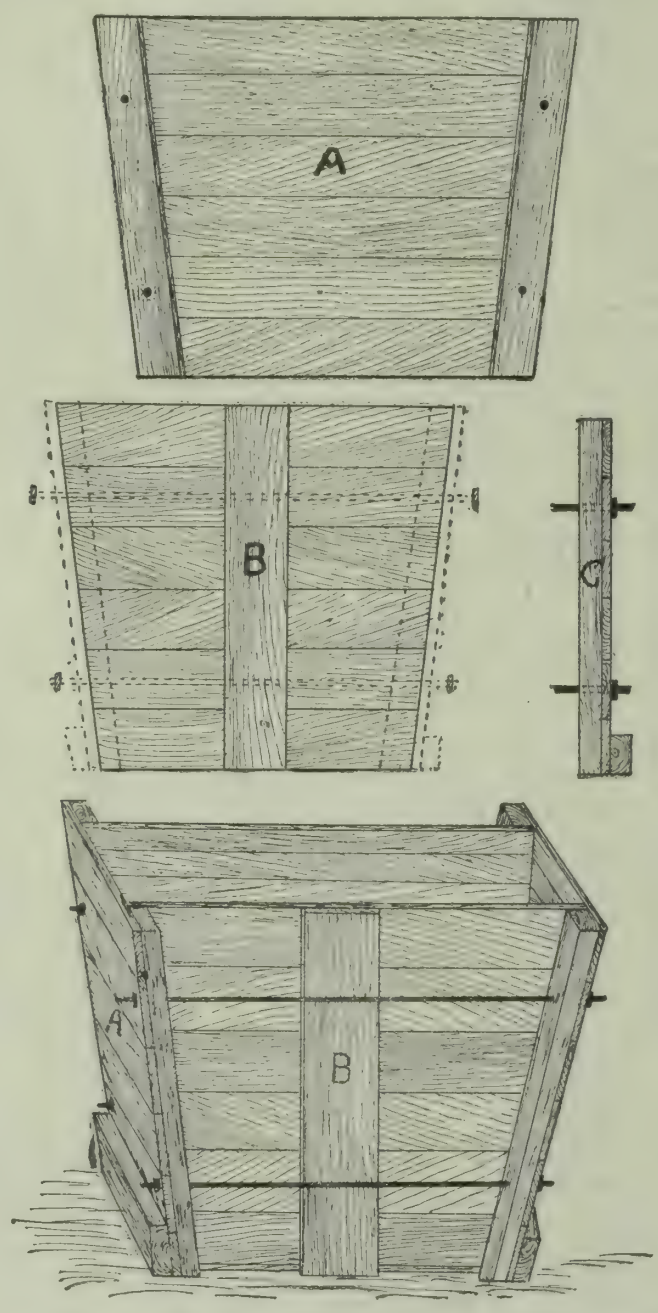
Boxes for Moving Large Plants.

J. M. Samuels, chief of the horticultural department of the World's Fair has issued an illustrated circular which will be of interest to all our readers who may desire to take up growing trees for transmission to Chicago or for other exhibition purposes.

The box represented is the one most commonly used for good-size specimens, but the dimensions must, necessarily, vary according to the size of the plant to be moved.

The box is made in four sections, and for one of the following description 1½-inch boards should be used.

"A" shows the inside of two opposite sections; 4 feet wide at top, 3 feet at bottom, and 3 feet deep. 2x4 scantlings are nailed to each end, through which are bored holes to correspond with the size of the iron rods to be used.



BOX FOR TRANSPORTING LARGE PLANTS TO THE WORLD'S FAIR.

"B" gives the outside view of the other two sections; 3 feet 4 inches wide at the top, 2 feet four inches at bottom, and 3 feet deep. A strip 1x6 is nailed across the center to strengthen them.

"C" gives an end view of section "A," showing the position of the iron rods, and a 2x4-inch strip on the outside, to which to nail the bottom of the box.

REMOVING SPECIMENS TO THE BOXES.

Prepare to remove the specimen by carefully digging around it with a sharp spade, in such a manner that the sides of the adhering earth will conform to the shape of the box to be used. Do not attempt to remove the specimen before fixing the box permanently. This should be done by first fixing the sections "A" on opposite sides of the ball, passing the rods through the holes already bored in the ends of each section to hold them in position; then drop the two sections "B" in place on the insides of the rods, and screw up the nuts sufficiently to secure the earth. If any soil has broken away from the outside of the ball, fill in carefully with fine soil and ram tightly with a pointed stick. Then cut the roots off carefully level with the bottom of the box, lay the specimen over on its side and nail on the bottom firmly, leaving spaces for water to escape. The sides of the box should then be nailed firmly all round. In boxes of the size given as an example, or larger ones, the rods should remain in place, but if of smaller size they may be removed after nailing. Water the specimens thoroughly and remove to a shady place to prevent too rapid evaporating.

Before their final disposition, the boxes should be filled with soil level with the top; boards should then be placed to form a cover and to protect the ball from fracture, and strong protecting strips nailed across this cover.

Whatever sized boxes are used, they should be uniform in shape and proportionately on the same lines as in the example here given. Some deep-rooted specimens will require boxes of greater depth.

Eastern Fruit Crops.

CARBONDALE, ILL., April 5, 1892.

TO THE EDITOR:—A few notes on the fruit prospects of Southern Illinois may be of interest to your readers again this year. Last year there was a good fruit crop through this region, as well as the most of the Mississippi valley. As a result, but little California fruits have found sale here the past winter in proportion to what were sold last year. To make it more definite, it is probable that one-third as many cases of canned goods have found a market here during 1891–2 as did the season of 1890–1. Some green California fruits have been sold here. I should say about the same quantity as a year ago.

Now, as to the prospect for the coming season. In strawberries, I do not think the crop is going to be near as large as last year. Plants set last spring were in many places injured by the dry summer following, so that many fields have been plowed up this spring. As to peaches, all budded fruit was killed at this place by the low temperature of January 20th. It was reported that they were not injured farther south, but the cold wave about the middle of March did a great deal of damage then, as the enclosed slip will show, to the pears and early vegetables:

The 13 inches of snow last Thursday was followed by the coldest night of the year, and as a result, over one-half of the tomato plants were killed. Some growers lost every plant. It was intended to have an increased acreage of about 50 per cent this year, the acreage cannot now come up to last season. To the south of us, great damage was not only done to plants under glass and in cold frames, but to the fruit buds, so that the peaches and pears are ruined as far south as Louisiana and Southern Texas. In Mississippi and Louisiana, the strawberry crop is about ruined, and the loss on early vegetables is over 50 per cent.—Humboldt (Tenn.) Messenger, March 25th.

With us, the pear, apple, plum and cherry buds seem to be uninjured, but I do not predict a full crop, because of there having been a full crop of these last year. The trees would not form a heavy complement of fruit buds under the adverse condition of a rather dry season. This gives us at this writing a prospect for a fair crop of apples, pears, plums and cherries over a small portion of the Mississippi valley, but a shortage of these over the southern part, and a shortage of peaches and strawberries here. This, of course, means a call upon other sections for what home production cannot supply, and California will supply a large share of our deficiency.

As to green fruits, only a small amount is sold here, usually. Each fall, grapes from Ohio and New York are sold here in considerable quantity, eight-pound baskets selling at from 40 to 50 cents each.

But when it comes to the canned fruits, the excellence of most of the brands of California canning that have been placed on our market has crowded out nearly all canned goods from other States.

G. H. FRENCH.

Florist and Gardener.

Eschscholtzia.

[Written for the RURAL PRESS by ADA S. HALSTEAD.]

Mantling our hills in wondrous beauty,
Hearts of gladness; stars of purest gold;
Interspersed o'er meadow land and valley
In bright constellations manifold.

Long ago, when our ambitious fathers
Named this State the "golden" of the west,
'Twas thy light that gave them inspiration,
'Twas thy beauty their fond hearts impressed.

So their children, born beneath the kindness
Of the sun that gave thee thy glad fate,
Weave of thee a diadem imperial,
Circumscribe thee to the "Golden State."

Queen Eschshholtzia! thou art a fitting symbol
Of our Eldorado land. No flower could be
Half so emblematic of her country,
Half so regal in her ministry.

The Eschscholtzia or California Poppy.

[By MRS. JANE KLEE, read at the April meeting of the State Floral Society.

Already, the world over, the California poppy is known as typical of California skies. It is the child of the long, sunny, summer day. To the glowing sunrise it doffs its long, green cap, and turns its radiant face to the light, and, when the brilliant sunset comes, it folds its warm petals close and awaits the sunny sky of the morrow.

The world over, there is nothing like it among flowers. For those who have seen it in the fields abloom, there is a recollection of dashes of flame color in among the wheat and the barley stalks; sheets of flame in the meadow—a bit flashing here, a great stretch blazing there. Indeed, yes, a reflection of our skies, almost tropical at times in warmth. Truly, the flower is the child of our summer days.

From early springtime until late in the fall, on the trains, in the carriages in the pathway, you will see people, old and young, with their hands full of our bright poppies. The pleasure seekers, going out for a day's rest in the fields and by the roadsides, come home laden with the poppies, and fill the vases throughout the house with their brightness.

Whether the soil be rich or poor, upland or valley, shaded or clear, our brave poppy takes hold of life like the brave pioneer of early times, like the vigorous youth of the present, and makes sunshine everywhere that its happy face can find a place to shine. Glowing and bright, it fulfills its destiny, "a thing of beauty and a joy forever."

From its clustering mass of pale green, fern-like foliage, it rises on a slender, flexile stalk, holding its cup upright to the sky, ready for all the sunshine that comes its way.

Painters of flowers speak of the difficulty they have in catching the satiny sheen and the peculiar bright orange color of the poppy petals. The gray green of the foliage is

easy enough of imitation, but the vivid orange satin sheen of the petals is difficult.

Since it is so peculiarly distinctive of California climate, it is well that it has been chosen as "our own" emblem, and the California State Floral Society has reason to congratulate itself upon the happy choice.

Farmers' Institutes.

Meeting this Week at Livermore.

NILES, April 5.

TO THE EDITOR: The next meeting of the Alameda County Farmer's Institute has been arranged for April 15th and 16th.

A first-class program is assured for we are promised able assistance from the State University and from the Leland Stanford Jr. University, as well as by a number of the leading viticulturists, horticulturists, stock growers and farmers in general throughout the county.

Prof. Hilgard will lecture on the subject of crops and fertilizers. This is a subject on which all farmers should post themselves, as the time is rapidly approaching when the wise, or unwise use of manure of various kinds will be a simple test of how good a farmer a man is. We are very fond of saying that we "have the best soil in the world," but can the best soil in the world stand the regular California style of one crop and no fertilizer forever? Prof. Hilgard can tell us better than any other man living what is lacking in our soil, because he has for years been analyzing specimens of soil from all over the State, and he can also tell us what to use to renew it. This is a live subject and one that farmers in this State cannot ignore much longer. As Prof. Hilgard is soon to be away on a years leave of absence, we had better "make hay while the sun shines," and get posted while we may.

Prof. E. J. Wickson will conduct the exercises in his usual competent and pleasing way. He will deliver the opening address on the subject of "The Farmers' Institute," its history, purpose, and accomplishments.

C. H. Shinn, Inspector of U. S. agricultural stations in this State, will read a paper from the results of his observations at the various experimental grounds on, "The Climatic Adaption of Varieties of Figs."

From the Leland Stanford University we are to have Dr. John C. Branner, who will address the Institute on "Agriculture in Brazil," with reflections on our trade with South America.

It may not be out of place to explain a little what the Farmers' Institute is and what it is not.

It is a convention of farmers and others, meeting periodically for educational and social purposes, and is just like a Teachers' Institute in that it plans, and succeeds, when well managed and patronized, in waking up and keeping up to date all its members. It plans to call on the best farmers in each branch taken up, to give their views and methods before the assembly, and then discuss them.

No one can go to one of these meetings with his ears open, without learning enough to pay him many times over for the time used.

THE EXERCISES.

The Livermore Institute will open in Odd Fellows Hall at 7:30 P. M. on Friday evening, April 15th, with remarks by Howard Overacker Jr. president, who will afterward give an address on "The Family Garden." The "Vegetable Garden" will be presented by J. E. Jacobus and "Poultry" by Messrs. Hatch and Dow-Kerrell.

On Saturday at 9 A. M. Prof. Wickson will speak on the "Farmers' Institute;" H. J. Philpott on Poland China hogs; G. E. Crittenden on Summer Feeding of Milch Cows; H. P. Mohr on Draft Horses; Dr. A. E. Buzard on Glanders and Farcy; C. J. Wetmore on Statistics of Wine Production; F. L. Fowler on Grape Growing.

On Saturday at 1 P. M. Prof. Hilgard on Soils and Fertilizers; W. H. Tyson on Winter Spraying of Fruit Trees; W. P. Bartlett on Success and Failure with Different Fruits in Livermore Valley; Prof. J. C. Branner of Stanford University on Agriculture in Brazil; C. H. Shinn on Varieties of Figs and their Climatic Adaptability.

The sessions will be enlivened by music and time for discussion and answers to questions will be given so far as possible.

J. C. SHINN, Secretary.

PARTICULAR ATTENTION is called to the advertisement of Theodosia B. Shepherd, announcing a new catalogue of new seedling canna. The advertisement is on page 371.

THE Truman, Hooker & Co. catalogue is just out and is bigger and better than ever. Everybody should see it.

Grangers' Union of San Joaquin Valley.

Incorporated May 14, 1874.



The above named corporation was organized under the Statute of 1872, known as the Civil Code. Its capital stock is fixed at $100,000, divided into 4000 shares of the par value of $25 each. Its principal place of business is in the city of Stockton, county of San Joaquin, State of California, and it was organized for the purpose of enabling the farmers of the San Joaquin valley to secure to themselves such advantages in purchasing agricultural implements and all articles consumed by the farmer as can only be secured by bringing consumer and producer as near together as practicable, thus doing away with the army of middlemen that have heretofore taxed the farmer enormous profits for such articles as he might be obliged to purchase.

The directors respectfully solicit all farmers to assist in building up an institution especially established in the interest of the agricultural community.

In the management of this corporation it is intended by the Directors that the rights of the smaller stockholders shall receive the same consideration and attention at their hands as the larger, it being the intention of the management to conduct the business affairs of the corporation with equal justice to all, whether shareholder or not.

The lease of the store which the corporation has occupied for the past 15 years expired September 30, 1891, at which time they moved into their elegant three-story building, corner of California street and Weber avenue, built for and owned by the corporation. The upper story is one grand hall 100 feet square.

The present Directors are: James Marsh, President; H. W. Cowell; J. B. Harelson, Treasurer; H. S. Sargent, Secretary; B. F. Langford, W. L. Overhiser, J. H. Hickey, J. B. Boody, E. Fiske.

Geo. A. Earle, Business Manager; T. E. Connolly, Bookkeeper and Cashier.

W. H. E. Leffler, Salesman Hardware Department; Arthur Howell, Salesman Agricultural Implement Department; Harry Marsh, Assistant Bookkeeper; George Haub, Drayman.

Since moving into the new store the business of the corporation has increased wonderfully; in fact, sales have nearly doubled over the corresponding months of 1889, 1890 and 1891.

The President, Mr. Jas. Marsh, gives his personal and undivided attention to the business, and, with his efficient Manager and corps of attentive clerks and other assistants, is making the Grangers' Union a decided success.

Pure Food in Congress.

Action Which Has Resulted in the Official Determination of the Best Baking Powder.

The act of Congress authorizing the examination of the baking powders has resulted in a most unprecedented compliment to the Royal Baking Powder. The tests were made in the Government Laboratory at Washington, and the official report shows that the Royal is superior to all others in leavening strength—being over thirty per cent. above the average. The report also shows the purity of the Royal Powder and the wholesomeness of its ingredients.

This is probably the highest compliment of an official character ever paid to a proprietary article, though no more than the great army of baking powder consumers would expect in behalf of their old friend and favorite.

The result of the official examination, as thus determined, will, of course, make the "Royal" the standard for Government purchases.

THE INSTITUTE AT FRESNO.—The institute meetings held at Fresno on Friday and Saturday of last week were very interesting and profitable. We give on other pages of this issue some of the papers presented and will present others later. The lectures by Prof. Hilgard and by B. M. Lelong, secretary of the State Board of Horticulture, excited great interest. Mr. Lelong supplemented his essay with a demonstration of the qualities of the different varieties of citrus fruits and their adaptations and requirements, which was especially satisfactory to the people. The institute resolved to continue quarterly meetings and elected a new board of officers, viz: President, D. T. Fowler; vice-presidents, Mrs. McLean and J. H. Harding; treasurer, L. B. Holton; secretary, John S. Dore. Dr. Chester Rowell, a regent of the State University, gave a very interesting talk on University extension and the cordial relations which the institution desires to maintain with meetings in the interest of agricultural progress.

THE RIVER IMPROVEMENT MOVEMENT—It is telegraphed from Washington that the committee of the California Miners' Association in Washington has by no means given up its intention of passing the debris bill during this session, if possible, though there will be no undue haste in the matter. The manner in which the Chinese exclusion bill was put through the House, under suspension of the rules, has encouraged them in the belief that a day can be secured and that it can go through. Assurances have been received from a majority of the members of the House that they will support the bill, but it would be considered foolhardy to try to pass the measure when a two-thirds vote is required.

WE call attention to the advertisement of Geo. Ertel & Co., Quincy, Ill., in another column of this issue. That the Victor press is one of the most perfect presses on the market is shown by the fact that Messrs. Ertel & Co. have the largest factory in the world devoted exclusively to the manufacture of baling presses. They offer to ship a press on trial to any point in the United States or Canada to work against any other make, the party testing them to agree to buy the one doing the most and best work for the least money.

Agricultural Notes.

CALIFORNIA.

Butte.

AN ALMOND ORCHARD CHALLENGE.—Biggs *Argus:* We defy the world to show a more thrifty, larger growth, cleaner and better laid out almond orchard than that 300 acres of Hatch & Rock on Rio Bonito. Trees three years old so large that the limbs almost interlap in every direction, every twig loaded with nuts and 300 acres of them in a body. It is a sight worth seeing and the crop this year will be worth thousands of dollars.

SAVING GIRDLED TREES.—Oroville *Register:* Most persons who find valuable fruit trees girdled by gophers, or from any other cause, consider the trees lost. Chas. Charvet of Thermalito told us this week how he recently saved a five-year-old budded orange tree that had been completely girdled by gophers and fully three inches of the bark stripped from the trunk. He put a rope under the limbs so as to support the weight and propped up the tree with four stout sticks. He then dug away all the earth from about the roots till the girdled section was fully uncovered, when he took some common rubber paint and with a brush gave the trunk a coat of this paint, completely covering the section that had been stripped of its bark. He then quickly covered the roots with earth, not having them exposed any longer to the sun than possible, removed his props and rope and left to the tree to live or die. It was in full bud when he tried the experiment and it has continued to bud and bloom, and its leaves appear as fresh, green and bright as though the tree had never been injured.

Fresno.

OLD CITRUS TREES.—Reedley *Exponent:* At Lewis Creek, on the ranch formerly owned by John Tuohy, a lemon tree 12 years old this year produced 10½ boxes, each box holding about 210 lemons, making the number on this tree about 2100. Several orange trees of the same place have produced well for a number of years and the trees are clean and healthy.

CROP PROSPECTS BAD.—White's Bridge Cor. *Expositor:* We who have been blowing about our great grain fields all winter will, I fear, have to cease soon, unless rain comes at once. There is no doubt that a better stand of grain never existed than we had this season, but the fact of not having had a decent rain since March 1st is now showing the grain in a different light. All last week we suffered a heavy northwest wind, and what moisture was in the ground was soon gone.

CROP PROSPECTS.—Sanger *Herald*: In many fields the summerfallow wheat is very heavy, and in all the grain is growing rapidly. The acreage is large and the stand excellent. The warm weather is forcing a rapid growth of alfalfa and other grasses, and the prospect is that haying will begin early. Indications are favorable for a very full fruit crop. With fairly favorable weather from this time on, the season's output will be the largest in the history of the county.

Inyo.

AGRICULTURAL DISTRICT FAIR, No. 18.—Inyo *Index:* Board of Directors met in Independence on Tuesday, April 5, 1892. Robert Love was elected president for the ensuing year by unanimous vote. With but one dissenting voice, it was resolved to hold the Sixth Annual Fair at Independence, the date being fixed for September 27, 28, 29 and 30, 1892. The only condition is that the citizens here give as much for race purses as was given at Bishop last year. Failing in this, the directors will consider that Independence does not want the Fair.

Kern.

SIGNS OF RETURNING PROSPERITY.—Bakersfield *Echo:* No greater indication of the prosperity of a section could be given than to have the farmers realize that the old structures (built for the most part in the old cattle days) are entirely inadequate for the product of this and coming years. Besides, while they were in debt to the store keepers, they virtually had to dispose of their product at the latter's figures. Now the aspect of affairs has materially changed. Those who did not get out of debt last year are almost certain to do so this year and have something left. That a new era of prosperity will dawn is apparent from the fact that last year most of the farmers were compelled to sell their wheat for less than $1.45 per cental, when in two months' time wheat reached $1.90 per cental, and hay from $11.50 to $15, and none to be had at the latter figure.

Nevada.

FRUIT CROP.—Grass Valley *Telegram:* Bradbury Perkins, who is one of the best posted cultivators of fauit in this section, is pretty certain that the peaches and cherries of this section were killed by the hard freeze of Thursday night of last week. Mr. Perkins will have some pears, probably a good crop, although the pear trees did not escape entirely. Some others of our fruit growers think pretty much everything in their line was killed. David Bryan was even fearing that many of his trees were killed.

Orange.

WOOL NOTES.—Chino *Champion:* Michel Barcellona, Beneito Ochoa and Jean Arguina have been pasturing a flock of 7000 sheep on the east side of the ranch the past winter, and are now taking the fleeces. They have 27 men busy shearing, and up to yesterday they had finished 2000 head. They expect the entire clip to amount to about 140 sacks of 350 pounds each, or 49,000 pounds.

San Diego.

TREE PLANTING. — Otay *Press:* Capt. J. H. Folks is planting out 20,000 seedlings on his place at Nestor. J. C. Long is planting 100,000 seedlings in his Highland nursery. Hinch, Heckett and Peterson are each planting ten acres to trees in the Highland district. Col. J. C. Moore, is putting out five acres of lemons on his place west of town. G. S. Woolsey, who has planted 1000 trees this season, is now preparing to plant several acres more. Uri Decker is putting out 150 citrus trees. P. H. Evans is planting his five acres to citrus fruit. David Smallcomb, in the Tia Juana valley is planting out five acres to figs and citrus trees. W. G. Evans is planting several acres of his Highland ranch to trees and nursery stock. J. M. Sharp is setting out ten acres to peaches and oranges. Mr. Endly is planting his five-acre tract, recently purchased at San Diego, to trees.

San Mateo.

VEGETABLE NOTES.—Redwood City *Gazette:* The outlook for the early potato crop was never better. It is feared that the first crop will be materially shortened by the late heavy winds, which have beaten off the bloom. Colma is shipping large quantities of cabbage to Eastern markets. All kinds of vegetables are grown here in great profusion. This branch of industry is chiefly conducted by Italians, who are, as a rule, a very industrious, frugal, yet obliging people, and growing wealth is a reward of their untiring industry.

Shasta.

INDIANS TAKING UP LAND. — Redding *Free Press:* All the Indians in the country seem to be taking up land. It costs them nothing, and the copper-colored native sons of the forest are like every one else, willing to take anything as a gift. In a little while all the choice little valleys and nooks for miles around will be owned by the Indians, and the fear has been expressed that it will cause trouble with the whites, inasmuch as the whites cannot get these lands so taken either by purchase or otherwise, as the law does not allow the Indians to sell under 25 years. If this provision was not made, it would only be a short time when the lands would fall into the hands of the whites by purchase.

Sonoma.

A THRIFTY FARM.— Healdsburg *Enterprise*: Across the long bridge at Geyserville is the farm of L. G. Ellis of 550 acres. It is a beautiful spot, located on the east bank of the river and stretching away to the hills, whose wooded slopes gradually rise until they terminate in the Geyser Peak. There are 130 acres of as rich bottom land as can be seen anywhere in this tract. While there is a vineyard and orchard of bearing trees, Mr. Ellis continues to enlarge the same. Last year he set out 530 prune trees and 600 peach trees. He has a thrifty young nursery, where he raises trees for his own use. There is a field 50 acres in extent covered with a heavy crop of growing wheat and barley, joining which is a field of oats of 30 acres in extent.

Ventura.

FILLMORE, April 9—TO THE EDITOR: We are raising more barley and less beans this year. We have not had quite our usual allowance of rains, at least in some parts of the county, and barley will be light. As a general thing, we are prospering fairly well; new lands are being cleared and fruit trees and vines are being set in all parts of the county. We were not afflicted much with the boom of two or three years ago, and we keep moderately and steadily on onr course to prosperity. All are contented and busy.—S. P. SNOW.

The Home Circle.

California's Emblem.

Golden-hued eschscholtzia, fair,
Blooming on the hillsides, where
The breezes softly kiss thy velvet cheek;
In thy dress of molten gold,
Gazing on thee, we behold
Jeweled rosaries, heaven's richest treasure to the meek.

Thou art queen among them all!
E'en the sturdy sunflower, tall,
Bends to thee his sunny, beaming face;
Wrought in gold, and jeweled tipped,
Sunny heart, and smiling lipped,
Thine willingly, we kneel before thy grace.

In thy gold and amber dye,
Nodding midst wild wheat and rye,
Thou dost wave above a carpet green;
Heaven's cup distills the dew,
Each day, jewels, bright and new,
Nestle round thy stem, and brightly gleam.

Light, dancing in the summer air,
The skies are blue; the world is fair;
Thy home, the broad and boundless realm of space;
The hills, thy beautiful palace hall;
Thy friends, the lofty trees so tall;
And hill and dale alike, thy fit abiding place.

Ah, yes, to us thou art doubly dear;
California's fields thy native sphere;
The "Golden State;" the garden of the West;
Sunny-born eschscholtzia, fair,
Nodding here, and waving there,
Of all, *thou* art the one we love the best.

San Francisco, March 28, 1892. —R. Johnson.

Old Dudley Thurman—A Vanished Type.

To many of those who daily see the dark masses of ignorant, restless, unkempt people that beat ceaselessly up against the dominant race of the States like the waves of a dark, pent-up channel beating against stalwart white cliffs, there is nothing in the negro as he is seen to appeal to any artistic sense in the beholder. To others, his ignorant, shiftless state appeals for and levies from sincerely good and earnest hearts an immense flow of intensest pity. Others find in the masses moving about them, with barbarous, undeveloped profile, with awkward gait and gesture, with clipping tongue, only subject matter for mirth.

But look at the masses as we may (for in this instance, as in every other, it is true that "the eye sees only that which it brings with it the power of seeing"), all must admit that now and then from out the seething, restless mass, there springs to light some well-rounded wave filtered through and through with the light of heaven.

These individuals, lifted above their kind, and enlightened not mentally but morally, are usually those old creatures who bore the yoke of slavery, but felt less its pressure than they felt the pressure of the sustaining, friendly, able hand of the master reached ever out toward these humble ones dependent upon him.

I wish that a gallery of simple portraitures of these simple people could be made. They drop one by one out of Southern life, the last links that bind together two utterly alien races. The worth of them to the South is incalculable. They carry ripples of light over the dark sea of seething political and impossible aspirations. They act as most powerful motors in the present adjustment of our grievously troubled labor questions.

I wish that many portraits of these good old people might be made, for I can scarcely believe that the world has ever before held such a class as this. One such old creature, quintessence of quaintness, I have now in mind, old Dudley Thurman.

Old Dudley came to our home on Mondays to carry off a laundry bag and contents to his daughter. His daughter made great pretensions to style; she was a constant displayer of fashions that never were on sea or land.

I had often been told how old Dudley made his first trips for the clothes to wash at earliest dawn, awaking sleepers with a marvelously queer plat! plat! plat! plat! on a door, a quaint knock with the finger balls. Such deprecatory knocks the African makes, utterly differing from those ringing demands for admittance that an Anglo-Saxon gives.

When a door opened at old Dudley's humble and apologetic taps, he began what became known to our household as the song of Dudley, a long and monotonous chant that ran like this:

"Mornin', mornin'! Dis is de man dat comes fer de cloze. Dis is de father of 'Liza Ann. Dis is ole Dudley Thurman."

"Dudley is your name?"

"Yes'm! Yes'm! Dudley. Dat's hit. Dis is de man dat's name' Dudley Thurman. Dis is de man dat sweeps Mrs. L.'s yard. Dis is de man dat cuts up her wood. Dis is ole Dudley Thurman!"

I thought this relation of old Dudley's chant rather an exaggeration made to please me, since I so loved any exhibition of the old-time, before-the-war negro, with his quaintness of humor, his sweetness of great humility, but not so. I myself was destined to hear many times the song of Dudley. I was delighted when its first soft notes struck my ear.

"Mornin', missy, mornin'! I been fer de cloze six times dis mornin'. Yes'm; hit's 'leven o'clock now, it is. Dat house gal er yourn she won't gimme de cloze, dat she won't. Yes'm!

"Dis is de man what comes fer de cloze.

"Dis is de father of 'Liza Ann. Dis is de ole Dudley Thurman."

The song of Dudley was like most songs made by an individual of a race in its earliest youth—a song almost endless and changeless. Any question or suggestion from the listener thereto would turn on a flood of monotonous melody with the suggestion for subject. For instance, I asked the old man: "Was it your crib that burned last week?"

"Yes'm!

"Dis is de man whose corn crib cotched afire. Dis is de man knows a enemy done it.

"Dis is de man didn't know twel right den dat nobody all de round worril hated him.

"Dis is de man whose oxen got burnt, too; dis is ole Dudley Thurman.

"Dis wus de man dat wuz sleepin', sleepin'. I think my heart in my breast wuz sleep, too. While I slept, fire cotch crib, oxen, wagin. My oxen wuz hitch right side my crib. Lo and behold! All de crib, year's corn, and de wagin, wuz all in ashes, and my two oxen wuz burnt 'fo' I waked good ter my senses.

"Yes'm! Dis is de man dat los' in dat fire a hundred dollars and mo'. Dis is ole Dudley Thurman."

"You have a nice name, uncle."

"Ma'm? Yes'm! Dudley's my name. Dudley Thurman. My teefs out. I can't talk like I useter talk. I useter be a stylish talker twel all my teef left me. Dat how come you don't al'as un'stan' me when I talk, 'caze my teef gone. I guine spell my name fer yer, dat's what I guine ter do."

Then he braced himself for a mighty effort. I knew that I was going to have exhibited to me next moment the result of years of earnest mental effort. I knew that a great part of 'Liza Ann's odd times had been given to those lessons, devotion to which from both teacher and pupil, daughter and father, had enabled old Dudley almost to spell his own name.

"Now, Miss!" holding up one awkward hand, "I guine ter begin: D! u! d! Dud!—and er-er—Missey it goes on and continoos ter er-er—l! e! y! ly. And all dat put toge'e'r makes a Dudley! Da's it, ain't it, missy? Dat's all correct, ain't it? Den we begins, and we sez: "T! h! and hit runs on dat way—" (here a gesture vast enough to take in all the field of orthography)—"twel it gits ter—Lemmesee! T? h? o? dat's hit? T? h! o! r! and er-er—Missy! Thurman!"

Poor old man! As many times as I heard him endeavor to "spell out" his name, I never heard that last name Thurman finished out by letter, only a grand sweep of hands magnificently awkward filled in the deficiency.

His own name, he said, repeatedly, was Dudley, and he always added: "Arter de war, when all de niggers wuz free an' tuck ter choosin' uv names fer deyse'ves, I choosed my name back, Dudley! and I choosed my master's name ter put right sider hit—Thurman. And dem what speaks dat name, des so: Dudley Thurman! der speaks my name." He came one day in autumn, this old Dudley, to, as he said, "Des beg a few biscuits and ter talk des a little mockin' bird talk ef de gre't house folks want ter hear him."

I was of course anxious to hear "mockin' bird talk," so that I might know what that was, therefore the biscuits were presented in hot haste, howbeit they themselves were cold enough, and the old man began:

"I made 'Liza Jane des laff. Yes I did. Yes m. Dis is de father of 'Liza Ann. I tolt her how yistiddy mornin' I was in de fiel'. I wuz tryin' ter pick out my cotton, but de clouds des rolt deyse'ves round over my little patch, des did, and de rain hit fall on my open cotton—drap! drap! drap! Ef I let dat cotton stay in de field, den rain guine best it on the ground and in de dirt, den I gwine los' it. If I pick dat cotton it gwine take a mildew; den I gwine des natchally los' it ag'in. Den what is I gwine do?

"Den I tell 'Liza Ann how I did talk ter myse'f in de cotton fiel', sez I, 'Lord,' sez I, 'what make you does do me like you does do me? You done gin me good 'ield er cotton. You done gin me in dis heah fiel' mo'n a 100 open bolls ter ev'y lick I done put dar. But now Lord,' sez I, 'I can't git dis cotton out dis fiel', 'count er dis rain. How come you done gin me dis cotton, den sen' on dis rain 'leaze ef dis cotton don't do me no good 'tain't gwine do you no good, neither nobody else gwine git it; den why, oh Lord, don't you let de sun shine, sence de cotton is hangin' in fiel'? Lord,' sez I, 'please let de sun shine,' and den right den and dar de sun it shin!

"Yes'm! Hit did. De sun hit shin! But when I say dat ter 'Liza Ann, when I do say the sun hit shin, den 'Liza Ann she des keel over and laff and laff. She say: Pa, Pa! who ever hearn of anybody a-sayin' de sun shin. Pa, how come you to say shin?' Den 'Liza Ann she do laff. She des laff and laff.

"You know, Missy, I des say dat fer ter make her laff.

"I oughter had said: De sun hit shine! not shin! oughten I, Missy? I knowed dat.

"I useter be a fancy and fine talker when I was young.

"But my teefs out, Missy, dey is out, and dat how come I don't talk so good.

"Dar now.

"I des wanter make you laff like I done make 'Liza Ann laff. Dat how come I talks' much dat mockin' bird talk fer you, make you laff."

This is line by line the sketch of that simple, humble, kind-hearted old Negro, Dudley Thurman. Long may he live to make the earth brighter by his good work in our gardens. Long may he live to make the world gayer with his quaint "mockin' bird talk."—Martha Young, in N. Y. Home Journal.

Contemporary Heroism.—"All this talk about the heroic age of our grandfathers is unadulterated nonsense," says Walter Blackburn Harte in the April *New England Magazine*. "We are quite as heroic in this generation as were the men of any generation; and this is not saying very much. There are, however, heroes in our midst all the time; but the only heroes we know anything of are those of history and literature. We are torn and swayed by the same passions and fears as actuated the people of ancient Egypt; and a tragedy in a Broadway restaurant is just as much a tragedy, and just as full of the human element necessary for poetry, as if it took place on the banks of the Nile. The engineer who stands in his cab, at the risk of his life, in a railroad crash is quite as heroic a figure as Columbus, threatened by his mutinous sailors. As long as the human drama continues, there will be tragedies and there will be heroes. The critics who say that this age is too prosaic for the production of poets and poetry do not not appear to realize that as long as birth and death, and the essential solitariness of every individual existence remain, human life can never become commonplace. The fact is, in reading about our ancestors we accept shadows, continually elongating with the years, for men."

An Old Maid's Enlightenment.

I can remember when I used to think it would be so nice to be "Mrs. Somebody," and so unfortunate never to be "Mrs. Anybody," but that was years ago; I won't say how many. I live with my brother Simon Andrew, in one of the farming districts of Western Connecticut. Simon Andrew is a bachelor, in the true sense of the word, for I have known him to walk a mile out of his way to avoi speaking to a woman.

One day when I was tying up my catnip and boneset into bunches to dry for winter use, who should come in but the Spriggins girls brimful of fun and laughter. I knew they had come in quietly, thinking to catch Simon Andrew in the house, but he was clear down in the lower lots before they had the gate unfastened.

Of course they had an errand—they almost always have. I've known 'em to come in as many as three times a week to get my receipt for preserves, and I haven't a doubt, if you had asked 'em the next morning how the receipt read, they couldn't have told a word of it. I wonder why it is that bachelors are such a curiosity and so much sought after by young folks?

Well, as I said, the Spriggins girls came in, and just as they were going they almost took my breath away by saying, "O, Miss. Rachel, did you know that Roscoe Miller and his family are in town—just came from out West to visit Roscoe's father?" I managed not to show my astonishment much and the girls finally started for home.

You see everybody has his or her little story sometime in life, and I had had mine. This news brought it all back to me. I thought of the four-leafed clover Roscoe had given me so long ago, that I had carried in my bosom for a year after, and as time passed I had finally consigned to the bottom of the old chest in the garret. I had thought of burning it, but somehow I didn't. It was the only souvenir of my youthful dream.

Roscoe didn't spring from a very high family, and his older brothers had all turned out "black sheep," so everyone looked down on Roscoe and thought it wrong in me to accept attentions from him; but I was young, only seventeen, and the more they said against him, the more I loved him and the surer I was that he was all that I would wish him to be. Wouldn't I believe Roscoe before all the world? What if folks did say he frequented the tavern? And what if his breath did sometimes have a peculiar smell? Didn't he solemly swear that he did not taste liquor? What if his family did have black sheep? Was that Roscoe's fault?

Some seem to think it is particular credit to themselves because the Lord saw fit to give them a right minded ancestry. I don't think it is right to condemn the whole flock because of the color of one, so, although I have lived to be thankful that Roscoe and I parted at last, I hold to it that his case was the exception rather than the rule.

When I look back through the mists of time, it seems to me like a silly little dream that I would like to forget forever, but it was hard to bear then, and even now the mention of his name had set me into an uneasy state of mind, and I found myself wondering how he looked, and what sort of a wife he had chosen.

Well, the next day was Sunday and I felt a little curious to see Roscoe and his family. I knew they would come to church, so I hurried Simon Andrew and went early so as to be there when they came. And they did come! I heard the old familiar step, which time had not yet changed. I felt, rather than saw, him pass our pew, followed by the click of several pairs of feet of assorted sizes.

I took a fleeting glance. And O! to think I had saved that clover leaf all these years. Did I, Rachel Welton, ever dream of marrying such a man as that? Old, gray and unkempt, with the unmistakable marks of dissipation on his face; an insignificant-looking, shabbily-dressed woman on one side and several open-mouthed, stupid-looking children on the other.

I looked at Simon Andrew, but he was contemplating the scratch he got on his boot while walking down and I knew he would be in agony till he got home and polished it over. I looked over at Deacon Hobb's widow sitting with her scapegrace of a son, that had brought the deacon's gray hairs down in sorrow to the grave. Then my eyes wandered over to the Dobson's pew where Mrs. Dobson's three-years-old boy was mussing her bonnet-strings and worrying the life out of her. I finished my survey with a glance at the Spriggins girls, "sweet and fresh as the morning dawn," brimful of life and health and fun, with the making or marring of their future lives in their own innocent hands, and I thought to myself, "I wou'd not change places even with them." Then I fell to folding my best handkerchief, and I think I folded more of contentment into that small square before the service began, than I ever knew in my life before, and I am sure I raised a heartfelt prayer of thankfulness to Heaven that I was an "old maid."

When I reached home, the first thing I did was to throw that clover leaf into the fire which I lighted on the old stone hearth, and when the ashes and smoke went up the broad mouth of the old stone chimney they took with them the last of an old maids dream.—Anna D. Gray in Farm and Home.

San Francisco Fashions.

[Written for the RURAL PRESS by MARIE EVELYN.]

SAN FRANCISCO, April, 1892.

DEAR DAISY:—One of the most noticeable features in the new spring fashions is the preponderance of ribbons. Long streamers are worn floating from hats, shoulders and waists—from any point, in fact, to which it is possible to attach them. Skirts are lavishly trimmed with ribbon, or ribbon velvet, arranged in fantastic trellis patterns, or in plain bands strewn with bows. Many of the pretty lace flounces on the spring gowns are ornamented every few inches with bows of ribbon and hanging ends. There is nothing strikingly new in the cut of the dresses; waists are still elaborately trimmed, and skirts continue to be long and clinging. The bell skirt is perhaps the most worn at present. Nothing is more simple to make, as it is merely the plain skirt cut with the back seams on the bias, from the hem to the waist, thereby avoiding superfluous drapery being gathered into the belt, and insuring a train with less material than by cutting the back breadth plain. The bell skirt has the advantage of setting back naturally, without being tied, and of being easily gathered together to hold up. Since walking dresses have been lined throughout, instead of having foundations, it has become an absolute necessity to wear a pretty underskirt that just clears the ground. Every one who aspires to be fashionable wears a silk underskirt trimmed with one or two frills, probably because silk has the advantage of not being at all clinging, whereas a woolen skirt attaches itself to the dress and makes it a matter of difficulty to hold up the one without the other. Of course, rich and extravagant people trail their long dresses through the mud and dust, but poorer and wiser ones object to sweeping the roads with their wearing apparel.

Some of the prettiest bell skirts being worn are long and perfectly plain, save for two or three narrow frills round the edge. A few of the latest are slashed or raised a few inches at the sides, showing another material; and a new, but so far not very popular, skirt consists of two or three very deep flounces. As for waists, the more fantastically they are trimmed, the more fashionable they are. Long ruffles or ruchings hanging from the neck and wrists are much worn, so also are silk vests, ribbon bows or festooned ribbon, chemisettes, etc. A pretty dress consists of heliotrope cashmere and velvet ribbon about two inches wide. The plain, tightly fitting waist and long bell skirt trimmed with three narrow frills are of the cashmere. The collar and cuffs are of violet velvet. Across each shoulder is a strap of the velvet ribbon, kept in place by a bow. In the front, these straps go to a point a little below the waist, meeting a strap from the neck and one from under each arm. The straps that cross the shoulders almost meet at the back of the waist, where they are looped in long bows and ends that hang to the edge of the skirt.

Belts are more worn than ever. Nearly all are deep and some assume the dimensions of corsets. Short waists edged with ribbon or a puff are very fashionable, but perhaps the long blouse is newer. This is often half the length of the skirt, and while sometimes tight-fitting at the waist, is more becoming to a slight figure if made loose and drawn in with a belt.

Some of the spring outdoor jackets are made with a full loose back drawn in with a strap that is attached to the seams under each arm, and buttons at the back.

Flats and bonnets are very transparent; tinsel, jet, gilded openwork frames and many kinds of fancy straw are shown. These are extensively trimmed with flowers and festooned ribbons, and some of the streamers are so long as to make mischievous children itch to seize upon them and cry "Gee up."

P. C. W. P. A.

[Written for the RURAL PRESS by MAUD MANSFIELD S. PEASLEE.]

The work done by the Women's Press Association of this coast is quite varied in its nature.

Numbering nearly 150 from the northern to the southern limit of the coast, engaged in all the different lines included in the term, legitimate press work, their influence is very considerable.

Because of this great diversity in the nature of their work, in no other way could the concentrated force of their energy be felt.

The best good of the Pacific Coast is the earnest desire of every member, and "In Union is Strength," their unwritten motto.

The Constitution and By-laws provide for two meetings each month, on the second and fourth Mondays of each month.

The business meeting on the second Monday is often a a very lively one as the pros and cons of many disputed questions are discussed.

The strictest parliamentary rulings prevail at such times.

The social meeting is open to invited friends of the members, and highly interesting are they to all who attend.

The W. P. A. will contribute largely to the entertainment of the National Editorial Association which meets here in May. This will prevent their holding the customary W. P. A. convention in March.

The official seal of the W. P. A. is a fac-simile of the badge, the five-pointed star, bearing the initials of the Association and the date of inauguration.

It is a point of considerable interest as evidence of the high nature of the work done by members of the W. P. A., that of the eight delegates allowed them for representation at the Editorial Convention to be held in San Francisco in May, all except the President are *bona fide* active editors. The same is true of the alternates.

PERSONALS.

Mrs. Maggie D. Braniard of the Santa Clara Valley is writing an article on the Commercial possibilities of Horticulture as a profession for women of the Pacific Coast. This will soon appear in *The Californian*.

Mrs. Parkhurst has accepted a position on the staff of the *National Journalist* of Chicago. She will hereafter represent the business interests of that periodical on this coast. This however will not conflict with her duties on *The Californian*.

Mrs. Nellie B. Eyster is lecturing throughout the State on Scientific Temperance.

A goodly number of the W. P. A. are very actively engaged in work on different Boards for the World's Fair to be held in Chicago during '92.

April Jokes.

"SINGULAR idea that about our growing shorter as we grow older," said Snagg, "I don't half believe it myself." "There must be exceptions to the rule," answered Boggs. "If I should live to be a hundred, I couldn't be any shorter than I am now.—Detroit Free Press.

FRIEND.—What did he say to you when he proposed to you? Miss Rox—He said life without me meant nothing. Friend—He was sincere in that. That's just what his possessions amount to.—New York Press.

TEACHER—I am surprised that you are not further advanced. You are extremely backward for your age. Little Girl—Yes'm. Mamma wants to marry again.—Good News.

MISTRESS.—"I am surprised. You say you were married six months ago, divorced three months ago, and remarried to your husband last night." Domestic—"Yes'm. You see, at the first place he had they wanted a married man so we got married; but the next place they wanted a single man, so we got divorced and I came here. Now he's found a place where they want a man for gardening and wife to cook, so we got married again, and I'm going there with him.

PAPA: See the spider, my boy, spinning his web. Is it not wonderful? Do you reflect that, try as he may, no man could spin a web? Johnny: What of it? See me spin this top! Do you reflect that, try as he may, no spider could spin this top?—Chicago Inter-Ocean.

A LITTLE GIRL listening to her father as he read aloud from a newspaper the long string of deaths, including those of the Duke of Clarence and Cardinal Manning and Simeoni, and when he was through, she quietly observed: "Papa, it must have been a great day in heaven."

YOUNG FOLKS' COLUMN.

The Dinner that Wasn't.

[Written for the RURAL PRESS by ALICE KINGSBURY COOLEY.]

It was Easter Sunday and the mother had prepared a couple of nice pies, and the celery was washed and the cranberries cooked to a stiff jelly, so she only had to cook the turkey and vegetables and the dinner would be worth giving thanks for, and it wasn't so very wicked to have a nice dinner for the little ones after the rather restricted diet of Lent. Everything was cooking nicely, and the aroma filled the kitchen and penetrated even to the garden, where the little ones were at play; but the garden wasn't a garden now. Away up in Cisco the mountains have snow on them; yes, the road is sometimes ten feet thick with it, even in May, so instead of flowers to play with they were having a little game of snowball.

"Ah, ma, but the dinner smells nice," cried King, entering the kitchen. "I—I should like to just taste the dressing."

As the mother had just opened the oven to see how the turkey was cooking, King had a good view of it that made his mouth water.

"Hold out your hand—there, taste it."

"Ouch, ah!" and King slipped it rapidly from one hand to the other to cool it for eating.

"Oh, get a saucer," said the mother, and King was not slow to obey. The piece of dressing was soon eaten.

"Um! shouldn't I like to taste of the meat."

"Don't be bashful, dear, here's a leg," and the mother cut off a nice brown leg. This he took in his fingers, and with a mild war-whoop he went into the yard to show his good luck to the rest of the children.

"Ma'll give me a piece, I know, cried Mignonne, the little beauty of the family, rushing in.

"What is it, dear," asked the mother.

"A little tintsy piece of the lovely smelling turkey, dear ma."

"Of course," and a fine piece of the breast was placed on a saucer, and just a little cranberry sauce.

"Ain't you a sweet mother," and Mignonne took her prize into the yard too.

"That ain't fair!" cried Sailor Walker. They called him "Sailor" because he wore a blouse suit with little anchors worked in the corners, and said when he was a man he was "agoin' to join the nevvy."

"Ma, please give your sailor a piece; it smells good clear out of doors."

A wing and a piece of the breast was laid on the plate that he fetched from the cupboard. "Now a little dressing and a little bit of sauce," and he remained by the fire and ate his "bit." But it tasted so good that he asked for more, and then the twins ran in. "Turkey, mamma, turkey," they shouted, holding out their hands, and mother soon filled them with the choicest bits put on a couple of slices of bread. Then Polly came in.

"I don't think it fair you should give them all some turkey and me none," she pouted.

"Of course not, my dear," and she heaped her plate full.

"Oh, ma!" and she darted out of doors to show King that she had more than he had.

"So you have; that's just like a girl," and King went back for a second little piece and came out with a plate full; and the "baby"—but he wasn't a baby, you know, only the youngest—left off making a snow man and ran in.

"Wi, ma! give me some too," he cried, and some for Dick."

"What do you say?"

"Give me some turkey, please?"

"Oh, hold your saucer," and she piled it full.

"What's got into ma to-day?" whispered Polly to King. "I've often wanted her to cut off a bit of turkey or chicken and she never would before."

"I guess it's 'cause its Easter. Let's have a game of snowball."

"No, you build a fort and we'll make a pile of balls and we'll see who can knock it down."

So the rest of the children, including little neighbor Dick, were called, and for an hour they had a capital game; then, one by one, they slipped into the house, and this is what each one said:

"Ma, *please* give me my piece of pie, and I won't ask for any at dinner," and each got his piece and went off, so that the rest should not see. Soon they were all ready for more fun, and the "baby" said they could fire at his man, as he might want some of the good dinner that continued to tempt their olfactories as the door was ever and anon opened and shut.

"Whew! but I'm getting hungry," cried King. I wonder why ma doesn't call 'dinner'?"

After another hour, mother called them in to get ready, wash their hands and brush their hair. Then they all rushed into the dining room, where their father sat at the head of the table smiling, and a big bouquet—some friend had sent up from Frisco for Easter—in the middle, and a beautiful pyramid of mashed potatoes stood at one end, and a lovely dish of cranberry sauce, but there was only a couple of spoonfuls in it, stood at the other. Then there was stewed onions and beans—you see there are no green vegetables growing away up in Cisco in April—and in front of their father was the skeleton of an immense turkey.

As each passed his or her plate the father put on a bone, and the mother filled their plates with potatoes.

"No onions, ma," was the cry from nearly all, and "no beans" from several.

"Ain't there no gravy," asked Sailor Walker.

"No, dear, you all ate that before dinner."

"I should like a little meat of the turkey, please," said Polly, as she watched her father and mother enjoying theirs.

"You all ate your portion before dinner, my dear. Won't you have some onions?"

"Dis bone won't chew. I can't swallow it," cried "Baby."

"Here's some bread and butter that's nice," said their father.

"Give us the dessert, ma," cried the twins, and she put an apple on each of their plates.

"No, no, pie!" they cried.

"Oho! you are going back on your bargain," said their mother.

But the pie was put on the table, but there were only two pieces, so mother and father ate them. While the children looked on King and the Beauty got up disgusted; then suddenly they both burst out laughing.

"I know now, cried King, ma has been teaching us a lesson—"

"Yes, an object lesson," said Polly under her breath—"That we can't eat our dinner beforehand and then have it to sit down to and eat all the same."

So, as it was a good lesson and was to save much future trouble, their mother got them up a splendid supper, and told them one of her best stories, so that they always remembered with pleasure "the dinner that wasn't."

DOMESTIC ECONOMY.

POTATOES IN BALLS.—Boil and dry the potatoes in the usual way, and mash them quite fine, adding a little cream, pepper and salt and a small piece of butter; roll them in balls with a little flour and brown them with a little butter, or fry them.

SARDINE SANDWICH.—Remove the skin of half a dozen sardines, split and take out the bones. Spread stale slices of bread very thinly with butter, place on each two halves of the fish, squeeze a little lemon juice over them, add a crisp leaf of lettuce to each, and put a slice of buttered bread on top.

PARK HOUSE GRAHAM MUFFINS.—Four eggs, one teacupful of brown sugar, two tablespoonfuls of melted butter or lard, one-half teacupful of good yeast, a pinch of salt, two quarts of graham flour, milk enough to make a stiff batter. Mix, and let it rise over night. In the morning, fill the muffin rings half full, and bake in a quick oven.

GOLD CAKE.—Rub a generous half cup of butter to a cream, add a teacupful of powdered sugar, the beaten yolks of four eggs, and half a cup of milk, in the order given. Sift together a pint of flour, half a teaspoonful of salt, and a teaspoonful and a half of baking powder, and stir it into the mixture. Beat until perfectly smooth, add a teaspoonful of lemon extract, and bake in a shallow tin, lined with buttered paper, from 20 minutes to half an hour, in a steady oven, being careful not to open the oven door suddenly upon it. Powdered sugar sifted thickly over the top, just before baking, improves its appearance, or you can cover it with icing. Cut it in square blocks.

ROLLS.—Into a pint of milk put two tablespoonfuls of butter. Let it come to the boiling point. Dissolve a cake of compressed yeast in a coffee cup half full of cold water. Sift two quarts of flour into a wooden bowl. Add one tablespoonful of sugar, one teaspoonful of salt. Pour in milk and yeast, and mix together; but do not add any more flour. Do this over night. Roll out and cut and put into baking pan, and allow it to rise until ready to cook it. Never lift the cover to look at it, because it chills the dough.

VANILLA KISSES.—Half a pound of pulverized white sugar, the whites of six eggs, one vanilla bean. Pound the bean in a mortar until it is completely pulverized. Whisk the eggs to a stiff froth, add the sugar very gradually, then stir in the vanilla. Drop the mixture on white paper so as not to touch each other. You may make them any size you choose. About a dessertspoonful makes a pretty sized cake. Take care to have them sufficiently far apart. Place them on tins with several thicknesses of stout paper under them, set them in a hot oven, and as soon as they have a tinge of brown, take them out with a broad-bladed knife, slip them off the paper, and place the under sides of two together.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

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ALFRED HOLMAN.....General Manager

Saturday, April 16, 1892.

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Horse Sale—Killip & Co.
California Illustrated Magazine.
Sheep Dip—Shoobert, Beale & Co.
Plants, Bulbs, Seeds, Etc.—Theodosia B. Shepherd, Ventura.
Cocoanut Meal—L. G. Sresovich & Co.
Sheep—Wilmans Bros, Newman.
Agents Wanted—Oregon Indian Medicine Co., Corry, Pa.
Harness—Liebold Harness Co.
Land for Sale—Pecos Irrigation & Improvement Co., Eddy, New Mexico.
Tanks, General Mill Work, Etc.—P. A. Buell & Co., Stockton.
Rakes—Baker & Hamilton.
Hay Presses—Geo. Ertell, Quincy, Ill.
Poultry—W. O. Bowen, National City.
Thrashing Engine for Sale—T. Liliencrantz, Aptos.
Horticultural Position Wanted—Harvey C. Stiles, San Diego.

See Advertising Columns.

The Week.

Our fruit crop has taken a good step forward this week. Apricots are coming on fast and thinning should not be neglected. Peaches are also coming out of their baby fur, and they too, must have space enough on the twigs to assume good size. There was two much small fruit last year; in fact there is too much small fruit every year. As soon as it is well set, thin it out. With peaches especially, some of this work should have been obviated by twig-shortening at pruning time.

Reports are still of reduced fruit crops at the East this season. The March frosts did great injury, and the situation has not been improved, we supppose, by the April 1st blizzards. This means that the East will want more California fruit, and they can have all they want if lower freights and faster time can be had. It will be the great event of the week, if it be true as remarked, that 30 San Franciscans have subscribed three millions to push a new non-combine non-sell-out kind of a railroad, clean through to Salt Lake. It is either Salt Lake or Salt river with some of our prospects about these times.

Artesian Wells.—The Superintendent of Census has sent to press a bulletin on artesian wells for irrigation, prepared by Mr. F. H. Newell, special agent in charge of statistics of irrigation. The total number of artesian wells on farms in June, 1890, in the States and Territories forming the western half of the United States, numbered 8097, representing an estimated aggregate investment of $1,988,-461.26. Of that number, 3990 are employed in irrigation. The average depth per well is 210.41 feet; the average cost per well, $245.58; the total discharge of water per minute, 440,719.71 gallons, or 54.43 gallons per well per minute; the average area irrigated per well, 13.02 acres; and the average cost of water per acre irrigated, $18.82. Over one-half of these wells are in the State of California, where 38,378 acres of agricultural land were irrigated by artesian water. Utah stands second in the number of artesian wells used for irrigation purposes, and Colorado in the area of land thus irrigated.

The Protest Against the Canal.

We have received a long letter from Mr. William Pool, of Fresno, being in effect an indictment of pretty much the whole of American history in recent times. Scarcely anything has been done, in Mr. Pool's judgment, which has not been done wrong. He is at present alarmed lest the crowning act of national maladministration shall be effected through Government aid to the Nicaragua canal project. We can only print that part of Mr. Pool's letter which criticises an article recently published in the Rural concerning the canal. Mr. Pool apparently does not understand the proposition. He ought to know that the canal company is a private organization, that it has already spent five or six millions of dollars in furthering its plans, and that it will complete the work whether the United States Government aids it or not. The important question now before the American people is whether the work shall be done under conditions that will make it vastly more expensive than it ought to be, and leave the canal subject to foreign control when completed, or whether it shall be done in the cheapest possible way, and when done, remain under the control of the United States. If the canal company shall be left to its own resources, it will seek financial aid in the money markets of Europe, and in that event it will have to pay heavy bonuses of stock, all of which must be represented in the capitalization of the company when the canal shall be finished. To get returns upon this excess capitalization, there will be heavy charges against tonnage using the canal; and just as the canal charges are increased, the value of the canal to the commerce of the world and incidentally to the people of California, will be diminished.

Mr. Pool and every other producer is interested in having the canal built for the least possible money, because the cost of its construction will forevermore be figured in the price of his wheat, his fruit, his wool, or whatever else he produces, and which must seek a market beyond the range of the State. Furthermore, if the money with which the canal is built comes from England, then the control of the canal will remain with England. In this day and age of the world, whoever puts up the money for any project, directly or indirectly, bosses the job. And, if we Americans want to control this canal, we must not permit it to be built with British gold.

It is manifestly of the greatest importance that the canal should be built as cheaply as possible, and that when built it shall be subject to control by Americans in the American interest. And for these reasons, it is very generally desired that the United States Government shall promote the work; that is, that it shall so assist the canal company as to enable them to carry on their project. This is the purpose of the bill now before Congress. We entirely agree with those who criticise this bill as not sufficiently protecting the interests of the Government, and we would have it materially modified before it becomes a law. There should be no question as to the Government's control; and we believe those who drafted the bill and those who were most earnest in advocating it, will gladly readjust it to meet this criticism. But we cannot fail to see what evidently Mr. Pool fails to see; that for the Government to take the project and make it its own absolutely, is a practical impossibility.

The fault of Mr. Pool and those who stand with him is that they are demanding what cannot be done at this time. The Government cannot take up the project and make it its own, because there is at the present no sentiment in the country that would support such a violent change in our national policy. If either party were to attempt so complete a departure from all precedent, it would surely be beaten at the next election. Therefore, neither of the great political parties would dare to attempt this thing. Consequently, it will not be done. To insist, therefore, that the Government shall do this work, absolutely, is to insist that it shall not be done at all.

Obviously, as we look at it, the only practical thing to do is to secure such modification of the present bill as will completely secure the interests of the Government in the canal. Nothing more is practicable, and those who demand more are asking for the impossible. The Rural Press regards the canal as a most important thing. It considers, in fact, that it is the thing most essential for the interests of the Pacific Coast. It believes that the canal should be built cheaply, and it holds that when built, it should be controlled in the interests of the United States. It does not seek impossibilities. Therefore, it most heartily supports the project of governmental aid, provided always that the interests of the Government be adequately and permanently protected.

The Cooper Olive Oil Property.—The negotiations for the sale of Elwood Cooper's ranch to an English company, which have been pending since January, have been perfected. Forfeit money has been paid, and the ranch will hereafter be known as the Elwood Syndicate (limited). The purchase price is said to be $200,000.

The Price of Prison Bags.

At the last regular monthly meeting of the State Prison Directors, held at San Quentin on Saturday, April 9th, an effort was made by J. D. Huffman, C. H. Wakefield and J. L Bercher Jr. representing the Grangers of San Joaquin county, to have the price of San Quentin grain bags reduced, the applicants claiming "that 7⅞ cents is too high and that the price should be slightly above actual cost to the State." In reply to the Grange Committee, Director Develin is reported to have presented a statement showing that the actual cost of each bag at present produced is upwards of ten cents. He says:

The factors entering into the cost of a bag are, with jute at the present market price, 5¼ cents per pound; cost of the jute in a bag, 4.76 cents; spinning and weaving, 1.733 cents; sewing, 2-10 of one cent; baling and shipping to San Francisco, 15-100 of 1 cent, the total cost of manufacturing one bag being 6.843 cents.

The cost of the maintenance of the 420 men who work on bags at 45 cents per day, each for 365 days, should be $68.935; the wear and tear on the machinery worth $250,000, at three per cent per annum, equals $7,500. Interest at four per cent on the $250,000 invested in the machinery of the jutemill equals $10,000 yearly, making the total cost of the present yearly output of 2,500,000 bags, $257,560, or a little more than 10 cents each.

Director Develin's statement shows a most remarkable increase in the cost of manufacturing, or else he deals with data which is not based on facts. The jutemill at Oakland manufactures this year grain bags at a profit with the price not exceeding seven cents a bag and the company pays for its help. Why cannot the San Quentin prison bags be manufactured at a profit even with the market price below seven cents? The labor, outside of three or four persons, it is claimed, is done by prisoners, the only expense being for their maintenance, and this should not be much if any over 30 cents a day for each hand, and not 45 cents, as claimed by the Directors. This opinion is grounded on official reports, which show that in 1873 the cost of maintaining a prisoner was 53⅓ cents a day, which fell by degrees to 32½ cents a day in 1881. The above cost included subsistence, clothing and pay of officers. It is only reasonable to conclude that the cost now does not reach the latter figure (32½ cents), since many articles of food and clothing are now sold much cheaper, while none are sold any higher than they were in 1881.

As to the price of jute (5½ cents per pound) claimed to have been paid for that used at San Quentin this year, it seems unreasonably high. In 1889 the market value of jute in India was materially advanced, owing to a short crop, yet the State Prison Directors then in office contracted for jute at an average of four cents per pound delivered at San Francisco; adding the duty of 20 per cent, the material did not cost over $4.80 per 100 pounds. With jute coming in free of duty, and the price of jute in India in 1891 not showing any material advance over that which ruled in 1889, we fail to see where the extra cost, about 1½ cents per pound, comes in.

In the Rural Press of February 15, 1890, the cost of grain bags was placed as follows:

To manufacture 1000 standard-sized, 13-ounce grain bags, it takes nearly 900 pounds of jute (this includes waste), which, at 4 cents a pound, costs for the raw material alone about $3.60 per 100 bags; add to this the expense of maintaining prisoners, and it brings the cost of the bags up to about 5⅜ cents each.

To substantiate the above, that the cost at that time was not placed too low, we give the following excerpt from a communication on this subject from Hon. D. A. Ostrom, which appeared in the Rural of April 5, 1890:

Being a member of a Special Committee of the Senate and Assembly of 1889, I was in position to gain much knowledge as to the actual cost of sacks at San Quentin prison, and also in regard to the way in which they reach the farmer. * * * * It is is in evidence before the committee mentioned above that bags can be and are manufactured for 5 cents apiece or less. One witness testified that they could be manufactured for considerably less (4.3 cents).

When the establishing of a jutemill at San Quentin for the manufacture of grain bags by prison labor was under discussion, Hon. George C. Perkins was Governor of California, and in his several messages to the Legislature on the subject, he advanced the argument that it would give employment to prisoners and make them self-sustaining, and, at the same time, break the grain-bag ring. After the mill was in successful running order, in his biennial message to the Legislature, twenty-fifth session, 1883, Governor Perkins said:

The success of the jutemill is now assured; not only are its products superior to the usually imported article, but our farmers can congratulate themselves that the sack monopoly is effectually destroyed.

The above makes it clear, as stated in the Rural Press of Feb. 15, 1890, that the object in establishing the State Prison jutemill was twofold, viz., the turning out of grain bags at cost (covering the expenses of the State Prison) and to break the grain bag pool or monopoly in the interest of farmers—both very important considerations; besides which, it would give to prisoners a trade that can be utilized to advantage after having served out their term of imprisonment. It is the general belief that the jutemill was established to lower the price of grain bags, which justly causes farmers to feel sore over their knowledge that the establishment is run as a money-making scheme in the interest of the State, by making them pay a good margin over and above the cost of manufacture.

Reciprocity and the Farmer.

Hon. Hilary A. Herbert, Chairman of the House Committee on naval affairs, gives in the April *North American Review* the findings of a study of "reciprocity" in its relations to the interests of the American farmer. He writes as a free-trader and deals with results as they already appear. Our reciprocal arrangement with Brazil had been nine months in operation on December 1st of last year, and from reports of that date he shows that in the period of nine months we sold to Brazil $4,682,546 in agricultural products against $5,208,001 as compared with the same months of the preceding year before the rule of reciprocity. Here is a falling off in our exports of farm products under the reciprocal arrangement of $525,455 in nine months. During the period in question Brazil bought of us $2,009,000 of other than farm products more than during the corresponding period of 1890.

The conventions covering Cuba, Puerto Rico and San Domingo went into operation September 1, 1891, and Mr. Herbert gives the statistics covering our trade with these countries under the agreements for the four months ending December 31st last. Grouping these three with Brazil, and aggregating the trade with them all under reciprocity, as compared with that of corresponding periods for the previous year when we had no commercial arrangements, we have the following results:

1891. Exports other than agricultural to reciprocating countries	$12,016,066
1890. Exports other than agricultural to reciprocating countries	7,892,531
1890. Increase under reciprocity	$ 4,123,535
1891. Export agricultural products to reciprocating countries	$ 7,832,531
1890. Export agricultural products to reciprocating countries	7,321,057
Increase	$ 511,474

This shows a gain in the sale of farm products under reciprocity of seven per cent, whereas the increase in the exports of other products, principally manufactures, is a fraction over 39 per cent—not a flattering result from the farmer's standpoint. Viewing these facts as they relate to the interest of the farmer, Mr. Herbert concludes that this "is not fair and profitable reciprocity."

Of course, the judgment of one who writes as Mr. Herbert does, giving only such facts as support his own theories of the subject, and having partisan rather than economic ends in view, should not be too readily received.

It is yet too soon to give judgment. It is not in the nature of things to demonstrate either the wisdom or folly of commercial conventions between distant nations in the fractional part of a year. Two, three or five years may tell a very different story. However, the figures as they now stand make interesting reading, and it will not be surprising if they check the ready popular acquiescence in reciprocity, won for it not less by its own good-sounding name than by the credit of its author Mr. Blaine. It is the obvious fault of the reciprocal plan that it proposes to deal with nations which, like ourselves, have abundant and cheap lands, and which, in the warfare of commerce, are more likely to be our rivals than our allies. Those who are hoping and looking for economic results rather than political effects will calmly wait for results, in the meantime reserving their judgment.

The Farmer in Politics.

What the farmer has to do with politics and whether he is to have any more to do with them than every other good citizen should have, are questions of no little importance. It is manifestly the duty of every honorable man to exert his full influence in behalf of good government, and against all extortions and abuses. Whether the farmer can fulfill his duty in this respect better in one way than another, is a fair subject for thought, discussion and action, and sayings which are striking and suggestive are interesting and sometimes valuable. The following, which Secretary Rusk is reported to have said to a N. Y. *Herald* reporter, is in that line:

The new organizations of the farmers are an indication of the growth of their intellectual life. They are thinking for themselves and their ideas show that they are awake and that they are studying their own interests. I am glad to see it. I think the country is to be congratulated upon the awakening interest which they have in political affairs, and I believe that they are by their numbers and their peculiar position, especially well fitted to serve as a balance wheel in political matters. Extremists may be found in their ranks as in the ranks of all other classes, but in our future the capitalist will learn to trust the farmer as a man who owns property and can never be a communist; and, on the other hand, the laborer will have a confidence in him as a workingman who will never become a monopolist. I do not apprehend that the farmers will ever be a political party of themselves in the United States. Their interests are wrapped up in those of the rest of the country, and their success forms the foundation of the success of all classes and all industries. They will continue to support such great ideas and public questions as come before the country, and the differences of opinion will be as great among them as among the members of the other classes. They are the most conservative element of the United States. They do more honest thinking than the people of the towns. They generate public sentiment, and the majority of them is seldom wrong.

There is a good deal to think about in those few sentences.

The State Press.

Bodie *Miner:* "Experience has demonstrated that flaws in and evasions of our present naturalization laws render it necessary that there should be greater safeguards about American citizenship."

Oroville *Register:* "Bad roads cost the farmer each year $15 for every mule and horse he has in his employ. This means a loss to the farmers of this country of $250,000,000 dollars. Bad roads cost the farmers of Butte county an enormous sum, for double the number of animals must be kept that would be required if we had first-class roads. With good roads there would be a vast saving in the wear and tear of vehicles and teams could haul larger loads with less exertion."

Colusa *Herald:* "Although according to Sec. 1083, a native born 21 years of age, who has been a resident of the State one year, is entitled to vote, yet if he attains his majority a few days after the great register has been printed, he is thereby disfranchised until he is 23 years of age. The same section confers citizenship upon a man coming from another State after a residence of one year, but if he arrives one month after the great register is printed, it requires two years before he can vote."

Sonoma *Democrat:* "Altogether the San Francisco postoffice war is one of the queerest episodes of that queer city. They howled for a postoffice site and got it within a block of their city hall. As soon as they got it they jumped on it and began throwing mud at everybody connected with getting it. They will probably get a new site and will jump that and throw more mud. There is no such thing as cooperation in San Francisco to help a public enterprise. It is every man for himself, and he wants it all. This is true in trade and commerce, in politics, postoffice sites and all else that would promote the general welfare of the city. It is unwise policy and has done much to retard the growth of the city in the past and, unless changed, will do more in the future."

Fresno *Republican*: If the Southern Pacific Railroad Company has acquired title to several thousand acres of land in this county now occupied by settlers, who have taken up the land under the homestead law and in good faith fulfilled, or are in process of fulfilling the requirements of the law, why was not a notification served upon the settlers some time ago, instead of taking a snap judgment proceeding demanding their appearance in Los Angeles within a few days after the service of the subpœnas? Many of these men have expended every cent they have the means of getting in improving these lands, and it would be almost impossible for some of them to get to Los Angeles on such short notice. It looks very much like an attempt to take a despicably mean advantage of men who are practically defenseless."

President Jordan on Fish Interests.

San Francisco, April 12, 1892.

To the Editor:—In a lecture before the Sportsman's Club, early in April, were brought out many facts of interest bearing upon an important source of food and revenue not generally appreciated. From a scientific standpoint, it was shown how nicely each species was adapted to its surroundings. A slight change in depth or temperature of water involves a fish of different structure. No depths have yet been explored where some kind of fish does not exist. Those which inhabit great depths are subjected to an immense pressure, and are flexible in proportion. Some of the specimens were as limp as dish-rags. More than 400 distinct varieties inhabit our coast, and among them about 130 are used as food. In this food product there are many sources of waste. Some of these arise from ignorance or carelessness regarding conditions of propagation. The Chinese in San Diego supposed that fish that only inhabited the bay came in as freely as the water, and that it was as absurd to talk of destroying the supply of one as of the other. Others claim that fish are destroyed in the bays and rivers by dragging nets outside by which no fish are taken of the varieties that run in the rivers and harbors.

Many tons of fish are wasted every year by taking more than the market demands, and many are wasted by careless methods and foul stalls where they are marketed. The consumption of fish might be considerably increased by methods to make them more attractive and palatable.

In other countries, fishermen have wells connected with their boats where the fish are kept alive until called for. The fish markets are along the water front. The buyer selects his fish when living. It is taken out for him and killed by a sharp stroke just back of the head as soon as removed from the water. Fish kept in this way have a superior flavor. Again, it would be a great improvement if ice was more generally used in keeping fish. In many of the stalls, a vast advance is possible in cleanliness. Buyers are not likely to prove eager customers where the appearance of the market disgusts them.

FISHING AS A COMMERCIAL VENTURE.

Many outfits are very poorly equipped. There is room for a great improvement in boats and tackle. Again, when those regularly in the trade have a good season, many amateurs are tempted to make ventures next year on borrowed capital. This overstocks the market with the most dangerous sort of competition. Their catch must be forced upon the market to satisfy those who have loaned money, and prices are broken. In one instance, a man new to the business brought in his catch in a foreign vessel, subjecting him to a tariff of $2800. The fish brought $500 at a forced sale, and were spoiled from improper curing when they reached the market to which they were consigned. In spite of many instances of similar discouragement, we inferred that there is a vast field for development in this industry, and that it may help to sustain a greatly increased population. Adequate capital should be managed by those having practical knowledge of the habits of the fish and requirements of the markets. They should also have approved appliances.

F. S. Chapin.

The Canal Project.

Fresno City, April 10, 1892.

To the Editor.—In your issue of March 26th, on the first page of the same issue, I noticed an article headed "Foolish Opposition." Upon reading the article, I find that certain farmers are accused of opposing the Nicaragua Canal scheme. In all my intercourse with farmers, both in and out of the Alliance, I have never found a dissenting voice against the project, but simply dissent against the Government aiding a private corporation to complete the canal. They are unanimous in favor of the canal, but want the Government to own and control it in such a manner that it cannot be subsidized against our interest, as the Southern Pacific has done in the past. We all know that the Government aided and assisted in building the Central and Southern Pacific, which should have been a blessing to the Pacific Coast, but have been a grinding monopoly.

They have subsidized the Northern Pacific and steamer lines with their ill-gotten gains, and in turn themselves were subsidized by Claus Spreckles when the Government effected a free trade with the Sandwich Islands and he monopolized the sugar trade and subsidized in such a way that their freights were so heavy on Eastern sugar that it could not be brought here and sold at a profit; consequently the people of this coast have been in the hands of Claus Spreckles ever since, as far as sugar is concerned. He charges the people of this coast more for sugar than he does the people of Chicago and New York, after transporting it there. Hence, you can see it is high time the people are kicking, and kicking hard, too. If the Government builds, owns and controls the canal, and it is run in the interest of the people, you will find no farmer or producer kicking. The farmer has lain still and said nothing too long.

* * * * * * * * * *

Don't say that the farmers are protesting against the canal project. We are against the scheme to make the Government go in partnership with a lot of these Shylocks and put up all the money, and, after it is built, then they (Shylocks) get the benefit at the expense of the farmer and laboring classes. No, no, we are a little too enlightened for that. The Southern and Central Pacific R. R. have opened our eyes. We don't want any more, and by the eternal we are not going to have it, and don' you forget it. I tell you the day of reckoning is close at hand, and don't you forget.

Wm. Pool.

National Legislation for Forest Conservation.

WASHINGTON, March 27.—Before the joint Sub Committee on Agriculture and Forestry and Public Lands at the meeting yesterday, Mr. Fernow, chief of the Bureau of Forestry in the Agricultural Department; Mr. Brewer, Secretary of the Forestry Association; and Mr. Ogden of the Forestry Division of Timber in the Interior Department, were heard. Mr. Fernow presented the bills which had been drafted by himself and Brewer, covering the points under consideration by the joint Sub Committee, one of which will probably be adopted unanimously.

The particular measure is "for the protection and preservation of the public forests of the United States," and it may be said to fully meet with the approval of the joint committee.

It provides that all lands heretofore proclaimed by the President, under the Act of March 3, 1891, as forest reservations, or that may hereafter be set aside as such, shall be exclusively controlled by the provisions of this Act for protection and improvement; that there shall be established in the Interior Department a Commissioner of Forests who shall be versed in matters of forestry and who shall be appointed by the President; that he shall have sufficient assistants to enable him to enforce the provisions of this law; that rangers shall be employed on every reservation, not more than one for every ten thousand acres of reservations, to act as police, to prevent trespass and fires, to apprehend trespassers. These rangers shall issue permits and shall supervise the cutting and removal of timber, and shall be under the direct control of a superintendent and live near the district assigned to their supervision.

The Secretary of War shall make such details of trooops as the Secretary of the Interior, with the approval of the President, may require for the additional protection of the reservations. Officers on reservations shall have commissions as Deputy United States Marshals. The Commissioner of Forests shall cause a survey and description of the lands in the reservations to be made, shall formulate rules and regulations for the preservation of reservations, which rules and regulations shall be posted in public places and published in newspapers.

Persons desiring to occupy reservations longer than one day shall be required to obtain a permit from the superintendent or other officer in charge, and shall strictly obey the regulations. There shall be no restrictions to prevent prospecting for minerals, but no exclusive right to prospect, hunt or fish shall be given. The opening of mines shall be permitted only under licenses granted by the Secretary of the Interior. Pasturage may be leased by the superintendent, when desirable, under restrictions. The construction of water reservoirs, ditches and other necessary adjuncts of irrigation works may be permitted by the Secretary of the Interior, but no roads or trails shall be opened by any one except as designated by the superintendent.

All cutting of wood on reservations is to be under a system of licenses, and every year, on or before the first of April, the superintendent of reservations shall make a report in regard to areas on which timber may be cut under licenses, the same to be advertised for bids not later than July 1st. Timber for domestic purposes shall be had by means of a prospector's license upon the payment of $2, or by a settler's license to any bona fide settler having any timber on his claim upon like payment. Applications for licenses are to be numbered in their order of receipt and acted on in the order of their filing, and the licenses shall be nontransferable.

Such timber on forest reservations as the commissioner shall decide is not needed for mineral or agricultural development, in the neighborhood, shall be disposed of to lumbermen or others who may apply for it under lumbermen's licenses in quantities not less nor more than that standing or being in one section, or that standing or being on 25 contiguous sections, such licenses to be granted upon a fee of $25, and $1 an acre to be paid for the timber before operations are begun.

The bill provides in detail for the disposition of all timber, wood, etc., and provides amply against frauds and misrepresentation. Absolute jurisdiction is given over the reservations to the United States authorities. The punishments to be imposed for violations of the law are fixed, and provision is made for the enforcement of the law and the detection of frauds. The complete revenues derived from licenses, rents, fines, etc., are to be used in part or whole payment for expenses incurred.

The bill proposes an appropriation of $500,000 for the beginning of operations under its provisions.

PATRONS OF HUSBANDRY

The Week.

The past week has been rather a dull season in the Grange canvass. The Worthy Master has been temporarily out of the field, and Past Master Overhiser has been practically the only member of the canvassing force actually at work. Of his meetings, Hon. Geo. Steele writes from Elna as follows:

"Our meeting at the Arroyo Grande on the 4th was a great success. Bro. Overhiser exemplified the work in a closed meeting in the morning, and in the afternoon there was a feast and an open meeting. Bro. Overhiser told us what the Grange has done and what it is now doing. Bro. Webster treated the money question and the transportation question in a very able, clear and entertaining manner. Everybody went home well pleased. A new interest has been created in the Grange work and cause by this visit."

The Secretary of the Arroyo Grande Grange, writing of this same meeting, characterizes it as the best field day the Grange ever had, and one that it will always remember.

This current week opens up the picnic season, the first of which was to have been held on the 14th by Enterprise Grange, in Sacramento county. The Worthy Master is booked for this occasion, and other prominent Grangers will be present. It is impossible to print a report, since, in going to press two days in advance of its date, the RURAL will be in process of printing while the picnic is in progress.

The next picnic will be under the auspices of Chico Grange, April 30th. Yuba City Grange will have its picnic May 4th; Pacheco Grange, Contra Costa county, will celebrate May 2d; Pescadero, May 7th; Glen Ellen, May 7th; Dixon, May 6th; Merced, May 14th. The dates of the Two Rock and Lodi picnics have not yet been named, but will be about the middle of May.

These spring picnics will have unusual importance, since they will, in a measure, partake of the interest excited by the current Grange canvass. Speakers prominent in the Order and distinguished for ability, will be present at each of them, and whoever attends may be sure of an attractive program.

Reports from Lodi up to April 9th speak enthusiastically of the meeting held on the previous Wednesday. Among the speakers were Daniel Flint, Past Master B. F. Walton, member of the State Executive Committee, Mr. McConnell and others. They discussed the leading questions of the day in their relations to the farmer, and urged the necessity of thorough organization in order that the farmer should occupy his proper influential place in the direction of national as well as of State and county affairs, and also in order that he may better himself.

The hospitality shown the visitors was of the warmest, and Grange sentiment was never more earnest and cordial in San Joaquin valley than at the present time.

A note from Yuba City states that a letter has been received from Gen. Chipman of Red Bluff, accepting the invitation of Yuba City Grange to deliver an address at a picnic and reunion to be held there on May 4th. Worthy Master Davis has also signified his intention of being present, and elaborate preparations are being made for the day.

The Secretary of the National Grange reports the number of the New Grange at Madera to be 300.

The following Granges have reported to the Secretary of the State Grange for the quarter ending March 31st: Santa Cruz Two Rock, Lodi, Santa Rosa, Bennett Valley, Yuba City, Eden, Glen Ellen, Eureka, Stockton, Merced, Lockeford Valley, California, Waterloo, Sebastopol, Kibesillah, Enterprise, Washington, San Jose, Tulare, Pescadero, Selma, Danville, North Butte, Woodbridge, Watsonville, Pilot Hill, West San Joaquin, Florin.

PUBLIC GRANGE MEETINGS.—Temescal Grange meets at 10 A. M. Thursday at I. O. O. F. Hall, Oakland, and Eden Grange at I. O. O. F. Hall, Haywards, on Friday of this week. Both have harvest feast at noon and invite all farmers and others interested, to public meetings in the afternoon. E. W. Davis, Master, and S. T. Coulter, P. M., will speak at both places. Past Master I. C. Steele, and Daniel Flint and Mrs. C. E. Kinney are also expected at one or both Granges.

A Good Circular.

Mr. A. P. Martin, County Deputy for Sonoma county, has issued the following attractive circular. Although sent out only for Sonoma county, it applies with equal point to every other county in the State and is worthy of the widest circulation:

Wanted—A score or more bright, active, sensible farmers' wives, daughters and sweethearts to help organize a Grange in Petaluma, and, as all the ladies on farms in this county are of the above named, the invitation embraces any or all the farmers' wives, daughters and sweethearts in this vicinity.

Ladies, the Grange is for you. It is preeminently a social order. Do not imagine that it is a dull, uninteresting meeting, where cows, cabbage and cultivation are the only subjects discussed. On the contrary, a Grange can be made one of the brightest and most interesting of assemblings. The range of subjects coming before you is almost limitless, embracing the home, the school, care of flowers and fruits and all the diversified industries and amusements peculiar to a farmer's life.

The Grange tells you how to make home brighter and happier, how to lift up and embellish your calling.

By bringing you together and comparing notes and experiences a new life is infused, a new zest is added to your daily vocations. A higher and a nobler womanhood is infused into your being. The little cares and worries that by isolation and brooding are magnified into real afflictions, are blown away as the mists of a morning, when you come into the Grange home.

The homes on too many farms are like prisons to the female members therein. By constantly doing the same thing daily and yearly, without change or recreation, in the same old treadmill style, their natures become narrowed and cramped, failing to develop into that full fruition that the creation intended. But when they meet weekly in the Grange their horizons are broadened, their thoughts are lifted up to the better and nobler things of life, and they thereby become better and more competent companions and helpmates to their husbands Then talk to your husbands and brothers about the Grange. Talk it up among yourselves and be ready on the 11th of May to organize a good rousing Grange in Petaluma.

Next week I will have something to say on this subject to the lords of creation.

A. P. MARTIN,
County Deputy.

From Oregon.

Reports from Oregon indicate an exceptional interest in the State meeting which comes in May. It is anticipated that the attendance will be even larger than ever before, and there is a cordial anxiety on the part of our web-footed brethren that there shall be a goodly number of visitors from this State. Worthy Master Davis has partially accepted an invitation, and the chances are favorable for his attendance. There is no definite information that others will go with him, but it is hoped that there will be a considerable party. Those who have visited the Oregon State Grange on former occasions remember most gratefully the pleasant attentions paid them, and can cordially recommend this excursion to all who wish for a good time and who would like to see a lovely country at its loveliest.

The meeting will be held at Albany, in the heart of the Willamette valley, and only three hours distant from Portland.

LEGISLATION BEFORE CONGRESS.

Turner (Oregon) Grange recently adopted memorials to Congress which were forwarded to Senator Mitchell, and the following letter from him addressed to the Master of the Grange is given to the public.

My Dear Sirs:—I beg respectfully to acknowledge receipt of memorials from Turner Grange, No. 18, praying Congress to pass the following bills:

1st. To prevent gambling in farm products, known as "options" or "futures."

2d. To prevent the adulteration of food and drugs, and

3d. Defining lard and imposing a tax thereon.

All of which shall be brought to the attention of the Senate and the appropriation committee, and each and all of which bills has my cordial support. I am very respectfully,

(Signed) JOHN H. MITCHELL.

(*Continued on page* 365.)

FOR SALE.

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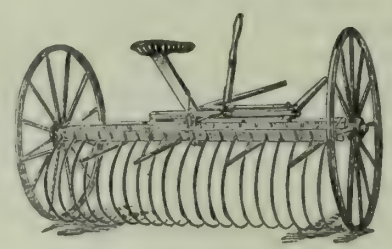
A 15 horse power Payne. Has been used but little and is in first-class condition. Cost $900. Will sell for $500 on account of having no use for it. For particulars address

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Aptos, Santa Cruz County, Cal.

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SEND FOR CIRCULAR.
E. P. HEALD, President.
C. S. HALEY, Secretary.

NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY, Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2.00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.
Office, 111 Front Street, San Francisco, California.

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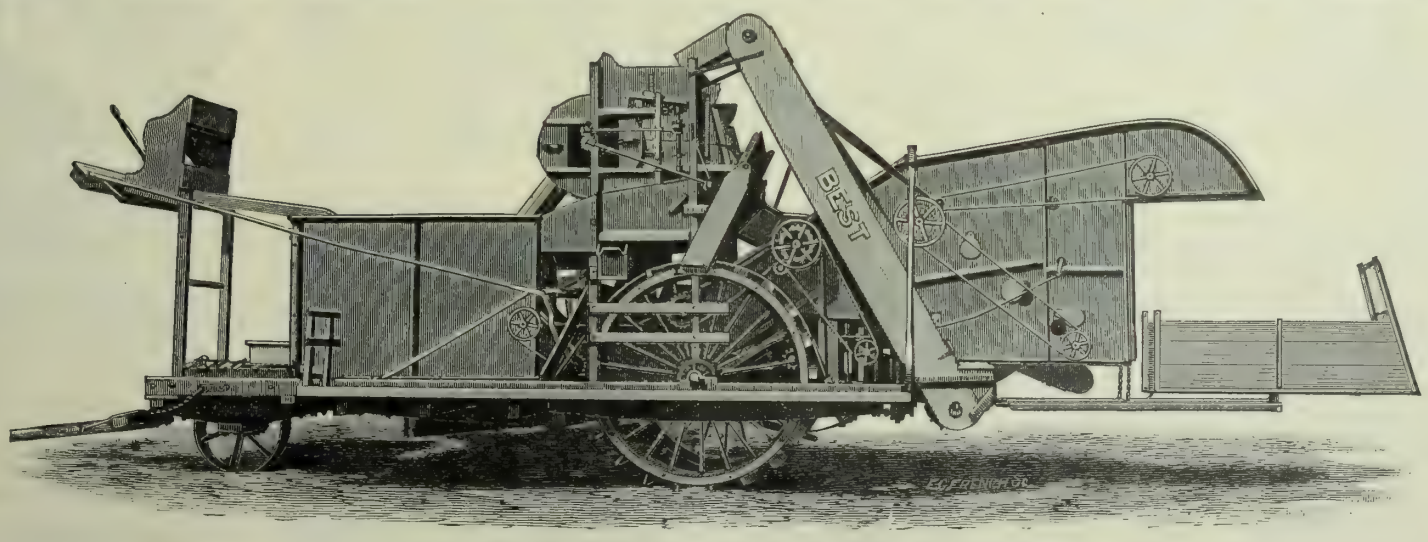
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NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

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Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS.

SAN LEANDRO, CAL.

The Field.

Methods and Cost of Drainage.

[By Miss L. H. Hatch at the Fresno Farmers' Institute.]

On a former occasion I presented to the Farmers' Institute ten good reasons why farmers should drain their land, namely:

Drainage deepens the soil; assists pulverization; prevents surface draining; lengthens the season for labor and vegetation; permits absorption of fertilizing substances from the air; supplies air to the roots; warms the soil; improves crops; prevents drouth; increases crops.

For these good reasons draining will be prosecuted because of its pecuniary profit. Yet in a larger view of the case there are advantages of greater moment than its mere money profit. "It is the foundation and the commencement of the most intelligent farming." "It opens the way for improvements, which without it would produce only temporary benefits." Plowing the land, planting the seed and trusting to the chances is drudgery, but to one who studies the causes of success or failure and strives to overcome everything that interferes with his success, he ennobles his profession and renders it the most progressive of industries.

By request of the members of your Executive Committee, who believe in the necessity of agitating the question of drainage both for profit and health, I bring you a compilation of facts from the writings of Waring and French concerning the methods and cost of drainage. The history of land-draining is a history of the gradual progress of an improvement, and, like all improvements, has become more valuable than was at first conceived possible. The earliest devices for opening a conduit for surface water, such as brush drains, sod drains and mole plow tracks, have each performed their mission and given place to the more expensive yet more economical tile drain.

We may wisely consider, first, the method of open drains, as they are sometimes practicable and necessary for temporary purpose, and while convenient at the outlet of our tile drains, yet their expense in excavating, cleaning, the loss of space they occupy, the hindrance in plowing and cultivating the land, together with their lack of permanence, renders them undesirable except as a last resort. The worst of all drains is an open ditch of equal width from top to bottom, as all open drains should be sloping. When lands are too wet to ditch properly, at first an open ditch may be employed for drawing off part of the surplus water. Again, in sloping districts where water runs in large quantities at certain seasons, open ditches may be a necessity; yet for permanent improvement and economy there is nothing as good as well-laid tile drains.

ESSENTIALS TO DRAINAGE.

To insure a well-laid tile drain, three essentials must be considered: 1st. A free outlet for the discharge of all water which may run through it. 2d. That it has an opening at its joints sufficient for the admission of all the water, which may rise to the level of its floor. 3d. That its floor is laid on a regulated line of descent, so that its current may flow uniformly through its whole length. Too great stress cannot be laid on the carefulness and completeness of this most important operation. The system of drains must be first laid out by a practical surveyor or engineer, one who is skilled in laying out an economical plan for draining agricultural lands, staking out lines, determining the grade of the drains and the size of the tile to be employed. This is no place for amateur work. The work of tile drainage needs skilled labor and the greatest care. Preliminary details may not be expected in this paper, but as any imperfect work would add heavily to the expense and insure failure, it may not be amiss to introduce them.

1st. Let a map of the land, on a scale suitable for the purpose—say of 50 to 100 feet, locating the line of equal elevation—be made from careful survey and observation in the field. With this map, one can prepare a system of drainage, mature a plan for the work with the least expenditure of labor and material, and insure a rapid and satisfactory execution of the work. This work accomplished, these special points must be considered:

1. Where and at what depth shall the outlet be placed,
2. What shall be the location, the length and the depth of the main drain.
3. What subsidiary or collecting drains.
4. What depth, what distance apart, what direction and what rate of fall of the lateral drains.
5. What kind and sizes of tiles should be used.
6. Making provision for preserving the drains from any obstruction.

The outlet should be at the lowest point of the boundary, and deep enough to take the water from the main drain, and should, if the fall is sufficient, deliver the water over a step a few inches in height to prevent its being clogged by any growth or gathered mud.

The main drain should be run as nearly the lowest part of the valley as can be, and made straight. The main should continue from the outlet to the most convenient point for collecting the remote submains which gather the water from several sets of laterals.

The collecting drains should be placed on the line first reached by the water flowing directly over its surface, before it commences its lateral movement down the valley, and have, if possible, a uniform descent for its whole distance.

Lateral drains are important factors in the drainage system, and on their arrangement depend the economy and success of the undertaking.

The depth of drains has been fixed by the most experienced as four feet, and if any one fact connected with tile drainage is established beyond a doubt, it is that the stiffest clay soils drain four feet deep effectually.

The distance between the drains is not so well established as the depth. In tolerably porous soils, 40, 50 and even 60 feet is considered near enough for four-foot drains; but in compact clay soils, all distances from 15 to 50 feet are recommended. Many circumstances affect the distance apart—the nature of the soil, climate, cost of labor and materials, as well as the depth, as in a porous soil, the rule is, the deeper the drain, the farther it will drain.

The direction of the laterals should be right up and down the slope of the land, in the line of steepest descent, always remembering that by the force of gravitation, water constantly seeks a lower level; and the whole object of drains is to open lower and still lower passages into which the water may fall lower and lower until it is discharged to a safe depth.

The fall required in well-made tile drains is very much less than would be supposed. It is desirable, whenever practicable, to have a fall of one foot in 100 feet; one-half of that amount of fall, or six inches in 100 feet, is quite sufficient if the execution of the work is carefully attended to. The least rate which it is prudent to give in using ordinary tiles is 2½ feet in 1000 feet, or 3 inches in 100 feet. Some of the drains in Central Park have a fall of only one foot in 1000, and they work perfectly.

KINDS AND SIZES OF TILES.

Drain tiles are made of clay similar to that which is used for bricks, molded by a machine, and burnt in a furnace, as hard as hard-burnt bricks. They are usually a foot long, with an interior diameter of from one to eight inches, with thickness of from one-fourth inch to more than an inch. The water enters them, not through the walls, but at their joints, which cannot be made so tight that they will not admit the very small amount of water that will need to enter at each space. There are several varieties: The "horseshoe tile," the "sole," the "double sole" and the "round" pipes and collars. Practice and experience both prove the best yet invented is the pipe or round tile and collar.

The usual sizes are 1½ inches, 2½ inches and 3½ inches in interior diameter, running on to 8 inches. The 1½ or 1½ inch are recommended for the smallest drains, and they are considered ample for the draining of two acres after a very heavy rain. It is well to use the smallest that will effect the object which is to convey the water which will ordinarily reach it after a heavy rain. Drains that are 40 feet apart require 1000 feet of tiles per acre; those that are 50 feet apart, 860 feet of tiles; and 60 feet apart require 750 feet of tiles. Tiles should be hard-burned, and if they do not give a clean ring when struck with a metallic edge, or if the edge is easily cut, it should be rejected.

For the discharge of water through the tiles of different sizes, this statement is made as perfectly reliable for drains four feet or more in depth, laid on a well-regulated fall of even 3 inches in 100 feet.

1½ inch pipes with collars will drain 2 acres.
2½ inch pipes with collars, 8 acres.
3½ inch pipes with collars, 20 acres.
5 inch sole tile, 40 acres.
6 inch sole tile, 50 acres.
8 inch or two 6 inch, 100 acres.

PREVENTING OBSTRUCTIONS.

For preserving the drains from obstructions, such as silt, vermin and roots, every precaution should be taken.

When possible no drain should have a decreasing rate of fall, as it approaches the outlet. Silt becomes dangerous when it is accumulated within a short distance, by a decreasing fall or by a badly laid tile, or imperfect joint, as it arrests the flow, but this is easily overcome with a silt basin or chamber below the grade of the drain and by the use of muslin bands.

To prevent vermin from entering the pipe, a coarse wire cloth or grating in front of the outlet hinders them.

There are water-loving trees, willows, elms and swamp-maples, whose roots will force their entrance into the joints of the tiles. This may be guarded against by allowing no young trees to grow near a drain. Gisboom, an English authority, affirms that roots never obstruct a pipe through which there is not a perennial stream.

COST OF DRAINAGE.

Drainage is expensive work, and as facts are stubborn things, this must be accepted at the start, and he who hesitates at this argument, will do nothing, yet as compared with building and maintaining fences it is a small matter.

The items of cost include

1. Engineering and superintending.
2. Digging of ditches.
3. Grading the bottom.
4. Tiles and tile laying.
5. Covering the tile and filling ditches.
6. Outlet of silt drains.

English tables of cost of drainage, give an estimate of $1.25 per acre for superintendence which includes engineering, supervision of opening, laying tile and filling ditches, securing outfalls and all other incidental work, till it is complete. The general estimate of cost of labor is $25 per acre of which the excavating and filling are the chief expense, yet that depends on the nature of the soil. A four-foot drain in moist soils need be only 20 inches at top and 4 inches at bottom, giving mean width of 12 inches, then with labor at one dollar per day, the cost per rod will vary from 20 to 50 cents per rod.

Tiles at the Albany N. Y. tile works are for sole tile and round pipe the same, 2 inch tile $12 per thousand; 3 inch tile $18; 4 inch tile $40; 5 inch tile $60; 6 inch tile $80; 8 inch tile $125, and are estimated to lay about one foot each 1000 tiles, that is, 1000 tiles lay 1000 feet of drain.

At Lincoln, Placer county, Cal., tiles are manufactured at the following prices. The round tile, 2 inch diameter $25 per thousand; 3 inch diameter $30; 4 inch diameter $40; 5 inch diameter $60; 6 inch diameter $90; 8 inch diameter $150.

From these statements it is evident we cannot have cheap drainage till we can have cheap tiles, and we can have cheap tiles only by having them made with the most perfect machine and at the lowest price of computation. It is stated that there are parties who will enter into the local manufacture of tile if they have adequate encouragement.

For outlets, about 37 cents per acre is ample, and collars if used, are about half the cost of the tiles, yet as smaller tiles can be employed and a drain with 1½ inch tiles with collars is no doubt better in any soil than 2 inch tiles with collars, there is compensation at once.

The cost of laying tiles after the trench is dug is only two cents a rod, and our author (French) believes an active man may lay from 60 to 100 rods per day. We will assume labor at one dollar per day, tiles at $10 per thousand and ditches four feet deep opened and filled at one-third of a day's labor, the principal items of the cost of drainage by the rod, thus: Cutting and filling per rod, 33⅓cents, tiles, 16⅔cents—$3.50 per rod. Then with drains at 42 feet distance (62 5-7 rods per acre) the cost will be $31.42 per acre; at 30 feet (88 rods per acre) $44; at 60 feet $22.

Or taking half the number of rods per acre in dollars, the cost is found.

WILL IT PAY?

To answer this question is somewhat difficult, for we have not demonstrated the fact but it will be undoubtedly true, here, as in other sections of the world where crops have been doubled by under-drainage.

I will cite one case which proves the benefit of under-drainage. Mr. John Johnston, a venerable Scotch farmer in the wheat region of western New York, who was almost the pioneer of tile draining in America, has laid over 50 miles of tile draining in 30 years. He is a hardworking man who began poor and borrowed money to drain his land, and has reaped the benefit of 40 bushels of wheat to the acre, while his neighbors were harvesting on undrained lands, eight, ten or 15 bushels to the acre. His testimony is that tile draining pays for itself in two seasons, sometimes in one, and that he never made money till he drained his land.

I might add hundreds of well established cases, but time will not admit and this is sufficient. Draining makes the farmer, to a great extent, master of his vocation. What is true of wheat is equally true of rye, barley, fruit and vegetables.

For practical application, we will assume that the cost of draining an acre here is $60. As labor, tiles, and the fall of less than one foot to the thousand will add greatly to our expense, from this standpoint let us ask, will it pay? Our soil is considered unusually fertile, worth the best methods of cultivating by deep plowing, ample manuring and thorough working. Our climate is exceptional, and our returns from each acre sometimes generous. With all these advantages, our crops are subject to damage from disastrous changes of weather. The interest on $60 at eight per cent, is $4.80, the yearly charge on the land for the benefits accruing. Will the benefits accruing from one year to another, in wet seasons and in dry, from hay, grain and root crops, and from fruit, not only in quantity but in quality, be worth $4.80 per acre? What is not profitable in farming is not practical, and there is no doubt that each acre will produce enough, and more by draining, to counterbalance this added cost. To obtain these advantages, our land must be drained, and how shall we reach it? England protects her farmers by legislation. In America where individual right is usually compelled to yield to the good of the whole, we are behind England in legal facilities for promoting the improvement of land culture. Possibly it is because attention has not been especially called to that subject.

In closing, let me suggest, that by petition or any way that is practical, the attention of our supervisors or the legislative body of the State of California, or both, be drawn to this matter because of its necessity and because of the pecuniary inability of the farmers to carry it on under circumstances and conditions which widely prevail.



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ON EXHIBITION DAYS, April 9th and 16th, Saturdays, take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

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Agricultural Engineer

A Ship Canal for the San Joaquin Valley.

[By I. H. Harding, before the Fresno County Farmer's Institute, April 9, 1892.]

It is a trite saying that "God helps those who help themselves." When we look around upon the broad and grand landscape lying north, south, east and west of us, does not the question revolve in our minds whether providence has not done more for this people than they are doing for themselves?

This vast and fertile valley, with its gently receding level dropping away from the foothills of the lofty Sierras, where nature's great storehouse holds untold millions of life-giving wealth, all wanting but the touch and direction of man to give up its boundless treasures.

It does not need the poet's pen nor artist's brush to portray or paint a scene to fill us with admiration, wonder and reverence. None can look upon those mighty mountains, wrapped in their mantle of snow, and then upon these plains of purple, gold and emerald green, without adoring the God of nature and rendering thanks for his bounties. But the practical question arises: Do we utilize all these advantages and forces so bountifully supplied by nature? Are we taking advantage of our favored surroundings, to lay any solid foundation for continued and permanent prosperity? Or, are we not rather looking only to the present, and give little heed to our future welfare.

The experimental stages through which we have been passing during the past few decades, render a partial excuse for lack of interest in all that is essential to our continued and future prosperity. The practical solution of one problem is closely followed by another that demands more than a passing consideration. Intelligent application of water upon the rich valley soil has worked miracles in the agricultural and horticultural industries of our county; but have we given proper heed to the evils that may arise, or even have arisen by the excess of water that has percolated through the porous soil and filled the substrata, up to and over many of the low levels of land, creating marshes and even small lakes upon the plains?

This unavoidable rise of the subwater level over the area of lands, so abundantly supplied with it for irrigation, is leading to a question of serious moment, and some means must be devised soon to hold in check or draw off the surplus through a proper system of drainage canals, with an outlet upon the lower level of the valley, or be utilized in a waterway for the transportation of our products to the seaboard.

The proposed ship canal, connecting this part of the valley with the river below and thence to tide water, would not only give the proper outlet for a drainage system, but would repay all cost as a waterway and competing line of transportation to the present system that continues to levy an almost prohibitory tribute upon all our industries, and makes it almost imperative on our part to rise en masse in our desperation and shake off the galling chains.

The building of a ship canal is no new question with our people, and it would seem that no great proof were required to show the benefits that would be derived by it. Conventions have been held, plans proposed and the great good to the people has been discussed, and the whole question made seemingly plain. But has anything tangible, or anything tending to a practical solution of the proposed enterprise resulted from all these conferences, or must it end in simple discussion and talk?

How much longer must this people be oppressed and ground down by a soulless monopoly, that gets the price of our commodities and then fixes a rate to absorb the profits? How many more thousands and hundreds of thousands hard-earned dollars must we dump into their coffers before we will take courage and turn into a channel that will give us the much-needed relief? To promote an enterprise of this kind is not in the nature of a speculation, but fostering that which will give direct relief from tyrannical oppression.

The building of a ship canal from Fresno, or any point upon the lower portion of our irrigated country, to the river, is not only feasible but practical, and would add millions above the cost to the wealth and prosperity of our county. What has been the universal answer to all our petitions, appeals and appointed committees to make this city a terminal point for shipping and receiving freights?

It has always been: "We can't accede to your request until there is competition by rail or waterway." "We cannot deviate from our established rule, though your patronage amounted to millions." Is not an edict like that sufficient to establish the fact that there will be no permanent relief for us until some other and independent route of transportation is established for our products.

The question has been asked, Where will be the necessary supply of water needed for a canal heading so far out from any natural channel? I think there would be little difficulty in obtaining an abundant supply for all needed purposes of a ship canal at least 60 feet wide and from 10 to 15 feet deep. The serious question that even at the present time is confronting the horticulturist is how to check the continual use of the subwater level, and save the inundation of established orchards and vineyards as well as large areas of agricultural lands. Since the first irrigation canals and lateral ditches were built and the water turned upon these plains, there has been an annual rise of the water level toward the surface, until at the present time thousands acres of valuable lands are standing lakes, or marshes filled with rank and decaying vegetation, emitting unhealthy odors and malarious poisons. Also thousands of valuable fruit trees and vines have perished on account of too much water and tne excess of alkali driven to the surface by the same agency.

Now, this being the case, it would seem the proper remedy to cut canals through the lower levels, paralleling the irrigation canals as near as possible (as they are generally carried upon the higher ground) and draw off the surplus, dropping the water level to the desired depth and holding it in check, using the ship canal as an outlet for our drainage system and utilizing the surplus water to supply the canal.

Those who are acquainted with the geological formation of our valley say that the top soil rests upon a deep stratum of sand and drift, that this in turn rests upon a substratum or ledge of clay that seems almost impervious to water. That the water level is very uniform throughout the irrigated portion of the valley, and it has been noted that in a very short period after water is turned into the irrigation canals and lateral ditches, that the rise in the water level is apparent, showing conclusively that there is one solid body of water under the whole area of irrigated lands and those contiguous thereto.

When such a condition of things exists whereby we can gain such direct and immediate benefits, both commercial and industrial, adding so much to the wealth, permanent prosperity and health of our country, it is only a matter of wonder that we are not more alive to these questions, and are not up and doing that, and that only, which will give us the greatest relief and the greatest benefits of any undertaking we could promote or carry to a successful end.

We are confronted upon one hand with a grasping, tyranical monopoly, holding us in its iron grasp, and will so continue until we rise in open rebellion, or devise ways and means independent of it to transport our products to the seaboard. On the other we are confronted with the apalling fact that our country is being slowly but surely inundated by an excess of water rising to the surface and destroying by its agencies millions of valuable property. You may consider this strong language, but you cannot dispute the fact that every country that has adopted an extensive system of irrigation without proper drainage has been nearly, if not hopelessly, ruined in course of time.

No people in any part of the world has been surrounded with such advantages or has prospered as the people of this valley in the last few decades. It has been almost spontaneous, and we must not now rest upon our laurels, but must push onward and upward, ever on the alert, taking advantage of surroundings, and place our industries upon a solid and permanent basis.

This can only be accomplished by standing man to man, putting our shoulders to the wheel, lifting ourselves out of the slough of despond and upon a higher plane of substantial and lasting prosperity.

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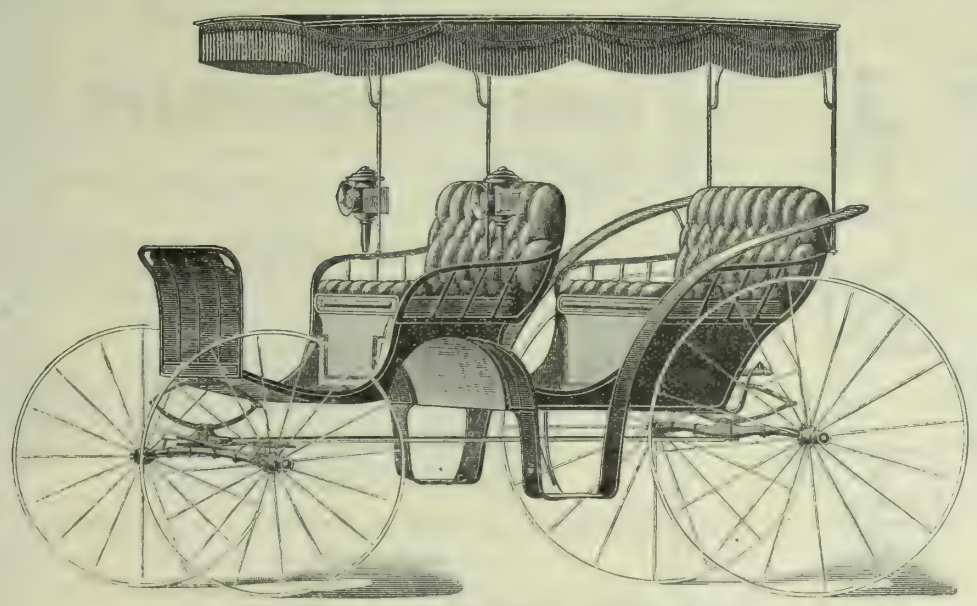
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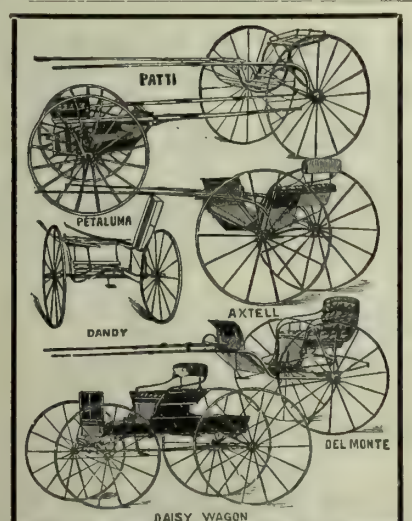
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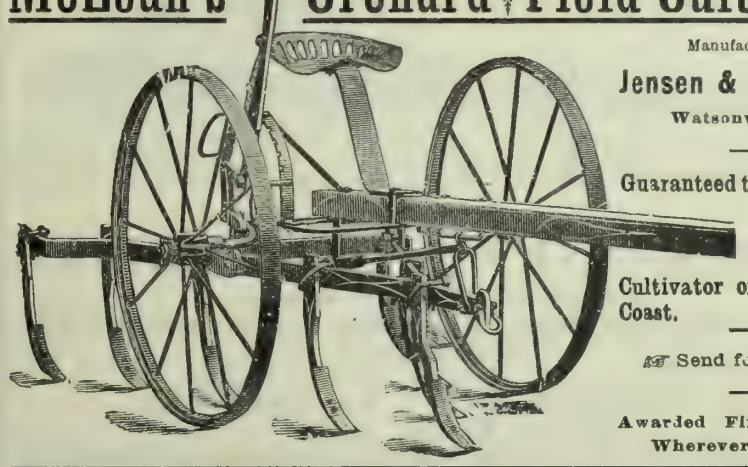


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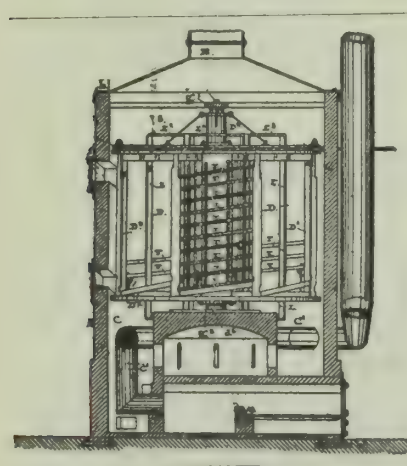
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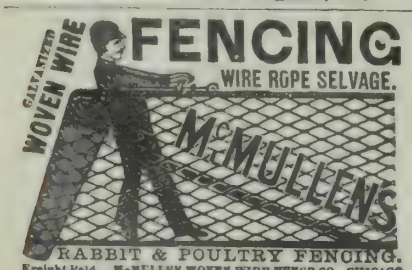
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Farmers' Alliance.

The Canal Matter.

The RURAL PRESS is among those who hold that the attitude of President Cannon toward the Nicaragua canal (which seems to be identical with that of Mr. Wm. Pool of Fresno, whose letter we print in our editorial page) is practically in opposition to the Nicaragua canal. However, as we intend to be perfectly fair and give not only our own view of the matter, but that of those whose ideas or motives may be different, we gladly print the following from the Ventura *Observer*, seeking to defend President Cannon's position:

Mr. Cannon, as president of the State Farmers' Alliance, declares that any man who is opposed to the construction of the Nicaragua canal is a fit subject for an insane asylum, and he further declares that anyone who is in favor of building it with Government money and turning it over to a private corporation is also a fit subject to be locked up in a lunatic asylum. He says further that there are thousands of people in this State who look upon such a person as more of a criminal than a lunatic, and the proper place to lock him up is in San Quentin.

The bill before Congress does not give the stockholders the right to select the board of directors, but places it in the hands of the President of the United States to appoint six directors to represent this country and the Government of Nicaragua to appoint one to represent it. This leaves eight in the hands of the Maratime Canal Company. In this way they propose to take the control out of the hands of this Government. In the memorial to Congress they strike out the words *build* and *manage*. The bonds that they wish the Government to indorse will run for twenty years. In other words will not become due until the expiration of that time, and according to a ruling of the Supreme Court of the United States in the case of the Central Pacific Railway the Government could not collect a dollar, either in principal or interest, until the expiration of twenty years. We repeat that President Cannon is not opposed to the Government building the canal, but simply wants it to control it. And if the Clayton-Bulwer treaty, which was made nearly 40 years ago, stands in the way, let it be abrogated. This can easily be done by the United States informing Great Britain that it desires it. The fact is any impartial observer can easily see that a class of interested men about San Francisco want to slip through Congress a bill to build up a great monopoly that will generate a crop of millionaires at the expense of this Government.

ALAMEDA ALLIANCE MEETING. — The Alliance met in the new and neat brick hall, at 10 A. M. on Saturday last, at Irvington. Among the speakers from abroad were D. C. Vestal and G. B. Johnson of San Jose, C. W. Pedlar of Gilroy, J. M. Moore of San Francisco, and Mrs. K. L. Nevins of Oakland. After lunch an open meeting was held, at which political reform matters were enthusiastically discussed by the several speakers above named and Dr. C. S. Lane and M. L. Gray of Oakland. At the afternoon session, H. R. shaw was selected to attend the coming meeting of the State Executive committee in San Francisco next week, whenever the subject of incorporating and capitalizing the State Alliance shall be discussed (according to the recommendation of some other County Alliances). It was voted to hold the next meeting at Pleasanton, on such Saturday in July as the Pleasanton Alliance may designate.

THE TRAFFIC ASSOCIATION ENDORSED. At a meeting of the San Luis Obispo County Alliance at Templeton, on April 5th, a set of resolutions were printed, from which we excerpt the following:

Resolved, That we appreciate and endorse the work of the Traffic Assocfation of San Francisco in their efforts to reduce freight charges.

CONCERNING ASSESSMENT.—At a meeting of the Monterey Co. Alliance, held on the 8th inst., the following resolution was adopted:

WHEREAS, There is reason to believe that in making up the assesement roll of this county, the assessor does not assess the small property holders on the same basis of valuation that he does the large holders; therefore be it

Resolved, That Equity Alliance instruct its delegates to the County Alliance to use their votes and influence to have the County Alliance appoint three members to look over the assessment roll of this county to see if such is the case.

AN ALLIANCE ENTERPRISE.—The San Miguel flour mill, started by the Alliance, seems to have worked a complete reform in its immediate neighborhood. Concerning it, the Watsonville *Pajaronian* says:

Since the Alliance flour mill started at San Miguel, flour has been cheap in that part of the Salinas valley. The Central Milling Co. has cut the price to crowd out the farmers' mill, and the fight is being watched with interest to see if the projectors of the opposing mill will patronize it at a higher price than is asked for similar products by the old company. Some of the Alliances of that section have instituted a boycott against the flour of the Central Milling Co., and will not patronize dealers who handle it.

SAN JOAQUIN RESENTS THE AFFRONT. Reviewing the proceedings of the Nicaragua Canal Convention, recently held in San Francisco, the San Joaquin Co. Alliance has resolved as follows:

That it is the sense of the San Joaquin Co. Alliance in session assembled that the Alliance throughout the State was outraged by the insult to its State President.

AT a recent meeting of Monterey County Farmers' Alliance at Salinas, a recess was declared, during which (under authority of Salinas Alliance)—by request of Alliances from different parts of the county—candidates were initiated by officers of the County Alliance, in the presence of the delegates and visitors. Good music and speaking by Prof. Fairweather and wife added much pleasure to the session.

NOTES.—The People's Party Central Committee of Alameda County met at Irvington, April 9th, and elected G. W. Kraft as a member at large. R. A. Downing was appointed to lead in the matter o holding a People's Party Picnic at Livermore next month. The members of Washington township were requested, if feasible, to arrange for a picnic in the vicinity of Niles, or elsewhere in the township.

The holding of a picnic near Oakland will be discussed by the Oakland Central Club. The County Committee will meet at 3 P. M., at Oakland, April 23d, a public meeting, with speakers from abroad, to be held in the evening.

GEO. T. ELLIOTT, of Hollister, an able speaking farmer, will address the people at Byron, on Friday night, April 15th, after the close of the Contra Costa County Farmer's Alliance quarterly meeting.

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Has more the spirit of success in its pages than any Pacific Coast publication we have yet seen.

Ponoma Times

The most distinctively Californian of any magazine ever published west of the Rocky Mountains.

Los Angeles Journal

The success of the publication is assured, for the Pacific Coast has long waited for a magazine of some literary merit, and will not be slow to appreciate it, now it has materialized.

Ventura Observer

We commend this beautiful monthly to the readers of the *Observer*.

Pasadena Star

Has earned for itself a place within the pale of American magazine literature.

Santa Clara Valley

Up to the full standard of a high-grade magazine.

Woodland Mail

Is finely gotten up and compares very favorably with its Eastern competitors.

St. Louis Observer

Starts off with articles of a high literary character, showing that there is a great deal of enterprise behind it.

Hartford Post

Among the best literary monthlies of the country. It is well illustrated, and the fact that it comes from the extreme western border of our land gives it additional interest.

Eureka Standard

It maintains the high standard which its initial number indicated . . . The magazine takes rank among the first in the Nation.

New Orleans Picayune

The CALIFORNIA ILLUSTRATED MAGAZINE is a welcome addition to the usual monthly file, and shows that the West Coast in matter and manner is not far distanced by the East.

New York Christian Intelligencer

It certainly is the leading magazine of the Pacific Coast.

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New York Congregationalist

It is bright and enjoyable in substance and externally attractive.

The California Crown Vista

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Coast Advocate

It ranks with the leading magazines of the country—equal in tone, contents and appearance to any of the Eastern productions.

Los Angeles Porcupine

At last we have a distinctively Californian Illustrated Magazine, in which we may take a just and pardonable pride. THE CALIFORNIAN for April is a number that should be found in every home in the State.

The Antioch Ledger, Cal.

This is undoubtedly the best magazine ever published in California and should be a welcome visitor to every home in the State.

Monterey New Era

Beautifully illustrated.

Petaluma Argus, Cal.

THE CALIFORNIAN ILLUSTRATED MAGAZINE for April is a superb number, abounding in excellent reading and fine illustrations.

Woodland Mail

THE CALIFORNIAN ILLUSTRATED MAGAZINE for April is beautifully illustrated, many of its articles being embellished by artistic sketches making the issue the peer of any of the elaborately illustrated magazines of the East. The magazine is an honor to California and we bespeak for it long life and prosperity.

Annals, Watertown, N. Y.

New periodicals are springing up on all sides, but it is rarely that one immediately takes a place in the front rank as does the CALIFORNIAN ILLUSTRATED MAGAZINE * * that compares favorably with the best of our large magazines, and may well claim an honorable position alongside of the *Century*. * * The CALIFORNIAN is a first-class magazine, and we wish it the success it well deserves.

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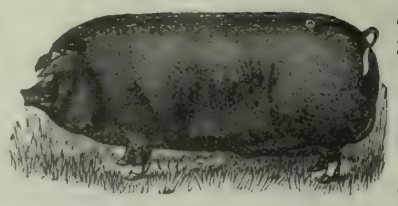
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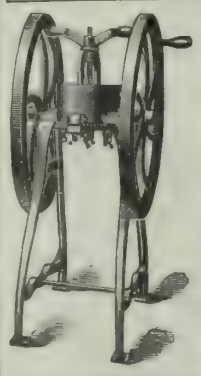
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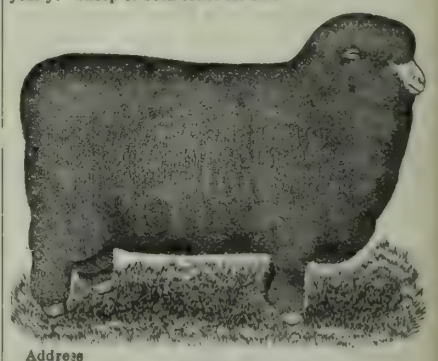
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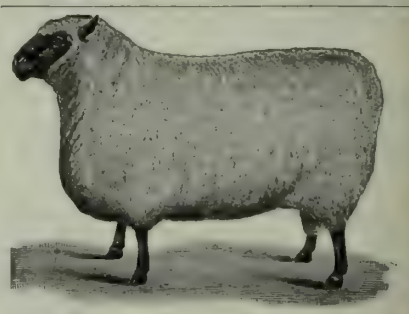
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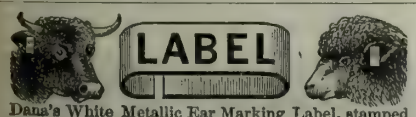
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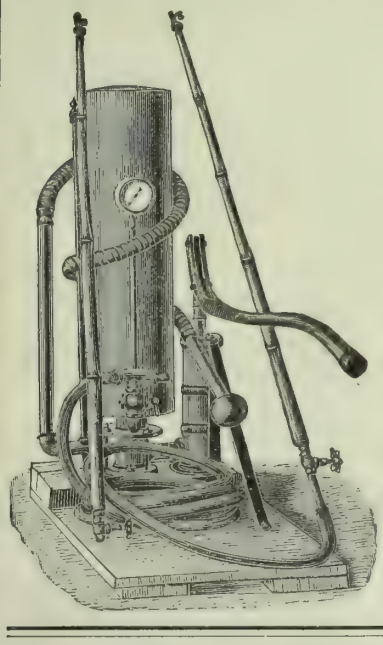
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

San Francisco, April 13, 1892.

General trade continues stagnant. Crop prospects are being closely watched. The weather will continue throughout this month an important factor in directing business ventures. With favorable crop weather up to toward the middle of May, there can be no doubt but renewed activity will be witnessed in all branches of trade. The local money market continues easy, with no free inquiry reported from any particular source, speculative or otherwise.

Foreign Grain Review.

London, April 11.—The *Mark Lane Express* says: English wheats are steadier at 32s, but holders are not willing to sell at these low figures. Foreign wheats are a shade firmer, but there is a small prospect for values advancing, owing to enormous stocks and influx of arrivals. The average weekly imports of wheat and flour since September is 437,000 quarters, against 352,000 quarters weekly during the preceding year. The chief increase was from Atlantic points, amounting to 221,000 quarters this year against 79,792 last season. Corn is a turn dearer; barley and oats are dull; beans and peas are 3d cheaper. At today's market foreign wheats were better; holders of American flour ask 1s more, but is not often obtained.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June	July.	Aug
Thursday	.....	7s02 d	7s01½d	7s01 d	7s01d
Friday	7s03½d	7s03½d	7s02 d	7s03½d	7s02½d
Saturday	7s04½d	7s04½d	7s04½d	7s04 d	7s04 d
Monday	*7s05½d	7s03½d	7s01½d	7s01½d	7s01½d
Tuesday	7s04½d	7s02 d	7s00½d	7s00½d	7s00½d

No. 2 Red Winter will be quoted hereafter, and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. O.	P. S.	N. D.	Market for P. S.
Thursday	35s6d	35s6d	35s6d	Steady. Weather fine.
Friday	35s9d	35s9d	35s9d	Steadier.
Saturday	36s3d	36s3d	36s3d	Firm.
Monday	37s0d	36s9d	36s9d	Buyers hesitate to operate
Tuesday	36s9d	36s6d	36s6d	Depressed, weather colder

To-day's cablegram is as follows:

Liverpool, April 13.—Wheat—To press sales less money would have to be taken. California spot lots, 7s 5d; off coast, 36s 9d; just shipped, 36s 6d; nearly due, 36s 6d; cargoes off coast, steadily held; on passage, rather more inquiry; Mark Lane wheat, firm; French country markets, weaker; weather in England, cold and wet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug.
Thursday	158¼	153¼	150	150	148½
Friday	163	158	154¼	155	151½
Saturday	164¼	159½	156½	156½	154¼
Monday	157⅜	155½	151½	151½	152½
Tuesday	155	151¼	149⅜	149⅝	148½

The following are to-days' telegram:

New York, April 13.—Wheat—91¼c for April, 92¼c for May, 91½c for June, 91½c for July, and 90¾c for August.

Chicago, April 13.—Wheat—81c for May, and 81¼ for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	153⅞	152⅝	....	....	139½	138½
Friday	157	155	....	....	....	....
Saturday	156	154½	143½	143½	....	....
Monday	154½	151½	....	....	139½	138½
Tuesday	152½	151⅝	....	....	139½	138½

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal session: Buyer season—100 tons, $1.53½; 200, $1.53½; 800, $1.53⅜ ₱ ctl. Regular session: Buyer season—100 tons, $1.53½; 500, $1.53½; 400, $1.53⅜; 1000, $1.53½; 800, $1.54; 700, $1.53½; 100, $1.53¾. Seller 1892—800 tons, $1.40; 200, $1.39½ ₱ ctl. Afternoon—Buyer season—100 tons, $1.53¼ ₱ ctl.

BARLEY.

	Buyer Season.		*May		June.	
	H.	L.	H.	L.	H.	L.
Thursday	110½	105½	....	....	....	....
Friday	112	109	90	89⅝	....	....
Saturday	110	110	....	....	....	....
Monday	105	100½	....	....	....	....
Tuesday	101½	100½	....	....	....	....

*New crop.

The following are to-day's recorded sales on Call:

Barley—Morning—Informal session: Buyer season—400 tons, $1.02½; 100, $1.02. Seller 1892 new—200 tons, 90c ₱ ctl. Regular session: Buyer season 400 tons, $1.01½; 300, $1.01⅜; 100, $1.01½; 100, $1.01¼. Seller 1892, new—100 tons, 89½c; 100, 89¼c ₱ ctl. Buyer season—800 tons, $1.01½; 100, $1.01½; 200, $1.01⅜; 200, $1.01½; 100, $1.01½; 100, $1.01¼ ₱ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

New York, April 12.—Several good lines of unpeeled peaches have turned up, offered at 6c to 7½c. The activity in prunes has subsided. Fifties and sixties hold at 9c, other sizes are ¼c off; sixties to seventies, 7¾c; seventies to eighties, 7½c; eighties to nineties, 6¾c; nineties to one hundred, 6½c; small, 5@5½c. Raisins are neglected in a wholesale way. There are sellers of three crown bags at 4½@4¾c. Apricots are steady at 6c for common to 7½c for fancy sacks. Boxes range from 7c to 9c. A good grocery outgo is noted.

Chicago, April 12.—Choice large prunes are fair of sale and steady; small are quiet. Some lots a little damp are offered, and these are slow and easy. Choice peaches are of moderate sale and steady, but small lots, tail ends of complements, are full and slow. Apricots are of moderate sale, and choice nectarines and pears are quiet.

Fresh Fruit Market Prospects.

New York, April 12.—George L. Threlkel of Newcastle, Cal., is here in the interest of Coast fruits. His statement that they are promising well and will be early, is a welcome one to the trade. A half-crop estimate of our peninsular peach yield is now accepted by some trustworthy investigators.

Eastern Hop Markets.

New York, April 12.—Hops made a strong general advance on Thursday, the new figures being well supported at the close. Choice are scarce, a few being released to the home trade. English cables are strong. Exports for the week are 123 State and Pacific 91's, at 23c to 30c; common to choice olds 7c to 12c. There were brisk dealings in the futures, the closing bid and asked being: March, 27½@30c; June, 28½@30¾c; July, 28¾@31c; August, 27c bid.

New York, April 12.—Hops are fairly active, and spot business is at 1@2c advance. The feeling is quite buoyant, and 23 bales Pacifics went at 26c. London is firm. On Exchange a rise of about 2c in futures is noted. Twenty-five bags of prime California 92s, October delivery, sold at 25c, buyer's option.

Eastern Wool Markets.

New York, April 12.—Liverpool advices and small domestic receipts of raw wool, and influenced by London wool sales, inclined prices upward, but as yet hat not advanced. New clip California wool is held above Eastern market prices. Sales at the seaboard are fair, but the demand seems more to provide against the possible late marketing of new than for actual prompt wants. Prices are unchanged; in fact, the shabby conditions of offerings permit buyers to dictate the terms for most parcels. The cleaned basis of Territory is down to 53@55c for fine, and 48c for medium. London's prices for Colonial wool have flashed up to January's rates, imparting a ray of encouragement to our hitherto dismal market. Cloths are doing well; dress goods are active when the grades compete with foreign, which are now quoted upward. The wool sales at New York are 557,000 domestic and 739,000 foreign, chiefly Cape, to go to Canada. Boston sales are 1,741,500 domestic, and 480,000 foreign. A number of buyers have gone West to negotiate the new clip. Philadelphia feels encouraged by the advance abroad, but there is no material business to report.

Miscellaneous.

New York, April 12.—Mustard seed has not quotably changed for prime. Honey—There is no new interest, Lima beans—The supply is somewhat oppressive; prices are easier; spot, per bushel, $1.55@$1.65.

Foreign Hop Markets by Mail.

Mark Lane *Express*, March 28th, says: There is practically no change in the trade, the course of which is marked by a quiet demand for consumption, and to supply deficiencies in cases where brewers had not purchased in quantities sufficient to carry them over a certain period. This refers more particularly to 1891 hops, the stocks of which unsold continue to lessen week by week. These descriptions are mostly held by merchants, and occasionally brewers who have got more in hand than they are likely to require resell a few pockets at a substantial profit on the price they paid for them last autumn. The market values are unaltered and the tone generally is firm. There have again been considerable transactions in old odds at the low rates that have prevailed for a long time past. Growers, who are relieved of all anxiety respecting last season's growth, having, with very rare exceptions, disposed of that crop, are now turning their attention to their plantations, where operations are considerably in arrear on account of the long spell of wintry weather, the severe frost having rendered it inadvisable to commence cutting the stocks. Now, however, the weather has become milder, this work has been begun in earnest, and there will be good progress made with the work if the present conditions continue. On the Continent there is an improved inquiry for hops, and values are maintained, being all round higher than the prices that are obtainable on this side. American markets are quiet but values are fairly steady, and there is confident expectation of an early advance.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending April 11, '92, were as follows:

Flour, qr. sks	54,020	Bran, sks	11,545
Wheat, ctls	29,978	Buckwheat "	....
Barley, "	36,921	Middlings "	5,735
Rye, "	833	Chicory, bbls	151
Oats, "	938	Hops, "	....
Corn, "	803	Wool, "	2,836
Butter, "	1,555	Hay, ton	3,528
do bxs	465	Straw, "	208
do bbls	....	Wine, gals	189,776
do kegs	....	Brandy, "	8,907
do tubs	....	Raisins, bxs	25
do ½ bxs	44	Honey, cs	68
*Cheese, ctls	1,001	Peanuts, sks	54
do bxs	28	Walnuts "	....
Eggs, doz	57,501	Almonds "	....
do " Eastern	12,000	Mustard "	12
Beans, sks	17,814	Flax "	....
Potatoes, sks	5,231	Popcorn "	....
Onions, "	665	Broom corn, bbls	242

*Overl'd, ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to April 11, '91.	July 1, '91 to April 9, '92.
Flour, ½ sks	351,911	385,178
Wheat, ctls	1,274,996	1,219,487
Barley, "	265,057	39,806
Oats, "	312,549	371,212
Wool, bales	5,940	6,011
Hops, "	443	431
Rye, sks	210	3,352
Potatoes sks	81,725	119,196

Cereals.

Prime says that there has been very little farm work yet done in the Central States. In the spring wheat region there will probably be a great deal of the acreage put into oats, barley and other crops, reducing the wheat acreage. Another fact which will tell against a large area of wheat is that there is a great deal of ground to be plowed this spring, farmers not being able to do the usual fall plowing last autumn. The development of the winter wheat is slow, but the conditions are favorable. The wheat, however, bears no comparison with last year, and it is very important that the month of April be a very favorable one.

Some of the latest reports from Russia are very conflicting. The Liverpool *Corn Trade News* says that the production of wheat last year was 248,000,000 bushels, whereas previous estimates seldom exceeded 240,000,000 bushels for an average, making the crop of the past year in excess of the average production. The previous estimates of last year's crop have been 184,000,000 bushels. The home consumption is estimated anywhere from 140,000,000 to 216,000,000 bushels. Mulhall gives the area of wheat in Russia at 29,000,000 acres, and Broch the average yield at 9 bushels, making a total average crop of 261,000,000 bushels. If the 1891 crop was 20 per cent deficient, the total yield would be a little over 200,000,000.

The production and exportation of cereals is the chief source from Russia; from 1867 to 1889 the exportations have steadily increased. The exports from 1867 to 1871 were 2,448,000 tons of different kinds of grain, while for the two years 1887 to 1889 the exports were about three times as much, amounting to 7,325,000 tons. The exports of grain, which in the early part of the period referred to represented only 14.7 per cent of the production, rose to 20.5 during the period from 1883 to 1889. The only rival to Russia is the United States. Together, Russia and the United States provide 68 tons of grain out of every 100 tons brought into European markets. After this comes Roumania with 8 tons, India 7.5, Austro-Hungary 4.3, the Argentine 3 6, Canada, 2.8, Australia 2.3, Sweden 1.6, Chile 0.8, Servia 0.7.

London cables of April 12th report as follows: Wheat and flour on passage to United Kingdom, 3,178,000 qrs.; Continent, 1,409,000. Imports of wheat into the United Kingdom during the past week, 181,000 qrs.; flour, 254,000 bbls. Indian shipments of wheat during the past week: United Kingdom, 55,000 qrs.; Continent, 60,000.

The local wheat market made a slight spurt in sympathy with a bull movement in Chicago, but the upmove was of short duration. The market, both here and at the East, acts very much as if it is about bottom, and that better prices can be looked for in the near future. The available supply of wheat in this State, and also up north, is light, and as there is a large short interest on Call out, the sellers may not be able to cover except at a good round advance. The same remarks, it is claimed, are also applicable to the Eastern markets. The engaged tonnage in port for wheat loading is small, but the disengaged tonnage available for new crop loading is large, while the tonnage on the way is steadily increasing.

Crop advices are uniformly favorable for large outturns in the northern, central counties, but on the west side of the San Joaquin more rains are wanted, and that soon, to insure a fair to a good yield. From Oregon and Washington all advices are favorable for an average outturn to the acre.

Barley made an unexpected upmove the past week, but toward the close the market fell back, closing the week under review weak and heavy. The movement was due to manipulation. The higher prices induced free shipments to this city from coast ports, and also from up north. The feed consumption is very large. A vessel is loading for England, but the cargo, it is said, is secured.

The oat market is steady, without any special change during the week to note. Receipts, which had fallen off, are increasing slightly from up north. The feed consumption is quite large, and as horses go into training a steady increase is expected to rule for several weeks to come.

Corn is slow at unchanged quotations, as are rye and buckwheat.

The general memoranda regarding the wheat crop in certain parts of India is at hand. The report shows that in parts of the Bombay presidency the area of wheat is all the way from 3 to 45 per cent below the average, owing to the dry weather which prevailed during a greater part of the season. The estimated area in Berar is 884,000 acres. The condition of the crop is not satisfactory, owing to dry weather, and the outturn is estimated at only about 62½ per cent of a full crop. The area of wheat in the Punjab is 6,948,000 acres against 7,074,000 acres last year. This is a falling off of 1 8-10 per cent from last year and 2.9 from the first estimate, owing to dry weather. Without rain in March the final outturn of the crop was expected to be very poor. In the northwest provinces and Oudh the crop is reported as very fair, the condition ranging from 80 to 90 per cent, 100 indicating a full condition. The crop is said to be the best seen for years in these districts.

Feedstuff.

The market for ground feed shows considerable strength for the season of the year, owing to an enlarged demand brought about by an increased attention to dairying through the establishing of creameries in various parts of this State and Nevada. Our quotations cover to-day's selling prices.

Hay is weak at slightly lower prices. Receipts are heavy for the season of the year. This is contrary to the heretofore expressed belief that supplies in the country were light. Dealers in this city say that considerable hay will be carried over, but that the carryover, and as for that all received, does not belong to farmers, but to parties who purchased in last year, expecting that very much higher prices would rule than did obtain. For new crop hay $10 to $11 is named.

Dairy Produce.

With heavy receipts and a smaller demand the butter market settled to lower figures, with, at the close, a weak tone and buyers trying to get concessions. Distributive points up north are taking less, and as feed is becoming more plentiful in Oregon and Washington, many dealers expect that outlet to be cut off very soon. Considerable packing is being done.

Cheese, like butter, is selling at lower figures. It takes very choice full cream to fetch 12½ cts. With increasing receipts from California dairies and decreasing orders from up north, lower prices will rule. Eastern cheese continues to come to hand in a small way.

Eggs are higher. It is generally claimed that heavy receipts will be in order the remainder of the week. Dealers generally look for lower range of prices after this week.

Vegetables.

Seasonable garden truck is in liberal supply and generally lower. Both asparagus and rhubarb have met with quite a decline, but peas advanced. We noticed at Wetmore Bros. a small consignment of green peppers, which they expected to sell at a big price. Everything points to a large crop of all kinds of vegetables this year.

Onions are high and in demand at the advance. It is claimed that still higher prices will rule. A leading dealer, it is said, has cornered the market. The supply is reported light both in this State and Oregon.

The market for old potatoes is demoralized, with that for new not showing to a much better advantage. It takes the best Oregon Burbanks (old crop) to fetch 1 cent a pound on the wharf.

Fruit.

The receipts of strawberries are increasing, which causes a shading in prices. The crop this year will show a very large increase over that in 1891. The increase will be due to the replanted vines coming into bearing and also to a larger acreage being devoted to the industry. The general opinion is that there is a marked increase in the acreage devoted to raspberries, blackberries and currants.

Apples are scarce, and as there is a fair demand, higher prices are asked. It is claimed that the improved prices will draw in freer receipts.

Limes and oranges are weak at slightly lower prices. Even the shading in prices for oranges does not stimulate the demand much, owing to consumers fearing being bitten by frosted fruit.

In dried fruits and raisins there is very little new to offer. Stocks are slowly but surely cleaning up. Choice, good-sized fruits are hard to get.

Live Stock.

The market for bullocks is weak at slightly lower prices. Mutton sheep are weak at a decline. Slightly lower prices are looked for in both bullocks and sheep. The decline in the latter will be due to larger offerings before driving to the mountain ranges. Hogs for the block show a slight advance, but for packing, the market appears to be a shade weaker.

Miscellaneous.

From reliable advices up to April 13, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	202,055	201,870	*†128,532	67,875
San Diego	17,162	15,483	5,592	.....
San Pedro	5,020	2,773	.....	.....
Oregon	25,320	36,408	10,211	17,530
Puget Sound	8,415	23,166	.....	.....
Totals	257,972	279,700	144,335	85,405

*Engaged for wheat, 1892, 16,164; 1891, 66,102 †For new crop loading, 5,161

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,008,524	10,676,149
Flour, bbls	873,072	931,020
Barley, ctls	786,338	208,635

Poultry, after selling for slightly higher prices, closes weak at around prices current last week. Geese are in good demand for the Jewish holiday. Large, well-conditioned hens and roosters are also wanted for the same purpose.

Beans, as a rule, show a stronger tone, but trading is light.

Honey is scarce. It is claimed that there will be a larger crop this year than there was in 1891.

About all the hops on this coast is in the hands of one firm in this city. They hold for 25 to 30 cents. For new crop hops 12½ to 15 cents is bid.

Wool continues to drag. Fears are expressed that the railroad company will advance the freight on scoured wools. This fear undoubtedly causes scourers to be offish and not bid up much for wools in the grease. There has been a steadily increasing business in scoured wools. Buyers and well-informed growers prefer dealing when wools are scoured.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

BEANS AND PEAS.				**FLOUR.**		
Bayo, ctl	2 00	@	2 20	Extra, City Mills	4 80	@ 5 00
Butter	2 40	@	2 80	Do Country Mills	4 65	@ 5 00
Pea	2 20	@	2 80	Superfine	3 00	@ 3 30
Red	1 90	@	2 15	**NUTS—Jobbing.**		
Pink	1 75	@	2 00	Walnuts, Cal. lb	4	@ —
Small White	2 25	@	2 65	Do Choice	6	@ —
Large White	2 20	@	2 45	Do paper shell	7	@ —
Lima	1 90	@	2 15	Almonds, soft shl.	10	@ —
Wid Peas, blk eye	1 30	@	1 50	Paper shell	12	@ —
Do green	1 30	@	1 50	Hard Shell	6	@ 7½
Do Niles	1 25	@	1 40	Brazil	6½	@ 8
Split	3 85	@	4 15	Pecans small	11	@ 13
BUTTER.				Do large	14	@ 16
Cal. Poor to fair, lb	12½	@	—	Peanuts	1	@ 3
Do good to choice	15	@	—	Filberts	10	@ 12½
Do Gilt edged	—	@	18	Hickory	7	@ 8
Do Creamery rolls	—	@	18½	Chestnuts	11	@ 16
Do do Gilt edge	—	@	19	**ONIONS.**		
Eastern	—	@	—	Silver Skin, Choice per ctl	2 00	@ 3 00
CHEESE.				Fair to Good	1 20	@ —
Cal, choice mild	11½	@	12	Cut	75	@ —
Do fair to good	9½	@	11	**POTATOES.**		
Do gilt edged	—	@	12½	Early Rose, ctl	25	@ 40
Young America	—	@	14	Burbank Seedling	20	@ 45
EGGS.				Do do Oregon	50	@ 1 00
Cal. ranch, doz	20	@	—	Do Humboldt	40	@ 75
Do do selected	—	@	22½	River Reds	15	@ 35
Do store	19	@	—	New	50	@ 1 00
Eastern	19	@	21	Sweets	—	@ —
FEED.				**POULTRY.**		
Bran, ton	16 50	@	17 50	Hens, doz	6 50	@ 8 50
Feedmeal	26 00	@	28 00	Roosters, old	6 50	@ 8 50
Gr'd Barley	22 00	@	23 50	Do young	9 00	@ 13 00
Middlings	19 00	@	20 50	Broilers, small	3 50	@ 5 50
Oil Cake Meal	—	@	25 00	Do large	6 00	@ —
Manhattan Food ₱ cwt.	7	@	7 50	Fryers	7 00	@ —
HAY.				Ducks	9 00	@ 12 00
Wheat, per ton	12 00	@	—	Geese, pair	2 00	@ 3 00
Do choice	14 00	@	—	Goslings	3 00	@ 3 50
Wheat and Oat	11 50	@	—	Turkeys, Gobl'r	15	@ 17
Wild Oats	10 00	@	—	Turkeys, Hens	17	@ 20
Cultivated do	11 00	@	—	Manhattan Egg Food ₱ cwt	11 50	@ —
Barley	9 00	@	—	**PROVISIONS.**		
Alfalfa	8 00	@	—	Cal. Bacon, he'vy, lb	9½	@ —
Clover	10 00	@	—	Medium	10½	@ —
Straw bale	45	@	60	Light	12	@ —
GRAIN, ETC.				Lard	9	@ 11
Barley, feed, ctl	92½	@	1 00	Cal. Sm'k'd Beef	11½	@ —
Do Choice	1 01½	@	—	Hams, Cal salt'd	10	@ —
Do Brewing	1 02½	@	—	do Eastern	12½	@ —
Do do Choice	1 12½	@	—	**SEEDS.**		
Do do Giltedge	1 17½	@	—	Alfalfa	12	@ 12½
Do Chevalier	1 05	@	1 40	Clover, Red	14	@ 15
Do do Giltedge	1 45	@	1 50	White	20	@ —
Buckwheat	1 70	@	—	Flaxseed	1½	@ 2
Corn, White	1 21½	@	1 27½	Hemp	3½	@ 4
Yellow, large	1 27½	@	1 31½	Mustard, yellow	3½	@ 4
Do small	1 32½	@	1 36½	do Brown	3	@ 3½
Oats, milling	1 42½	@	—	**WOOL.**		
Feed, Choice	1 38½	@	—	**Spring, 1892.**		
Do good	1 30	@	—	Humb't & Men'cino	—	@ —
Do fair	1 22½	@	—	Sac'to valley	16	@ —
Surprise	1 50	@	—	S Joaquin valley	11	@ 14
Black Cal	1 10	@	1 40	Cala'v & F'th'll.	14	@ 16
Do Oregon	1 20	@	1 27½	Oregon Eastern	10	@ 17
Gray	1 20	@	—	do valley	—	@ —
Rye	1 60	@	—	So'n Coast, def	10	@ 12
Wheat, milling. Gilt edged	1 60	@	—	**HONEY.**		
Do Choice	1 57½	@	—	White Comb, 2-lb	10	@ 13
Do fair to good	1 55	@	—	do do 1-lb frame	12	@ 14
Shipping, cho'ce	1 51½	@	—	White extract'd	6½	@ 7
Do good	1 50	@	—	Amber do	5½	@ 6½
Do fair	1 47½	@	—	Beeswax, lb	22	@ —
Common	1 45	@	—			
Sonora	1 45	@	1 57½			
HOPS.						
1891 Choice to Ex.	26	@	30			
Fair to Good	22	@	—			

WEDNESDAY, April 13, 1892.

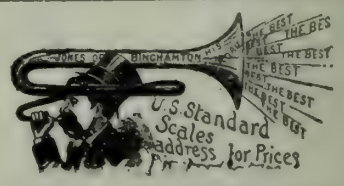
Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

Limes, Mex	4 00	@	4 75	Str'berries, pr ch	10 00	@15 00
Do Cal	60	@	75	Beets, sk	—	@ 1 00
Lemons, box	1 00	@	3 00	Carrots, sk	35	@ —
Do Sicily	5 00	@	6 00	Okra, dry, lb	15	@ —
Oranges, Seedlings				Parsnips, ctl	—	@ 1 25
Redlands	2 00	@	2 25	Peppers, dry, lb	8	@ 12½
Riverside	1 75	@	2 00	Do green	50	@ —
Los Angeles	1 50	@	2 00	Turnips, ctl	50	@ —
Do Navels—				Cabbage, 100 lbs	40	@ —
Redlands	3 50	@	4 00	Garlic, lb	2	@ 3
Los Angeles	1 50	@	3 00	Squash, Mrft, tn	9 00	@11 00
Riverside	3 00	@	3 50	Do Summer, lb	1 00	@ —
Duarte	3 00	@	3 50	Tomatoes, box	2 50	@ —
Oranges frosted and sell at a decline of $1@$1 50 per box on the above quotations.		poor		Asparagus, box	75	@ —
				Do choice to ex	1 25	@ —
				Peas, green, lb	2 00	@ 2 50
				Do sweet	3	@ 4
				Rhubarb, box	50	@ 75
Apples, box	1 00	@	—	String Beans	8	@ 12½
Do choice	2 25	@	—	Cucumbers, doz	75	@ 1 25
Do extra choice	2 75	@	—	Mushrooms	10	@ 30

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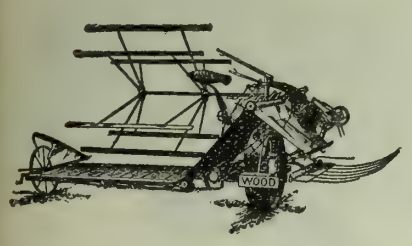
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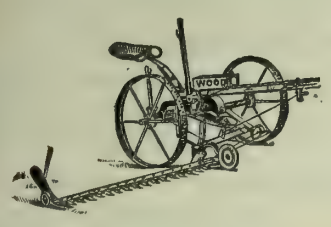


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CHOKING IS OUT OF THE QUESTION.

BAY POINT, Cal., Feb. 5, 1892.

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Yours truly, E. LUDGERING.



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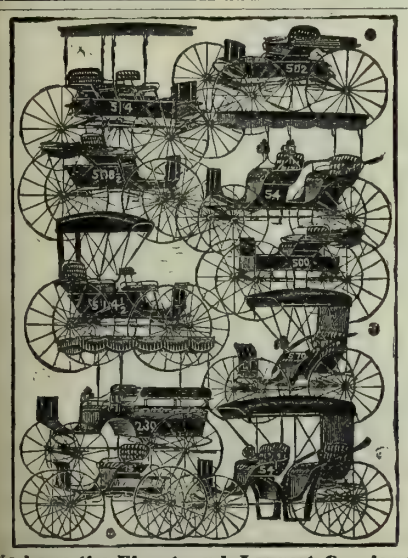
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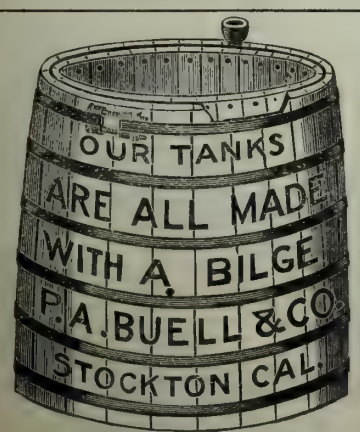


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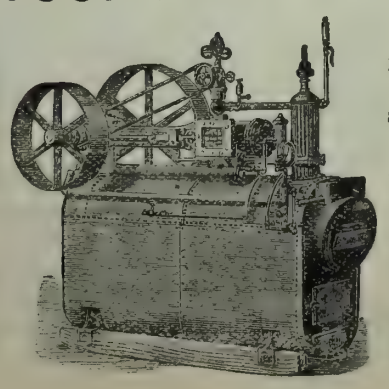
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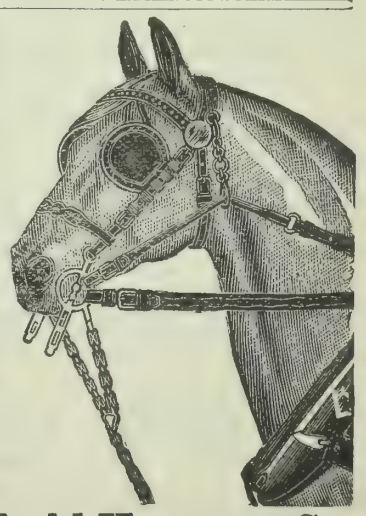
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Uses of Wood Pulp.

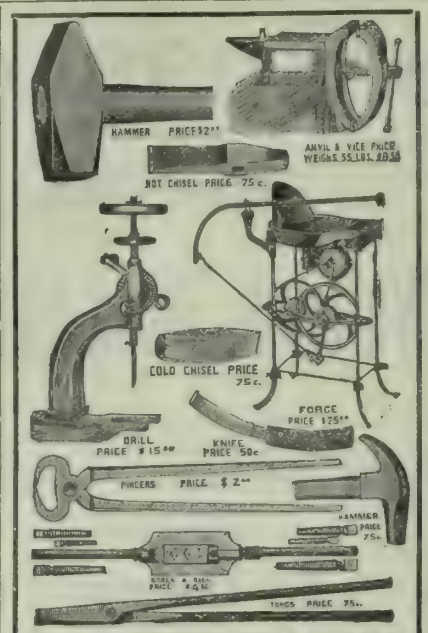
Wood pulp is now extensively used as a composition for moldings and decorative work in private and public buildings. In the manipulation of this composition, beautiful effects can be obtained by mixing in it the various aniline colors—strong or tinted—or those known as metallic colors. Bronze powders, of various colors, may also be used with pleasing results. By the use of this material all the better qualities of fine-grained wood are obtained without any of the drawbacks of shrinking or expanding on account of atmospheric conditions.

The extent to which the wood pulp business has been developed in this country is not generally known. The inroads on our forests, which its growing consumption for railway ties, building and the requirements of the press involve, are numerous. So serious has this matter become, it is stated, that unless each State passes a law for the encouragement of tree planting, there will some day be a tree famine.

As giving an inkling of the magnitude of the general consumption of wood pulp, a correspondent states that for a single edition of a prominent daily in New York 17 tons of blank paper were required. This was the product of 67 cords of poplar. In 22 hours from the time of felling the trees it had been turned into printed papers. The process is thus divided with respect to a test case: Chopping one a half cords of wood, three hours; manufacturing into pulp, 12 hours; transporting to printing office, one hour and twenty minutes; wetting paper preparatory to printing, 30 minutes; printing 10,000 copies, ten minutes. This shows the rapidity with which raw material can be turned into a finished article. When it is considered that the foregoing figures refer to only one paper in one city, and that almost every newspaper is printed from material consisting largely, and often almost wholly, of wood pulp, which is also used in the production of nearly all common and medium grade of paper for almost all uses, the magnitude of the consumption of wood in pulp-making becomes apparent.

Dust in the Atmosphere.

Prof. Aitkins, an English Scientist, shows the air to be full of minute particles of dust. Outside air at Colmonell in Ayrshire contained from 8000 to 155,000 particles. Near Falkirk the smoky atmosphere showed from 180,000 to 2,296,000 particles per cubic inch. Glasgow air showed from 2,750,000 to 7,500,000 per cubic inch, and Edinburgh air from 750,000 to 4,000,000. In the meeting-room of the Royal Society, when showing the Fellows his experiments, 4,500,000 were counted just before the meeting, 6,500,000 near the close of the meeting, 49,000,000 near the ceiling just before the meeting, and 57,500,000 near the ceiling at the end of the meeting. In his own laboratory he calculated 30,000,000 of dust particles in the cubic inch of air; near the ceiling, 88,000,000; and above a Bunsen flame the infinite number of 489,000,000. A cigarete smoker sends 4,000,000 of particles into the air with every puff he makes. Mr. Aitkens' observations, during the summer of 1889, were made on the Continent to find out the minimum number of particles in natural air untouched by artificial causes. At Hyeres, near Toulon, the number per cubic inch varied from 48,000 to 384,000; the latter when the wind was blowing from the town. At Cannes the lowest observation was 24,000, when the wind was blowing from the town. The sea air at Hyeres contained 28,000; at Mentone, 80,000, with a steady wind from the sea, and at Cannes double that number. At Lucerne, in Switzerland, the specimens of air tested were remarkably free from dust; on the Rhighi mountains the minimum was 3360 particles. In the purest Highland air in Scotland, tested by Mr. Aitkins, he found the minimum to be 32,000 particles per cubic inch.



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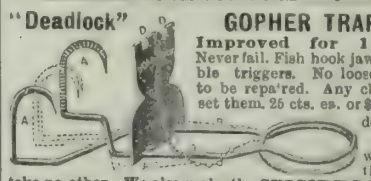
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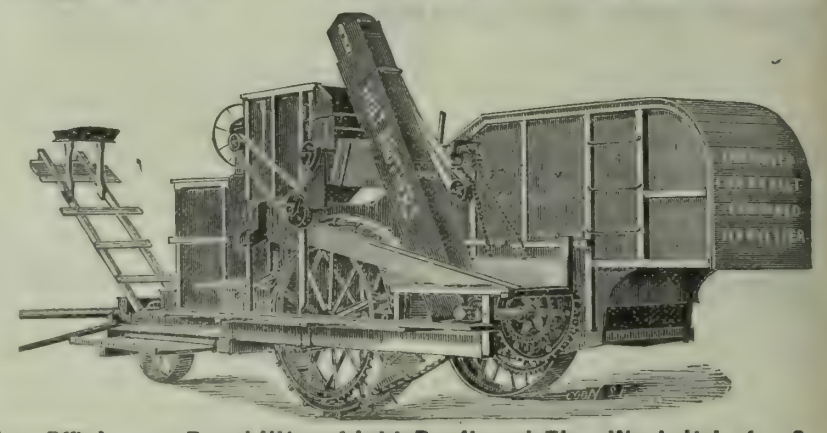


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California Fish.

At a meeting of the directors of the Mechanics' Institute this week, during a discussion concerning new features for the next fair, Director Stott made a good suggestion. He wanted to see an aquarium for salt water fishes, and one for fresh water fishes, placed in the Pavilion, where living specimens of our local fishes could be seen by the people. The Fish Commissioners would doubtless aid this project, and the whole thing would be a decided novelty.

There are upward of 400 varieties of fish found in California waters, and over 100 of these are known in our markets. Very few people indeed, however, can recognize the fish except when cooked—and when they are apt to get sturgeon for sole. But they have had no opportunity to see these fish. It would not take long to make a collection, and the Institute could well afford the outlay necessary to exhibit them. The fishing industry is an important one for this city. Some thousands of our citizens live by it. Thousands of tons of fish are brought to this city every year, yet we have never had any exhibit which would show people the appearance of even our commonest fish alive.

The excellent suggestion of Director Stott was a natural one for him to make, as he is an ardent angler, and has been for years. But it is not alone trout, salmon or bass that he wants to see, but all the varieties obtainable. Such an exhibition would be much more attractive than an artistic pile of yeast-powder cans or boxes of soap, and would be more instructive as well. Let the Institute consider the suggestion which would at once take it out of the old rut and furnish one decided novelty for the fair at least.

BORING HOLES.—For boring long, deep holes that do not go clear through the pieces so as to permit of using a boring bar, use a tool having right back of it a set screw which may be run out so as to touch the opposite side of the bore from the one the tool is working on; and have half way between these two, so as to touch the circumference of the bore hole 90 degrees from the tool and 90 degrees from the first screw, a similar screw which may be adjusted so that the tool will be kept centrally, and the hole kept straight. If the job be such as to permit the hole being bored vertically, there will be no trouble about getting out the borings or having them crowd under either of the set screws; but if it must be a horizontal job, the tool must be rigged so that one of the screws shall be at the top and the other at one side, the tool being on the other side.—Engineering Magazine.

Complimentary Samples.

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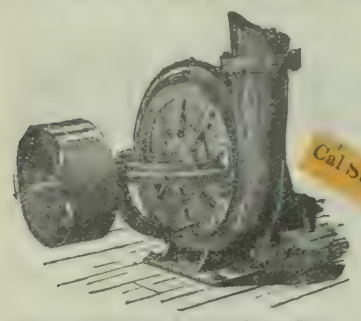
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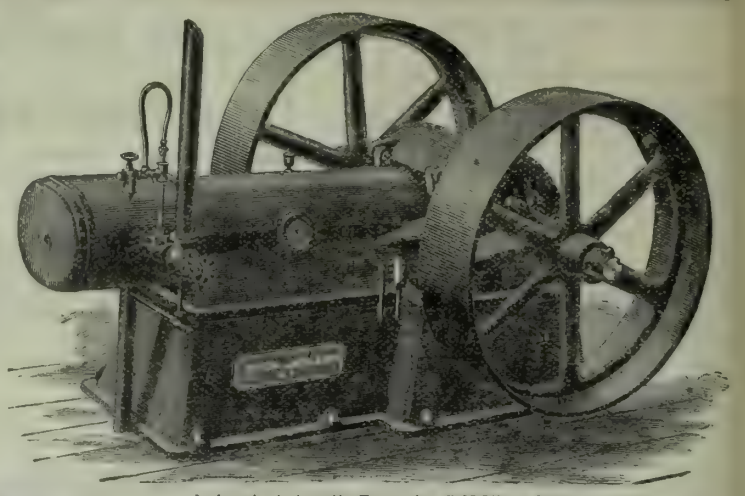
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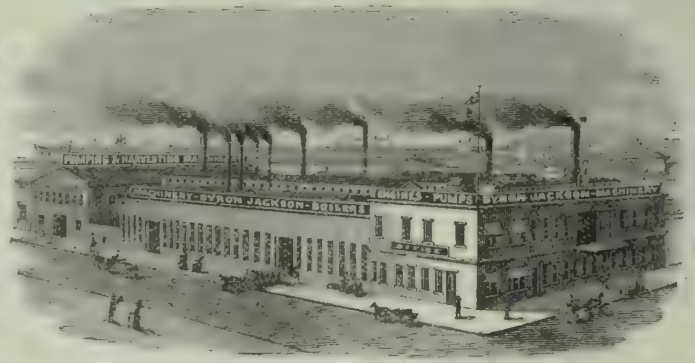
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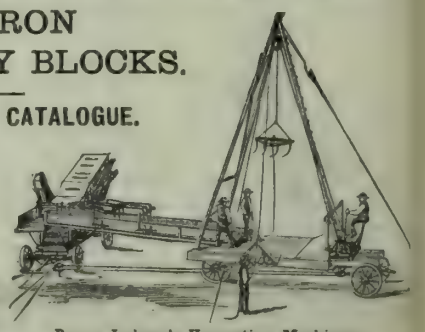
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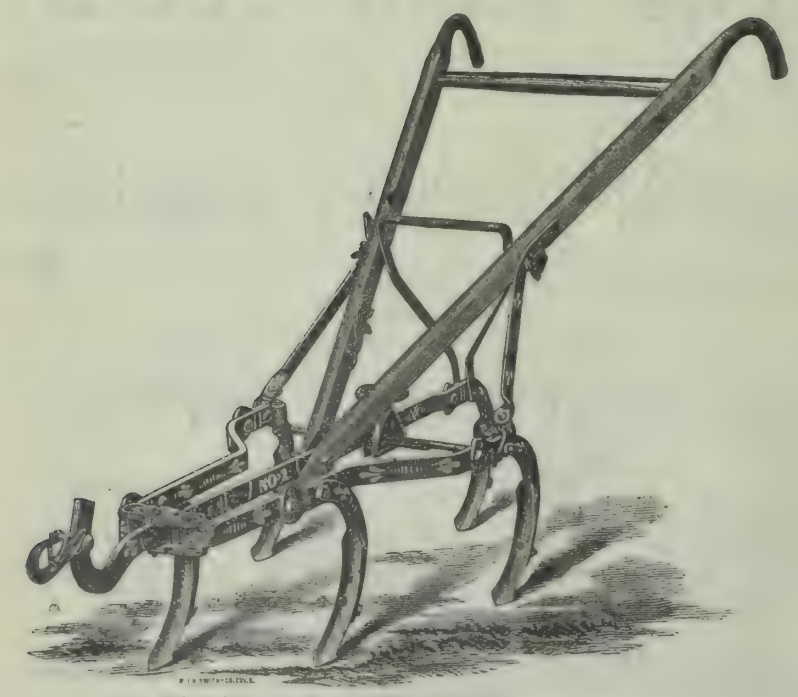
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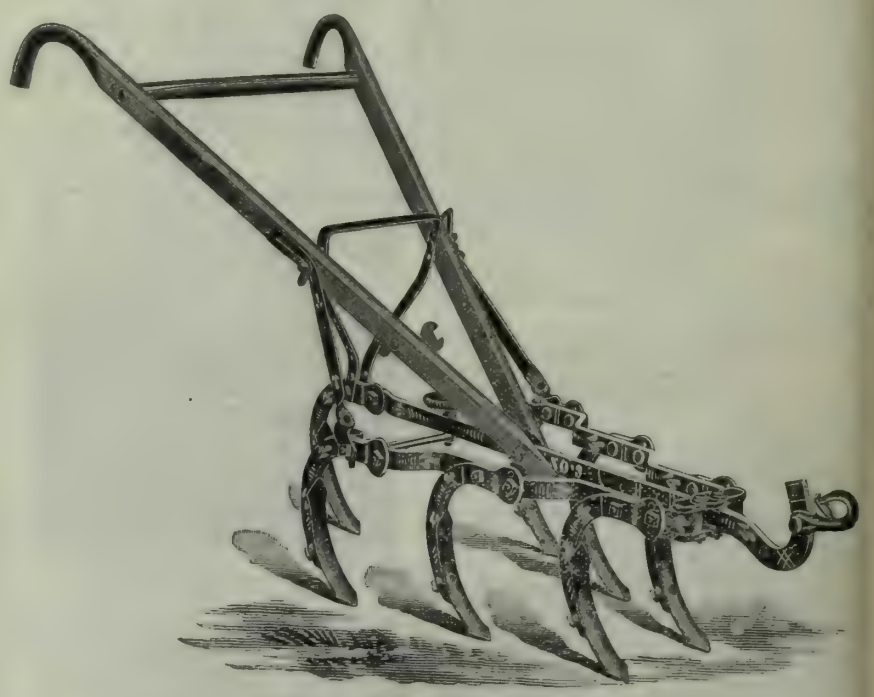
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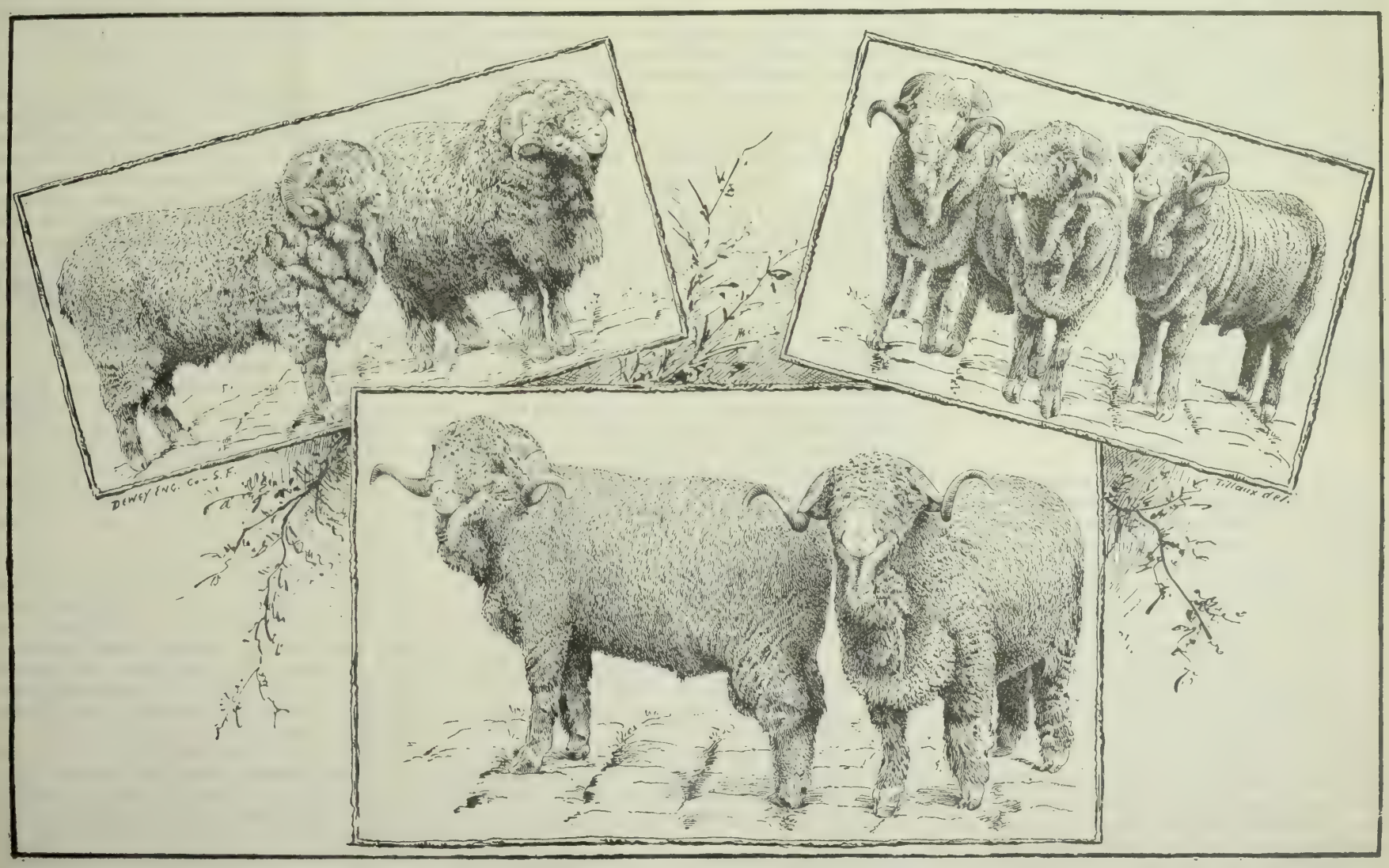
Vol. XLIII. No. 17. SAN FRANCISCO, SATURDAY, APRIL 23. 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

French Merino Sheep in California.

We have often commented upon the position which California is fitted to take, and should take, in the production of the finest specimens of the ovine race. Our climate and pastures favor the attainment of the finest animal form and the rarest qualities. This is as true of sheep as of other kinds of live stock. It has been demonstrated by the experience of our breeders. We have argued that, as there were selections of sheep made in this country for export to Australia, for example, California should have a share in the trade. We believe, as California-bred sheep of the most popular breeds become better known, there will be a profitable export demand not only to the interior States and Territories, where considerable sales have been made for years past, but to the countries around the Pacific which may develop a wool interest.

California has as fine American or improved Spanish Merinos as have the Eastern States, and probably finer French Merinos than can be found elsewhere in this country. And, by the way, we had a talk recently with a prominent sheep grower of Western New York, who has made several trips to Australia with shipments of American Merinos. He remarked that Eastern sheepmen were coming to think that French Merinos could be used to advantage in the Eastern effort to produce the best type of a fine wooled sheep. We told him what was being done in the same direction in this State, and that the French Merino had always been held here in high esteem.

As this is the fact, we are glad to present to our readers, upon this page, portraits from photographs of some French Merinos recently purchased in France for shipment to this State. They were secured by one of the Wilmans Bros., who is now in France, and made his selection personally from the government flocks at Rambouillet. Purchases from the government are, we understand, not common nor easy to effect. We are glad California is to have this great accession to its stock of French Merino blood. On page 376 of this issue, a correspondent of the RURAL gives an account of a visit to the ranch where these sheep will find their new home, and the character of the establishment to which they will be welcomed. Messrs. Wilmans are entitled to much credit for their enterprise in the interest of California sheep-breeding.



FRENCH MERINO SHEEP SELECTED AT RAMBOUILLET FOR SHIPMENT TO CALIFORNIA.

THE FARMERS' INSTITUTE AT LIVERMORE.—The meetings on Friday and Saturday of last week were very satisfactory in point of interest, and some of the sessions were excellent in point of attendance. The Alameda county association has good reason to go forward. There were many essays and discussions, some of which we shall give in early issues of the RURAL. Lectures were given by Prof. E. W. Hilgard of the State University and Dr. Branner of Stanford University, both of whom were received with marks of appreciation. The next Institute in Alameda county will be in September at Niles.

THE HOP LOUSE IN OREGON.—A dispatch from Salem, Oregon, says that William Wells, an extensive hop-grower, who has large hop fields at Buena Vista, says that the genuine hop louse is to be found on the vines again. Nearly every leaf has eight or ten of them.

IRRIGATION BONDS.—Pomona *Progress* reports great interest in the bonds of the irrigation districts. Leading Eastern insurance companies are investigating them as a line of investment. *Progress* says that there are now about $170,000 worth of bonds for sale by nine irrigation districts in Southern California, and about $800,000 more in bonds will be put upon the market before July 1st. San Francisco and Chicago bankers now hold between $700,000 and $800,000 worth of irrigation bonds issued in this region of California. Many secretaries of irrigation districts in Southern California say that they have had an unusual number of requests for information concerning the bonds and their legality from New York and Boston capitalists during the past few months.

MORE INFESTED TREES.—It is reported that about 50,000 peach, plum and apricot trees from Delaware are now in quarantine in Antelope valley, Los Angeles county. The horticultural authorities have declared them infested with "black aphis" and "peach borer," and the owners have appealed to the courts to get the trees out of limbo. The trial is on this week. Los Angeles county is proving the battle-ground upon which many points of importance will be settled.

PORTERVILLE ORANGES.—After the Institute meeting in Fresno, Mr. Lelong visited the Porterville region of Tulare county and other foothill sections of Fresno county. He reports remarkable growth of citrus fruits and absence of frost marks. This is evidenced by lime trees at Porterville laden with fruit. These trees are 20 feet high, and show no sign of damage from frost.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 15 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Half inch (1 square)	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

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Our latest forms go to press Wednesday evening.

Regis'ered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, APRIL 23, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Mowers, Rakes, Etc.—Truman Hooker & Co.
Books—Henry Carey Baird & Co., Philadelphia, Pa.
Live Stock for Sale—Mrs. Mary C. Smith, Redwood City.
Fly-Shuttle Loom—C. W. Newcomb, Davenport, Iowa.
Sickle Grinder—Deere Implement Co.
Irrigating Machinery—S. F. Tool Co.
Mowers—Baker & Hamilton.
Windmills—Challenge Windmill & Feed Mill Co.
Trees, Plants, Seeds, Bulbs—Sherwood Hall Nursery Co.
Situation Wanted—M. S. W.
Annual Flower Plants—Schwarz Bros., Sacramento.
Dairy Produce Wanted—Dairyman's Union.
Berkshire Swine—Sessions & Co., Los Angeles.

☞ *See Advertising Columns.*

The Week.

As we go to press, the greatest floral carnival ever held in California is in progress in Santa Barbara. The telegrams speak of the deep stirring of the community by the exceptional manifestation of devotion to the goddess Flora. Throngs of people have collected from near and far, and the public houses, the streets and the gardens are populous even to crowding. It is festival time almost to the forsaking of ordinary vocations. Everything, from the warships in the channel to the retirement of the padres at the old mission, is thrown open to the gayety of the flower worshipers. It is a great opportunity for relaxation and helpful rejoicing. We hope its influence may be felt in other California towns, and that such flower festivals will multiply.

The event at Santa Barbara reminds us of a different affair which will open in the Mechanics' Pavilion in this city on May 11th and fill the balance of the week. The State Floral Society will then hold the greatest display of its kind ever given on this coast. It will not have the carnival features of the Santa Barbara festival, but will be a high-class flower show, for the express purpose of displaying the higher arts of floriculture, and for rewarding those who excel in them. For months, flowers and plants have been training for this great occasion. It is hoped that the show will draw both exhibitors and visitors from all parts of the State.

The great out-door season of California life is now beginning. Henceforward, hardly a shower will cause one to seek shelter until the fruits of autumn are gathered. It will be a stretch of long, busy days—days which are well worth living.

High Art in Tax-Paying.

The Southern Pacific is a unique sort of a tax payer. It makes its own assessments and then pays such taxes as it sees fit. It also accompanies its donations to the public treasury with an oration upon its own generosity in paying any taxes at all. A notable instance of this behavior is the railroad's astounding sacrifice in the matter of taxes, which was so great that some counties had to close their schools temporarily for lack of funds. It was not considered much of a sacrifice by the people, but then the people in gross prejudice looked so angrily at the pittance paid that they did not hear the oration which accompanied it, and of course they did not know how generous the railroad really was. The same popular misapprehension is, we fear, to be repeated in the matter of railway assessments in irrigation districts. The statement is that the company denies that it is legally bound to pay anything, but as irrigation is rather a good thing, the managers are willing to subscribe something. They consider $2000 a mile all they ought to pay, even if assessable under the law, and on this they are willing to pay. The assessment of 1891 varied in the several districts from $6000 to $17,000 a mile. Inasmuch as it would create a deficiency in the interest account if this year's assessment is not paid in full, the railway will pay this year in full; but they warn the districts not to let it occur again. Hereafter, they will not go above $2000 per mile. The Santa Fe is a little more liberal, and will stand an assessment of $2500 per mile.

This is really an exemplification of a higher art in tax-paying. The poor land owner or shop owner has to stumble up clumsily and hand over what the County Assessor and Board of Equalization think he ought to pay. No matter if his feet are hurt by the gravel in his unmended shoes, he has to pay over his last dime or pull his property out of disgrace afterward through delinquent percentages. That is a coarse art of tax-paying; anybody can do that.

A little higher art of tax-paying is to swear that you haven't any property worth mentioning. This is the skill displayed by the millionaire who lies himself out of the payment. The highest art of all is to boldly deny that the State is entitled to anything, but out of sheer love of the public and hoping it will succeed, to hand in a small percentage of the assessed taxes as a gift to the people. Nothing but a dictatorial corporation has the nerve for such art.

Better Time to Eastern Markets.

During the week the air has been full of rumors of reductions in overland freight rates on California fruits. Some journals have, by a singular mistake, set forth the rates asked for by shippers as the rates the Southern Pacific proposed to secure from the transcontinental association. The mistake is singular because the railway has never yet shown such celerity in granting the petitions of shippers, although in their own way they have made wonderful reductions during the last decade.

Many glowing paragraphs were printed showing what glorious results would accrue to the State from such a reduction in rates as was promised. These bright anticipations were true enough, but the trouble with them was that they were based upon nothing, for the Southern Pacific promptly denied that it proposed to urge any reduction in rates. There is however, a very important change to be made, and that is in time. As the situation seemed somewhat involved and likely to puzzle the fruit growers, we wrote several notes to leading fruit shippers asking their understanding of the prospective arrangements and the effects likely to be produced upon the fruit interests. We acknowledge with thanks the following:

SACRAMENTO, CAL., April 19, 1892.

TO THE EDITOR:—Replying to your favor of April 18th, as to the effect which might be expected to follow a material reduction in the rate of overland freight on green fruits, I have to say that in my opinion the grandest possible results to California would ensue.

In connection with other fruit shippers and parties interested, I have been engaged for some time in the matter of presenting to the railroad companies, here and in the East, the absolute necessity of adopting a better service, especially in the way of making shorter time.

The rate of freight to New York on green fruits is $1.50 per hundred pounds, or $300 per car of 10 tons; to Chicago, it is 1¼ cents per pound, or $250 per car. These rates in themselves are not excessive, although I believe the companies interested will eventually make these rates still lower.

But unfortunately, under the old system, these rates were not available for the reason that the time consumed by the ordinary freight trains was so long that fruit could not be shipped that way except in refrigerator cars, which add very materially to the traffic charge. I understand that recently the Southern Pacific Company has agreed to run a special fast fruit train during the fruit season, at the rates above mentioned, making the time to Ogden from Sacramento in 40 hours.

I am also informed that the roads east of Ogden will make the same proportionate time, with the result that fruit will be landed in Chicago in about 5½ days and in New York in from 8 to 9 days. If this is accomplished, as we have every reason to believe it will be, the question of getting fruit through to the East in proper condition will have been solved, and that is nine-tenths of the battle. In my opinion, California, by reason of its superior advantages as a fruit-producing country, must eventually become the orchard ground of the United States; and with proper encouragement, which we seem now in a fair way to realize through the transportation companies, I have no doubt of the future absolute success of fruit-growing here.

I believe that the changes already announced, as above set forth, will benefit the fruit industry a round million dollars this present season, directly and indirectly, and certainly we all have cause for congratulations. P. E. PLATT
Of W. R. STRONG CO.

This assurance will be received with pleasure by all who now have large amounts of fruit coming forward splendidly under favorable conditions.

The Spring Markets.

General trade the world over is reported lifeless, with no encouraging feature. This condition obtains in the face of a plethora of money at home and abroad. Under the circumstances, it is hardly reasonable to look for any marked movement in the leading products of the farm.

So far, the spring markets have proven a disappointment, for in comparing prices now ruling with those which obtained at this time in last year, we find that there is in nearly all branches an average falling off of from five to ten per cent. This statement refers to the local or San Francisco market, but of course our market is largely controlled by the markets at the East and in Europe.

Cereals with us are very dull, yet prices do not shade off as much as many shrewd large operators appear to expect, in view of a large increase in the acreage seeded to grain. There can be no doubt but the uncertainty regarding our climate has much to do in promoting the present firmness. Yet there are other causes, not the least of which, as in the case of wheat, is the large disengaged tonnage in port and an increasing supply on the way. This supply of tonnage, combined with the light stock of old wheat, gives assurance that no corner in ships can be run successfully so as to create high charters. In barley there is a well-grounded belief that the outturn this year will not be as large as heretofore claimed, owing to crop prospects in the southern part of the State not being of an encouraging character. With only an average crop outturn, and a steadily growing consumption, it looks as if prices for the season of 1892–93 will average about the same as for the season now drawing to a close. It is rather too early to forecast the future for oats, corn or rye. The value of oats is largely controlled by the crop outturn in Oregon and Washington, while corn is governed by the markets in the Central States.

While the wool clip averages better, so far as the condition is concerned, than it did in last year, the prices show a decline of from one to two cents a pound when compared with the opening prices in 1891. Whether there will be an advance later on, is a disputed point. The general opinion among dealers is that owing to this being a presidential election year there will not be that demand for woolen goods which might otherwise obtain. On the other hand, there are many close observers of the times who contend that owing to the very fact of this being a presidential election year, people will generally dress better so as to appear to better advantage while attending political meetings. Other influences on the wool market were noted at length in the RURAL PRESS of April 9th.

Last year's hops are about cleaned up, the few persons who have any on hand can get from 20 to 30 cents a pound for fair to giltedged. For new crop hops contract prices have been steadily advancing until at this writing the range is from 15 to 20 cents a pound. The wide range in prices is due to the locality where the hops are grown and also to the reputation the individual grower has for careful picking, assorting and packing.

In dairy products, the market, as usual at this time of the year, is weak, with sellers forcing sales to close out consignments of poor keeping grades. The general introduction of creameries on this coast is revolutionizing the trade, and until the new conditions become general, it looks as if the market will continue more or less demoralized. The grades of butter and cheese manufactured are far in advance of former seasons, which leaves a poor market for everything below choice.

The fruit season will open early this year, which will give to California orchardists a decided advantage in marketing their surplus at the East, where the season will be late. While it is too early to predict prices, yet it looks as if much better values will rule than obtained in 1891, but of course this will depend largely on the size and flavor of the fruits. The days for small-sized and also for poor flavored fruits are numbered with the past, so far as marketing them at a profit is concerned. There are conflicting reports regarding crop prospects, but even with only an average yield to the tree, there will be a large increase in the aggregate outturn, owing to so many more trees coming into bearing. This applies to each kind of fruit cultivated.

More attention has been given to the cultivation of vegetables, looking to the supplying of Eastern markets with early garden stuff from this coast. This industry has grown into prominence, and promises to enlarge as transportation facilities cheapen and improve. The crop of potatoes this year is the largest on record, while the quality will, it is said, average better than it did last year. The crops of other root and also of plant vegetables, it is claimed, will be larger this year than they were in 1891.

RETURNED TO HIS POST.—Lieut. Finley has returned to the charge of the Pacific Coast Division of the Weather Service. Mr. Kerkham made a good winter of it, and all we need from Mr. Finley is a few good showers to fill out the grain.

The State Press.

San Jose *Herald:* "The proper way to deal with the liquor traffic is to lay aside all fanaticism and consider it solely as it affects the interests of the community."

Escondido *Times:* "It is with satisfaction we note the growing interest among the farmers in road improvements. In nearly every neighborhood a spirit of rivalry to have the best grad d roads has sprung up, not only among the road overseers but the people."

Tulare *Citizen:* "Our past experience teaches us that when a corporation becomes the custodian of large sums of Government money, much of it is used for corrupt purposes. Often large amounts are used to control legislation, changing the laws that were to govern its use, and changing a loan to virtually a gift. If a corporation owned the canal, it would quickly pool with the railroad magnates, and competition would exist only in name."

Vacaville *Enterprise:* "If there is one reform more than another needed by California, it is a system of registration of titles such as is attained under what is known as the Torry system. Under its provisions the owner of real estate is permitted to prove his evidences of title to land, and if the properly constituted authorities find them to be complete, that fact is certified by registration, which is a legal guarantee of its perfection which cannot be disputed."

Fresno *Republican:* "The struggle between decency and boodleism in San Francisco is becoming sensational. It has been a very interesting contest ever since the impaneling of the illegal Wallace jury, which was a volcano under the mountain of corruption, and was smoth red just in time to prevent an eruption that would have been a holy terror to the army which fattens upon the spoils of official degradation and crime, the shame of municipality and State.

San Jose *Herald:* "It is strange that the Treasury Department cannot see any way to protect the country from an influx of coolies after the ninth day of May, when, it is said, the present exclusion laws expire. The Treasury Department has never made much difficulty about evading and nullifying the law in favor of the coolies while it was in existence, but the moment it expires, or, rather, the moment it can be made to appear that it expires, the officials of that Department fold their hands complacently and declare that the whole Pacific Coast may be overrun with coolies for aught they can do to prevent it. In a word, they always construe the situation in favor of the coolies and against the people of the Pacific Coast. The Democratic House of Representatives has passed a bill that, if honestly enforced, will effectually exclude all coolies, and it is only for the Republican Senate to pass it and for the Republican President to approve it, and coolie immigration will be at an end."

Park *Record:* Just why a text book, written by a recognized authority this year should become worthless in 12 months or two years, and meet with the disapproval of many State and Territorial teachers organizations, and especially of a majority of the pedagogues in rural districts, is found in the fact that the large publishing houses that make a specialty of text books, offer commissions to parties of influence to inaugurate a demand for a change. The wires are set in motion, the village schoolmaster is flattered that his opinion is asked and regarded with much interest, and almost unconsciously finds himself supporting a movement that he knows is uncalled for and bound to work a hardship on nine out of ten patrons of the schools. The men of influence do the scheming and reap the profit, while the large mass of honest teachers unconsciously furnish the power to perpetuate the imposition—just as voters unthinkingly boost wily politicians into lucrative positions.

Irrigated and Irrigable Lands in the U. S.

The telegraph brings an outline of a report just filed at Washington by Special Agent R. J. Hinton, who has, for the last few years, been giving his time to irrigation inquiries. He is credited with showing that in the last seven years the United States has increased its area of irrigable land by 3,500,000 acres. The amount of land under "ditch" is reported for 1891 to be of an estimated area of 18,286,207 acres. The largest proportion of this will be made available for use in the next year, and by the time of the opening of the World's Fair, the United States may anticipate the cultivation by means of irrigation of at least 17,000,000 acres of land that within the last decade has been declared by learned authority wholly irreclaimable. Under projected works, or partially constructed, nearly 5,000,000 acres will be added, making in all, as now reclaimed or in process of reclamation, not less than 25,000,000 acres.

No wonder such figures appall the Eastern producer and incite him to fear starvation because of the vast prospective food to be produced from Western lands. He fears ruin to him because of the cheapness with which food products can be secured from cheap, new and fertile Western lands. But such ruin will not come to him nor to any one. The improvement and development of the West are but the surety of Eastern prosperity, and not a menace to it. The development of the West is but opening the way for the assured growth of the country, and if the present Eastern farmer does not feel its direct benefits, his sons will have reason to rejoice that liberal and broad views prevailed in this decade. All that has to be assured is that the great Government enterprises are honestly and unselfishly carried out, and, to secure this, Eastern watchfulness and conservatism will be valuable agencies.

The Presidential Outlook.

If Mr. Blaine had any idea that he was doing a shrewd thing three months ago in putting aside the crown, he was for once woefully wrong. The public has taken him at his word, or rather has accepted something less than his word, and he is now hardly looked upon as a presidential possibility. He could perhaps carry the convention "with a whoop," but it would be considered a trick by the better sort of voters, and would put him and his party at a disadvantage in the campaign. Mr. Blaine remains the idol of the Republican party, but he seems finally and effectually out of the race; and since Mr. Harrison never had any other formidable competitor, the way is broad and open before him. If not nominated by acclamation, he will be, in all likelihood, by a vote practically unanimous; and he will go before the country backed by every consideration that assisted his first election, and additionally supported by the record of an administration notably clean and efficient.

The Democratic situation has been almost revolutionized within the past few weeks. Mr. Cleveland, whose prospects a little while back seemed hopeless, is again the foremost man, and, as matters now stand, the probable nominee. The Hill boom died almost before fully born, and it is debatable if its supporters can muster negative force enough to prevent their dearest enemy from getting the nominating votes of New York. The failure of the Democratic majority in Congress to accomplish anything on the silver question further than to demonstrate the discord of Democratic sentiment on that question, makes the party hopeless of success with silver as an issue. They must have New York, and New York will demand an antisilver man—hence Cleveland. Furthermore, it is beginning to dawn on the party leaders that Cleveland is far and away their strongest man before the country. They do not love Cleveland so much as they love success, and if he is nominated, it will be a signal triumph of the Democratic public over the Democratic leaders.

The truth is that Cleveland is not liked by the leaders of his party. Gorman, Brice and others, would like a more pliable and politic man, one who could be made to speak at proper times and hold his tongue at proper times, and who in the event of election could be depended upon to turn over the patronage of the Government to those who could "put it to the best use." On the other hand there is natural and undisguised admiration on the part of the public, Republican as well as Democratic, of a man who upon occasion is not afraid to speak out his opinions in plain terms. Cleveland's famous antisilver letter actually gained him personal admirers, even among silver men, for all mankind takes off its hat to Courage whenever and wherever it may be displayed. It is true that in his own party as well as out of it there are many who cannot reconcile all of Mr. Cleveland's conduct with some of his principles, but on the whole he has grown prodigiously in public consideration. Next to Mr. Blaine he is our most popular man of national affairs, and if the Democrats are wise enough to play their highest card, he will be their candidate.

It is a very evident, and, as we view it, a very happy sign of the times that the fate of the coming national campaign will rest with the independent voter. There are many evidences that this is true. Less and less, autocratic party authority is respected, and more and more the better sort of voters are doing their own thinking and choosing for themselves, quite independent of party conventions. Thanks to the despised Mugwump, who led the way to this new order of things, it is no longer heresy to speak plainly against wrongs within one's party, or upon occasion to vote openly against its nominees. When so conspicuous a champion of party regularity, and of the rule of expedients over principles, as Mr. J. C. Clarkson dares openly censure an administration put into power by his party, and of which he is himself a servant, surely plain people who are not politicians, and whose interest in politics simply reflect their interest in the Government, may speak and act for themselves without rebuke. More and more, men of the better and wiser sort are coming to stand upon the rule of supporting party when party is right; and therein dwells the best hope of American politics.

THE EARTHQUAKE.—A tremblor of unusual severity visited a limited area of the State at a few minutes before three o'clock on Tuesday morning. The region of greatest disturbance was on the west side of the Sacramento valley in the counties of Solano and Yolo, and the shock was felt over a region about 100 miles in diameter, its southern arc including San Francisco and the suburban towns around the bay. In the towns of Vacaville, Dixon and Winters and their vicinities there was great injury done to town buildings and farm residences. Many constructed of brick and stone are reported as wrecked and beyond repair. Frame building were only injured by being moved from their foundations or crushed by falling brick walls. Fortunately, there were no lives lost, even in the wrecked brick buildings, and most marvelous escapes from falling bricks and other debris are reported. Losses will aggregate thousands of dollars; possibly a hundred thousand or more. One lesson of the affair seems to teach preference for frame structures, or at least an avoidance of the insecure brick structures which are too frequently cheaply run up in country towns.

The New Chinese Bill.

It is a very serious misfortune when questions of public policy become so involved in politics as to tempt those who make the laws to aim at pleasing voters rather than at economic ends. Unfortunately the Chinese question has gotten into thes shape. Apparently the effort of each member of Congress who addresses himself to this matter is to devise a measure appealing more strongly to local and race prejudices than any that have preceded him, with a view to tickling some particular "element" whose votes he may be in need of next election. All the broader relationships of the question, as connected with national good faith, humanity, commerce and the other interests of the country, are disregarded utterly. The latest effort in Chinese legislation follows the rule of going one step further than anything that has come before it; so that we now have a proposition from Representative Geary of this State to positively close the door against Chinese of all classes and kinds, save and alone diplomatic agents and their immediate servants. It is, perhaps, not surprising that a cheap, small-bore demagogue like Mr. Geary should originate and urge such a measure, but strangely enough this extreme and absurd bill has been passed by a large vote in the House of Representatives, and has gone to the Senate for consideration by that body.

The absurdity of the measure lies in the fact that its inevitable effect, if it shall become a law, will be the withdrawal of diplomatic relations by the Chinese Government, the expulsion of all American merchants and missionaries from China, and the curtailment or destruction of our Asiatic trade or the turning over of the trade of San Francisco to British Columbia. These were reasons enough, surely, why the bill should not have passed the House, and they remain reasons enough why it should not pass the Senate. To make this bill a law would be in effect to close our ports to a trade which is vastly profitable to us and which is essential to our supremacy in the commerce of the Pacific ocean. We would be doing over again by legal enactment the vast folly done centuries ago by the Chinese Government, with brick and stone, on their western border.

In opposing this extreme and manifestly absurd measure, whose aim is simply to gain political favor through unreasoning popular prejudice, we do not wish to be misunderstood as advocating unrestricted Chinese immigration. The objections to the Chinese as an element of population are rational enough. They have no affinities with our people, no capacity for assimilation of our civilization. There is no promise in them of becoming useful American citizens, and their presence here is in very many ways harmful to us. If they do not positively cheapen labor, they serve to put it in contempt, and the results of their industry do not remain to upbuild and support the country. The Chinese build no churches, they organize no schools, the activity of their lives is a drain upon the country rather than a help to it. To bar out the Chinese as undesirable is just as legitimate but not one whit more important than to bar out paupers from England, mafia from Italy, socialists from Germany, communists from France, nihilists from Russia, and scalawags from everywhere. The right to close our doors against such races or classes as may not be desirable is simply the right of self-protection and self-preservation which belongs not only to individuals but to nations.

We approve most heartily the spirit of the present law, which seeks to accomplish the prohibition of miscellaneous Chinese immigration. If it has failed in some limited respects of proper enforcement, it is subject to amendment; but to throw it over entirely and substitute for it a measure which means absolute prohibition not only to the cooley but to the merchant, and which will involve correspondingly severe retaliatory laws on the part of the Chinese, barring out our merchants and our missionaries and closing Chinese ports against our ships of commerce, is absurdity run mad. It cannot be that the United States Senate, which, in spite of its deteriorated character, at least retains some measure of rational conservatism, will follow the course of the House and pass this utterly foolish measure. Business prudence and common sense are united in disapproval and condemnation of it. If it shall successfully run the gantlet and become a law, it will be the most serious triumph yet of demagogic politics in American affairs.

French Merino Sheep.

SAN FRANCISCO.

TO THE EDITOR:—While visiting in the San Joaquin valley last week, we had the pleasure of inspecting the "Woodside Stock Farm," the home of the French Merino sheep. This magnificent farm borders on the San Joaquin river three miles north of the town of Newman, in Stanislaus county, and consists of 1000 acres of river bottom, all in luxuriant alfalfa, and, in conjunction with several thousand acres of hill range, rank with the nutritious herbage of the grasses indigenous to our State, comprise within themselves a small principality.

The bands of sheep on the ranch are all the descendants of the celebrated band of 161 French Merino sheep imported between the years 1847 and 1853 by Mr. A. L. Bingham of Cornwall, Vermont, at a cost of $37,500. These sheep were the choicest selection from the flocks of M. Cughnot and M. Gilbert, celebrated breeders in France. Meeting the eye of Sam Brannan, the Ralston of his day in San Francisco, and without whose name a history of the State would be incomplete, they were brought to California, and afterward sold to A. G. Stonesifer of Hills Ferry (which town has since been rechristened Newman), and here they have ever since pursued the even tenor of their way, undisturbed, except when buyers came from near and distant points, carrying back to their homes some of the young bucks, to raise the standard of their own flocks.

In all these years the pristine purity of the breed has been maintained. The only times when new individuals crossed the portals of the ranch was when a personal visit to France has resulted in bringing out some of the choicest of the breed to mingle their blood with their relatives on this far distant shore. One of the present proprietors is at this writing in France, making selections to this end.

In 1880 Mr. Stonesifer, feeling his years bear heavily, retired from active life, and, building himself a magnificent country house in the suburbs of Newman, retired to take his well earned rest, and sold his band, complete and entire, to Messrs. Wilmans Bros., the present proprietors.

On entering the farm, one is struck with the substantial character of the improvements. Nothing for show, everything for use. There are no petted bucks, pampered and combed preparatory to being put on exhibition, that a leaden medal may be handed to their owner as testimony that they had been housed, blanketed and pampered to improve their appearance and thereby take away the natural hardiness of the animals; but all run out the whole year round, without protection of any kind at any time, and when called upon to take their place in the world as individuals, they are thoroughly inured to all the vicissitudes they may be expected to meet.

The bucks weigh from 175 to 225 pounds and clip from 35 to 45 pounds of wool. In this connection, an excerpt from the first annual bulletin of the Montana Wool Growers' Association is not out of place, in which Mr. E. Beach states as follows:

"In November, 1880, I bought of Stonesifer 700 ewes and 15 rams of this thoroughbred French stock and came with them to Montana. A careful research in regard to these sheep shows that these breeders have exercised the greatest care to keep the blood pure, and have allowed no foreign blood to be introduced, hence making my sheep the pure and direct descendants of the French importations of Bingham."

Mr. Beach goes on further to say:

My own flock of thoroughbred French Merinos has now been run in Montana for three years. They have run upon the range winter and summer and received practically the same treatment given to my common sheep. In this time and under this treatment they have done well and refute the theory that there are no thoroughbred Merino sheep that will stand the treatment given to common sheep upon the range.

Year after year enterprising breeders of Utah, Montana, Washington, Oregon, Arizona, New Mexico and Texas have competed with our own people for the young bucks from the Woodside farm, and it has been no unusual circumstance that intending buyers have been obliged to await another season. Meanwhile Mr. J. M. Wilmans, the senior partner in the enterprise, was showing us the many points of interest about the farm, at the same time giving us the above information in a chatty way, and at the conclusion we reluctantly said good-bye as we turned our horses' heads toward Newman to take the train, but well pleased to have had an opportunity of getting an insight into this important branch of stock-raising in California, namely, the breeding of thoroughbred French Merino sheep. VISITOR.

Oregon Weather and Crops.

B. S. Pague of the Oregon State Weather Service issues, under date of April 12th, his first weekly crop weather report of the season of 1892. This is the fourth year that these reports have been issued in Oregon. That they have met with popular favor is shown by the interest manifested in them by the general public. In the past seasons there have been a good corps of correspondents, and these have been increased in numbers until now there is not a county that is not represented by correspondents.

THE PAST WINTER.—During October, the rains were well distributed and about the average amount. During November and December, the rains were heavy and general throughout the State, there being an absence of the usual amount of sunshine January, February and up to March 20th, the rains were light, sufficient, however, to keep the soil in good condition. There was an absence of any heavy snowfall east of the Cascade mountains, while to the west there were few days that the temperature was below the freezing point. In Eastern Oregon, there was an entire absence of any severe cold weather, a temperature of zero occurring but a few times in the more elevated regions.

There was not the usual acreage of fall-sown wheat put in, owing to the heavy November and December rainfall, but that which was sown did remarkably well. Plowing and seeding were pushed to their utmost during January, February and the forepart of March, so that now the acreage of cereals is fully up to the average, and it is all reported to be in first-class condition. A more favorable winter for the stock has seldom been experienced. There is no loss reported, the grass and feed were plentiful, and the stock all came through the winter in excellent condition. The growing season of 1892 opens most favorably for a bountiful harvest, even surpassing the wonderful yields and products of 1891. It should, however, be borne in mind that the success of the cereal crop in Eastern and Southern Oregon, especially, depends more upon the distribution and amount of rainfall in the months of May and June, and the temperature conditions in those months, than the conditions of the soil and prospects at the present time.

WESTERN OREGON CROPS.—Cereals are all in good condition, though more growth would obtain if there should be more sunshine, which has been very deficient. The rainy weather stopped, almost entirely, plowing and seeding. The reports indicate excellent prospects for a large acreage and the present conditions to be first-class for all the cereals.

The peach, apricot, some varieties of prunes, pears and cherries are generally in full bloom, and so far are in good condition, though the weather for the past week has been unfavorable. The present weather conditions, if continued, will seriously injure the prospective crop. Less rain, more sunshine and warmer weather are needed to protect and develop the fruit buds. The smaller fruits and berries are developing nicely.

The hopmen are busily engaged in working their yards preparing for the coming crop. The acreage is being increased in most of the counties.

The weather has not been favorable to the lambing season, though the losses are much less than usual.

Warmth and sunshine during the coming week will materially benefit all crops and products.

EASTERN OREGON CROPS.—The weather has been unfavorable to the growth of all vegetation, though no damage has been done save in a very few exposed places. The frosts of March 27th, 28th and 29th nipped the more advanced and tender vegetation.

Plowing and seeding are nearly done, and the acreage is somewhat larger than last year. The soil is in first-class condition, the wheat has a good stand, and the prospects are excellent.

Peaches, apricots, almonds and apples are in full bloom except in the interior. The fruit prospects are, so far, very good.

Sheep shearing is being pushed. In some sections it has been finished. An extra good clip and staple have been secured. The weather is too cold for the newly sheared sheep. Lambing is now in progress.

The general prospects for cereals, fruit and stock are very good—much better than usual at this period of the year.

PICNICS for April 30th are Dixon, Elk Grove and Merced. Some of these dates have been changed since your list was published in RURAL,

E. W. DAVIS, W. M. S. G. of Cal.

Santa Rosa, April 18th.

The Prison Grain-Bag Question.

A Presentation of the Farmers' Side of the Matter by Mr. C. P. Berry of Yolo Co.

The following letter, written by Mr. C. P. Berry of Woodland to the State Prison directors, concerning the question of prison grain bags, their price and the general policy of their manufacture by prison labor, has been furnished us for publication. We print it gladly, because it embodies briefly and plainly the principles upon which the jute industry was organized at the State prison, and upon which that industry originally found support among farmers and others throughout the State. We commend the points set forth in Mr. Berry's letter not only to prison directors to whom the letter is directed, but to all the people of California.

WHEATLAND, CAL., April 14, 1892.

To the Prison Directors, San Quentin, Cal.—GENTLEMEN: As a member of a committee appointed by the State Grange of California to confer with you in regard to the price and distribution of grain bags for the season of 1892, finding it impossible to attend your meeting on the 9th inst., I respectfully offer the following suggestions for your consideration:

1st. I believe the maximum number of bags sold to any one farmer should not be more than 3000, and that no bags should be sold to any person other than the actual grain grower, for his own use. I believe further that the price of bags should be determined by the actual cost of production, with an addition of, say, one cent per bag.

I believe the policy of selling bags at the market price, unless the market price be no more than from 10 to 20 per cent above the cost of production, is wrong.

1st. Because I believe the said percentage is a fair and equitable profit, and as great as consumers should be compelled to pay. All institutions, and especially those supported by the State, should be run upon a basis of justice and equity.

I believe the policy of selling prison bags at the market price, regardless of cost, often permits the market price to be fixed by rings and combines to the detriment of consumers, and when it is understood to be the policy that the State will change its price from time to time to correspond to the so-called market price, fixed by the bag rings or combines, it becomes a party to the wrong and renders it easier for any combination to fix unjust prices, because they will require less capital to accomplish their purpose.

The State should fix the market price of bags in so far as her limited production will permit, and I believe it should be the policy of the State to so increase the output of bags as to be able to fix and hold the price of bags at a reasonable and just figure.

The argument that the manufacture of grain bags is the only labor to which the prisoners can be put that will give profit to the State and not come directly in competition with free labor, and that hence the State is justified in taking advantage of the market, or perhaps aid in "bulling" the market and making as great a profit as she can, is not a sound one. It is easily seen that the State could take control of the market by increasing the output of bags sufficiently, and thus be in position to fix the price. Were it to do so, and then demand excessive figures (all the traffic will bear, or more properly speaking all the farmers could pay), we are satisfied that no honest man would approve of such an action.

If, therefore, having control of the market, the State would not be justified in fixing excessive prices, certainly she is not justified in pursuing the policy that will aid others to take advantage of the demand caused by large crops or otherwise, and fixing extortionate prices for bags, and that without any regard to their cost, or the ability of consumers to pay. It has been the case in this State when the supply of bags was largely in excess of the demand, by combinations the surplus was withdrawn from the market, and the remainder sold at exorbitant prices.

Again, the expense of maintaining all State institutions should be paid from the taxes collected from all the people, and it is doubtful if any policy is justifiable that will cast the burden of support of any State institution upon one class of consumers, which would be the case if the State prison was made self-sustaining by the manufacture of bags, sold at excessive prices.

At present there are but a small number of prisoners engaged in the jute mills; it is possible that were all the prison labor engaged in the manufacture of jute bags, the prison might be made to pay something of its running expenses. To this the consumers would not object, provided sacks were placed at cost, with the said 10 to 20 per cent added.

However, in behalf of the producers I enter my protest against the policy of attempting to make large and excessive profits by changing the price of bags from time to time to correspond with the prices fixed by dealers who resort to every device and combination possible to increase the prices and add to their profits. I think the only true and just policy for the State to pursue in the price and distribution of bags is to furnish them to farmers only, in limited quantities, and at a small percentage above cost, and thus, as far as possible, control the price of grain bags in the State.

I think further that, as soon as possible, the State should prepare to employ all the prison labor in the manufacture of jute. She would then be in a position to control prices of bags and to hold them at reasonable figures, and do much toward making the prison self-sustaining. Respectfully yours,

C. P. BERRY.

VITICULTURAL COMMISSIONERS.—Governor Markham has appointed Viticultural Commissioners as follows: John T. Doyle of San Francisco, commissioner at large (reappointed); Allen Towle of Placer county, commissioner for the El Dorado District, vice George G. Blanchard, deceased; Geo. West for San Joaquin District (reappointed); E. C. Bichowsky of San Gabriel, Los Angeles county, to succeed L. J. Rose, term expired; Isaac de Turk for the Sonoma District.

QUERIES AND REPLIES.

Other Benefits from the Coyote Bounty.

VALLEY CENTER, San Diego Co.

TO THE EDITOR:—In a late issue of the PRESS, you invite comment on the coyote scalp law by those concerned. In response, I would say that I am a rancher and live somewhat remote from market. We keep cattle, horses, etc. on our ranch. (I have no sheep.) I endeavor to raise poultry to consume the grain we grow. Previous to the Scalp Act and the diminution of the coyotes, our loss was about 50 cents per day from the ravages of the coyotes on the poultry. By a liberal use of poisons, guns and a little vigilance, we can keep the rabbits and squirrels under control, but coyotes were always out of our range. We have never killed any of the varmints since the act was passed, consequently are not pecuniarily benefited by the act, only so far as it saves us the loss of so much poultry. Two years ago, during a busy time in harvest, we lost 13 fine young Pekin ducks at one time within 40 steps of the house with two good watchdogs just at hand.

I have resided in these rugged mountains for 13 years. In that time, we have killed scores and scores of foxes and wildcats, but in all that time have only killed one coyote.

As one interested farmer and tax payer, I am highly in favor of the Coyote Scalp bounty. I would suggest that our next legislature increase the scalp bounty and reduce by $200,000 the World's Fair appropriation. These are my and my neighbor's sentiments.

There is a large stock ranch near us where hunting is prohibited, and the coyotes stay and breed there. W. F. JAMES.

Canaigre Weed Roots Wanted.

SAN DIEGO, April 8, 1892.

TO THE EDITOR:—Among the weeds found in California is a coarse species of dock, known to Mexicans as *Canaigre*, botanically known as *Rumex hymenosepalus*. The plant has large tuberous roots, most common in rich bottom land. With some Mexicans the leaves are used as a substitute for pie plant in making pies. The root is credited with curative properties, owing its repute to the amount of tannin contained. The writer would be glad to learn concerning the distribution of this plant in California or elsewhere. Any one in a position to obtain a large quantity of the roots (a ton or more) is invited to correspond, with a view to learning if it can be turned to some useful account, instead of remaining a weed.

C. R. ORCUTT.

To Stop a Leaky Cistern.

LINDEN, CAL., April 12, 1892.

TO THE EDITOR:—In reply to Mr. S. H. Herring, who asks how to stop the seeping of water through a stone and cement tank, will say: I built a tank of brick and cement which seemed water-tight. After holding 5000 gallons for a week it began to seep a little, and the next day bursted a portion of the bottom out. I then removed more of the bottom, replaced the washed out foundation with a concrete made of broken stones and cement, plastered the bottom with cement, then painted the inside of tank with two coats of white rubber paint (for outside work), and have had no seepage since—nearly a year. If two coats of paint did not seem sufficient I would put on more.

J. M. GILLIS.

The Sour Orange.

BLOCKSBURG, Humboldt Co.

TO THE EDITOR:—Will the gentleman who wrote for your paper, two weeks ago, of sour oranges tell me if it is identical with the Seville orange of Europe, which is only used for marmalade or wine and is a dark, thick, rough-skinned and bitter fruit, and where to buy the trees? Will some of your readers tell me how to raise sea kale?—MRS. E. HOPE.

The scur orange is identical with the orange of Seville. Trees can be had, probably, from any nurseryman advertising citrus trees.

Growers of sea kale will please reply.

THE OLIVE PRODUCT.—It is estimated that Southern California altogether produced $65,000 worth of olive oil and pickled fruit last November. To-day not $1000 worth of this oil or pickles remains in the market. The Eastern demand has been enormous. There are many orders for California olive oil and pickles from Chicago and New York wholesale grocers already made for the year's product.—Pomona Progress.

Horticulture.

Irrigated Strawberries in Colorado.

Our growers of small fruits will be interested to compare their methods with those successfully followed by another irrigated State. At a Farmers' Institute meeting at Brighton, Colorado, R. L. Edwards read an essay from which we give the following extracts:

Knowing the strawberry to be an extraordinary grass feeder and a great drinker, I always try to prepare my land in the fall for spring planting, and in the spring for autumn planting, by applying from 30 to 40 loads of manure to the acre, plow it under, harrow and cross harrow, and make the ground as mellow as I would for a crop of seed onions. I mark out for the rows 40 inches from row to row; plants are set about 15 inches in rows, and have crowns just level with surface. Use nothing but your hands to plant with, spread roots naturally and make soil firm around plants; better walk on and put your foot on each plant after planting.

Irrigate immediately after planting if soil is dry, keep plants moist during planting—in short, never expose the roots one moment, when dry, to the parching winds and the sun. Ninety-nine per cent of my plants always grow. Hoe and cultivate frequently during the summer, irrigate before the land gets dry, do not turn water on very rapidly and avoid washing, turn off water soon as wet enough and thus avoid souring the land. When runners appear, cut them off; when others appear, move them around where you want them and put a little soil on them. Try and have plants growing six inches from each other in matted row 16 or 18 inches wide; this makes an ideal row. Cultivate and hoe out all surplus runners and plants if you do not wish them for plants.

I am in favor of fall planting if I have plenty of water to irrigate after planting. Plant before the first of October; before first of September is better. Always let your plants go into winter quarters with plenty of moisture. As soon as the land is frozen, cover with light straw manure; if fall-planted, cover before any frost with a light coat, and add more if you wish afterward. After my last cultivation, I leave a good mark in center between rows. When I uncover in spring, there is a place to put my long manure. When I irrigate, the water runs under this covering, washes out the element in the manure, and makes available plant food, of which plants soon take advantage.

After crop is gathered, I run mowing machine as high as I can and cut off tops of leaves and the weeds. The latter are sure to grow during the rush of picking season. Rake up and throw away the rubbish; cultivate with two horses through the centers or the paths which are made very solid by the pickers walking over them; then apply a good coat of well rotted manure; spread it all over the ground, harrow and cross harrow with weight on harrows, flood the water all over the land, let it soak for two days, when dry enough cultivate often, use as little water as possible, and thus avoid washing out the element as little as possible.

Irrigate often and keep surface moist; object, I am now encouraging the new fibrous roots to grow, which are now just starting from the upper part of the crown. Just below the surface of the ground, the under part of the crown will soon die if attended to rightly. In the meantime, my new or renewed plants make very rapid growth, make few or no runners, but are rapidly making fruit crowns for the next year's crop. I let my strawberries rest for two or three weeks after fruiting, for there is danger of forcing the plants too fast and causing them to bloom. Should it be a mild fall, all kinds may not do this; some may. I have had Captain Jack and the Favorite to bloom very thickly in October, and I consider that the following crop was somewhat less in consequence of it. To avoid fall blooming, I now start the fall cultivation the first of August instead of the middle of July, as I have done.

HOW TO MARKET BERRIES.

Do not use old boxes and crates for berries, for there is stain on the cases caused by the juice of berries that have been shipped long distances. For months previous to the ripening of Colorado berries, you can buy those cases for one-third the price of new ones; but the sharp eye of the purchaser will object to them. Mold is present in the wood on their arrival from distant points, and sure to be present as soon as fresh fruit is put in them. I have often seen berries, 24 hours from picking, commence to mold when such cases contain them. It must cause dissatisfaction to purchasers, as berries are very susceptible to injury and sensible to the surroundings, and old crates and boxes are a pest house for their reception. By all means, always use new and attractive cases.

I will state another objection I have against our retail dealers. They scatter the fruit out of the boxes on their counters, scoop them into a quart measure, and throw them into paper bags for their customers. By the time the bag reaches the home of the consumer, the berries are a mass of mush. After berries are treated in this way, the consumption to a great extent is curtailed, the appetite decreases, the good housewife becomes disgusted, and she wants no more strawberries in the house. She stops buying them, and the market becomes glutted. Such is the case with our market. In Denver, consumers are disgusted with using a berry the color of a strawberry, but they do not deserve the name. Frequently, last summer, I tasted those berries, some of which were shipped from Florida, and with my eyes shut I would imagine I was eating a berry Edison speaks of manufacturing out of New Jersey soil. Edison says they lack fiber, but I thought they were deficient in every element they ought to have but color.

It is pertinent for our Colorado strawberry growers to put in practice and produce berries superior in quality, tempting in color and uniformly large. Grade your berries; throw out all damaged and small berries, if there are any. Use nothing but attractive boxes and crates with your name and location on each. Pick your berries with a portion of the stem left on them. Berries appear more attractive and keep better when picked this way. If to be shipped, pick them a little under-ripe but fully colored. Jesse and Warfield No. 2 require picking every day to obtain best results. If the above suggestions are complied with, there is very little fear that the Denver market will be glutted with Colorado strawberries. To keep tally with 25 or more pickers, I found it necessary to have cards printed—three kinds, three colors; one for one box, another for five boxes. When pickers have a dollar's worth, they return them for a dollar card with my name endorsed on the back. There was no mistake, and it gave good satisfaction. Before closing my remarks, let me again impress on the minds of all the Colorado strawberry producers: Grow them for quality, grow them aiming for large berries, grow them attractive in color, grade them, and put your fruit in attractive cases before offering for sale.

The Olive in the Interior.

Extracts from an essay by George C. Roeding at Fresno Farmers' Institute.

Some contend that the sea breeze is an essential factor for the olive. This is a mistaken idea. The olive is grown in Smyrna 70 and 80 miles inland. It also produces large crops of fruit in soils where other fruits would be a failure. The olive is not a success on heavy, wet land.

Most of us, both raisin and fruit growers, know by sad experience, how important a part labor plays in profitable fruit-growing here, and especially is this brought to our attention during the picking season when labor is at a premium. How to overcome this difficulty has had the careful consideration of many fruit growers, as the high wages demanded and received by laborers, and especially the Chinese, is entirely out of proportion to their real value.

I think a simple solution to that question will be found in a greater diversity of crops, so that as soon as one has been handled and disposed of, another will follow, and thus employment will be given to men for more months in the year, with the result that wages will not, during the fruit season, be as high as in past years.

The olive ripens when all other crops have been gathered, some varieties commencing to ripen with us November 1st and continuing until January 1st, thus giving ample time to gather the crop, providing you will plant varieties in accordance with their time of ripening. Labor at this season of the year is easily obtained at much lower rates, and furthermore, the fruit can hang on the tree several weeks without being damaged; rains are a benefit, are actually required; the trees gather increased vigor in the fall, and the fruit fills out and ripens much more readily than it otherwise would.

True, the olive does not come into bearing as soon as other trees, but taking into consideration the difference between the profits of an olive orchard and that of some other variety of fruit on the same soil, I feel satisfied when your trees do come into bearing you will be amply repaid for the time you have had to wait before receiving any returns. The olive commences to bear when about four years old, and from that time on will increase in productiveness every succeeding year for an indefinite period. There are trees in Europe said to be 1000 years old, and still bearing large crops annually. A number of my trees commenced to bear a few olives when three years old, and since that time I have never known the crop to fail.

Just such soils as are not adapted to the raisin grape are suited to the olive. I refer, of course, to the sandy, light loam, of which there are many thousands of acres in this valley, and which, in my opinion, is best for the olive.

In making this statement, I speak from actual experience and observation. I had about 75 acres planted to the olive on such soil as mentioned above. The oldest of my trees are not more than seven years, and for three years have been loaded with fruit, while olive trees of the Mission variety, growing on the Fresno Vineyard Company's place, on heavy argillaceous soil, have never had on any one of their trees, now fully ten years old, as many olives as have been gathered from my trees when only six.

In planting an olive orchard, the first step to be taken is to plow your land good and deep, not less than 12 inches; the deeper you plow the better the results. I have planted trees at the Fancher Creek nursery 25 feet apart, many, however, recommend 30 and 36 feet. In such soil as I have 25 feet is a good distance, and if eventually the trees do become too much crowded (it will take at least 15 years) every other tree can be cut out and then the trees will not be too far apart. Mr. Roeding gave it as his opinion that the interior counties are better suited to the olive than any other portion of the State. He said that olives may readily be transplanted when four or five years old, and instances are known of their being successfully transplanted when 20 years of age.

PICKLING OLIVES.

Take a can of concentrated lye; dissolve about one can in a gallon of water, using an earthen vessel for that purpose. The strength of the solution should be tested with a hydrometer. The specific gravity should not be more than ten degrees.

If the olives are in a green state this strength can be safely used. If ripe, the hydrometer should not register more than six or seven degrees at the outside. It will take from four to five hours for the lye to penetrate the olive. After the olives have been submerged for two hours you should examine them every 15 minutes. Take one out, cut into it and as soon as the lye has penetrated to the pit drain it off, which may be ascertained by a discoloration of the flesh. Now pour fresh water over the olives, and change this at least three times a day for four days, or until the taste of the lye has entirely disappeared.

Then dissolve salt in water, taking about twelve ounces to every gallon, and after boiling for ten minutes add one ounce of alum to every gallon to clarify the solution. This mixture should be poured over the olives and in a few days they will be fit to be eaten.

Thus far no insect pests have attacked the olives here.

Treatment after Sunburn.

Lineus Stewart at the Fresno Farmers' Institute.

"In the spring of 1890, I became the owner of a ranch, at that time known as the Hoag ranch, 30 acres of which are in peach and nectarine trees from five to eight years old. In the fall of that year I noticed that a great many trees had been badly sunburned in former years, leaving the trunks of the trees bare of bark from three to six inches in width and from 18 to 20 inches in height. The ragged edges of the bark were infested with bugs of all kinds and in some instances fungi had made such ravages that the decayed parts could be removed with the hand.

Knowing that insects attack wood for the sugar or gum contained therein, and that fungi subsist on the albumen of the wood, I determined to give a coating of pine tar to protect the trees from these ravages.

In March, 1891, I thoroughly cleaned away all the decayed wood, stripped off all the loose bark, and then covered the wounds with the pine tar. Insects and worms came out by hundreds.

The effect of the treatment is a new growth closing around the bare spaces, no bark peeling away, and the trees are healthy and bear well. I gave another coating of the tar in February of this year, and found a few limbs that had escaped my observation last year; the difference between them and those that had been treated was remarkable; no new growth of wood, the bark all rough and curled up and insects under all. J. R. Baird, horticultural commissioner, visited the orchard February 22d, and was very much impressed with the benefits of the treament.

I would advise two applications yearly, one in the fall to protect the injured trees from the rain, and one in the spring to keep out the insects.

In the discussion which followed this paper it was clearly shown that tar should not be put upon live bark but only on the wounds caused by sunburn. Tar kills live bark. —Ed. Press.

The California Strawberry.

We have to go away from home to learn the news. Perhaps some of our readers need not go so far, and if so, we should like to have them tell us what they know of a strawberry called the "California." We find the following letter from Chas. Wright of Seaford, Delaware, in the *American Farm* of Richmond, Va.

A subscriber from Mt. Holly, N. J., asks about the California strawberry. I have it, and will try to tell him what I know of it. Several years ago an agent from Ohio came through here selling nursery stock, and claimed to have two valuable new strawberries—Topeka and California. He sold a good many plants, and when they afterward came into bearing, all, with one or two exceptions, turned out to be the the old Crescent. One man in Carolina county, Md., got a berry altogether different from anything we had before, and this proved to be the California. It has become quite popular lately, and will be largely planted here this spring. I heard of it through a party some ten miles from me, who had shipped the finest berries that went from his station, and on investigation I found them to be the California. It is large, rather long, firm, a good grower, quite productive, and is used here as a very suitable fertilizer for Bubach; season medium early. Altogether it is considered a first-class market sort by those who know it best. The Topeka turned out the same way. I have not yet fruited it, but a friend of mine here, who was fortunate enough to get his true to name, finds it very fine, and asked me to propagate it, he furnishing me the plants. Whether there ever were two such varieties I don't know, but they are not like any of the varieties I know or have fruited.

Now what is the California Strawberry? Is it the old Longworth Prolific which retained its popularity here so long after it was lost sight of at the East that it may have been sent back East with a new name? We would like to know more about it.

Horticulture at the World's Fair.

Appropriations for exhibits for the World's Columbian Exposition from foreign countries now aggregate more than $4,500,000.

The Placer County World's Fair Association has authorized Alex. Keller to secure a horticultural collection and was allowed a per diem and expense for the work.

The ladies of San Diego City and the surrounding towns are organizing and doing excellent work, especially in the way of gathering rare plants, vines, shrubs, etc.

A lady at Oceanside, San Diego Co., is growing some calla lillies for exhibition at the World's Fair. Some of the blossoms recently shown were fully a foot across and the stocks five feet in height.

A recent letter from J. M. Samuels, Chief of the Department of Horticulture, states that one acre of ground on the beautiful spot known as the Wooded Island, will be devoted to a rose garden. The California Nursery Co., at Niles, has agreed to furnish 900 plants to be used in this space.

Miss F. Butler, who has been chosen by the California Commission to collect and arrange studies of the Natural flora of California, is actively at work. There are upward of 5000 varieties of wild flowers in California, and she expects to furnish for exhibition at Chicago, studies of 600 wild flowers and grasses in both oil and water colors.

Taking the State as a whole, much interest is being shown in matters relating to an exhibit of California's products at Chicago. Exhibits are being collected and stored at central points ready for transportation. Young trees and vines have been transplanted into boxes in order to be hardy for next year, while those remaining in the orchards and vineyards have been carefully pruned and well fertilized, in order that only the choicest specimens of fruit may be grown. Great care has been given to the cereals and other agricultural products, while at least one county has growing for a display, over 50 different varieties of wheat. Exhibits under the department of horticulture are well under way.

The Stock Yard.

The "Red, White and Roan."

Baden Station, San Mateo Co., April 13, 1862.

To the Editor:—The season is at hand when farmers and dairymen will be looking around with a view to replenishing their herds with new blood by the purchase of bulls for future use. Of course there is the usual outcry about color, some not being satisfied unless they can have a red bull. By all means let such have their fancies gratified; but most of us know that it is hard to get everything perfect in a bull, as well as in other things, and I, for one, believe that the proportion of really good animals is less among red Shorthorns than among those of other colors.

Since the year 1810, when the roan bull Comet (155) was sold for 1000 guineas, until the present time when Queen Victoria's roan bull New Year's Gift (57,796) has just been sold for the same sum of money (being more than $5000), roan cattle have sold for the highest prices and won the most prizes. Let any man tell me of a herd that has been bred successfully and altogether to red for the space of 20 years, which is not too long a time in which to establish a herd of any fixed type, and I will name 20 or more breeders who have been more successful by not being bound to any one color, and whose cattle have been more in demand, for every breeder that has been equally successful by confining himself to using only red bulls.

Another noticeable fact about the Queen's recent sale is that a *white* yearling heifer "of rare proportions and of great beauty" sold for $530—a price which exceeded that of any other female in the sale by about $155, and that in a lot of 26 head, which sold for the high average of $242.

When I refer to roans as selling for the largest prices, it is also inferred that not only the breeding is good, but the animals are also individually of the best, not because of the color, but rather for their better shape and greater thriving qualities, coupled occasionally, but not necessarily, with what is called *style*. I say not necessarily, because it is a fact that the so-called stylish cattle are very seldom of the best type and symmetry. However taking to the eye of some people they may be, they are apt to be inclined to legginess and too frequently narrow and flat in the foreribs and through the heart, faults that indicate a delicate constitution in an animal, which no amount of upstanding style can compensate for. Style counts for nothing at the shambles, but often worse, as those of that kind of cattle invariably look bigger than they really are, especially to the eye of the inexperienced.

Most of your readers who take an interest in cattle know that I have written on this subject before, and to show that I do not stand alone in my ideas as regards the superior quality of the lighter colored cattle, I commend the following, written by one of the most successful breeders of Shorthorns in the United States and reproduced in a recent number of the *Breeders' Gazette* and also in the *Live Stock Report:*

Breeding for Color.

From Agricultural Department Kansas Weekly Capital.

In your issue of Jan. 28th, I notice a reference to myself in the article by "D. P. N." on "Breeding for Color in Shorthorns," which prompts me to ask for a word or two. Had "D. P. N." visited the Linwood herd any time in the last two years, he would have found three bulls in service, two roans and one red. Had he been here today, he would have found us deciding the selection of three calves to keep for future use out of 21 head, and the result again two roans and one red out of a roan cow, the entire lot containing only four roans. Now in neither case has the selection been made on account of the color, but because they were the best and in every way the most perfect animals, and the odds were largely in favor of those with mellow, mossy, roan coats. I fully appreciate the difficulty he speaks of as existing here in the West, and here only, in the preference of a majority of buyers for red at all hazards and at any sacrifice of quality; but I think it has reached a point where it involves the ruin of the grandest breed of cattle in taking an inferior animal because it is red.

In Kentucky I have often seen grade cattle superior to the "blue blood" herds, and found that for years the farmer took as his sires the cheap roan bulls instead of the high-priced reds. In Canada I have never seen a farmer using other than roan bulls, as they say they are perfectly willing to let the Americans buy the red ones. Some of their professional breeders have, like us, yielded to the demands from our side for red, and when persisted in for several generations, the effect is plain. As an American, I am ashamed to say that, so far as the show rings are concerned, for several years the Shorthorns would not have been "in it" at all bad it not been for imported roan cattle and the sons and daughters of roan cows and bulls from the other side. All the mystery of breeding may be summed up as William Houseman puts it, "to be able to understand the fitness of similarities and the unfitness of dissimilarities," and persistently "breed to the best." The "feed lot" and the "show ring" will then soon convince the other fellows. W. A. Harris.

Linwood, Kan.

So much for the beefy side, and now a few facts on the milking qualities of some of the old sorts, some of them taken from the reports of the American Shorthorn Breeders' Association on cows milked for their premiums at different State Fairs.

A good sample to begin with is one of my own heifers, Baden Ruby 4th, roan, calved March 4, 1889. She produced her first calf (a bull) on the day she was three years old. Her milk was weighed from the morning of the 7th March to the morning of the 12th, nine milkings. She gave 164 pounds of milk, being a fraction over 18 pounds for each milking. Her sire was a white bull and all the dams in the pedigree were roan for the next preceding five generations, and the seven sires preceding the white one were six roans and one yellow-red in color—a real old-fashioned Shorthorn color, however much despised by some people.

Baden Ruby 4th is of the same family as Baden Ruby, yellow, red and white, that averaged a fraction over 40½ pounds of milk a day, for seven days, at the California State Fair in 1890, giving as much as 44 pounds on the sixth day of the trial. She had averaged over 50 pounds a day at home from the time of calving till the time of starting for the fair, a period of six weeks.

This family of Shorthorns was bred for useful qualities, symmetrical shape, milk and beef, but without regard to the maintenance of any one color, by the late Sir Charles Knightley as much as 50 years ago, the bulk of his herd being sold off in 1856, at an average price of $385 for 77 head.

White Maid, milked at the same time as Baden Ruby, gave a fraction over 30½ pounds a day for the seven days' trial, 3½ months after calving. In the spring of 1888, this cow gave an average of over 50 pounds of milk a day for 100 days, after calving, on good grass. She is descended from one of the earlier importations of Shorthorns into the United States, and has for her sire a white bull whose sire and dam (both roan) I brought from England in 1875.

I could give other proofs of the good milking qualities of Shorthorns from my own herd, particularly some of the descendants of the imported cows: *Frantic* by 4th Duke of York (10,167), *Pansy* by Blaize (76), and *Lady Jane* by Whittington (12,299). I have had cows of these old families give as much as seven gallons of milk a day, while 20 quarts a day is an ordinary quantity for any cow of the families named to give when in full milk and on fairly good feed.

Other State Fair Records.

I will now turn to the reports on cows milked for premiums offered by the American Shorthorn Breeders' Association, through the agency of various State Fairs during the last three years.

The best record for 1889 at the New York State Fair was made by Messrs. Spencer & Son's Fillpail 3d, roan. She gave 30¼ pounds of milk, which made 1½ pounds of butter for the 24 hours, 197 days after calving.

The same firm also had three other good cows, viz.: Cherry Lass 4th, roan, gave 28½ pounds milk and 1 7-16 pounds of butter 177 days after calving. Kitty Clay 3d gave 28½ pounds of milk and 1 5-16 pounds of butter 140 days after calving; and Kitty Clay 4th, 21¾ pounds milk and 1 1-16 pounds of butter 197 days after calving. Cows that will make over one pound of butter a day, six months after calving, and when away from home, and, as the report says, after having been shipped 400 miles, cannot but be looked upon as good cows.

At the Indiana State Fair, Mrs. Virginia C. Meredith exhibited Wild Duchess of Oxford, where she made a record of 32 lbs. 7½ ozs. of milk for the 24 hours.

The above are the only records of milk given by the Shorthorn cows exhibited in 1889, although several premiums were awarded for dairy Shorthorns at some other fairs which were not really dairy cows, but the greater part of them animals which took the premiums in the classes where they had been judged by the beef standard.

In 1890, one of the best cows, if not the best, was exhibited at the Michigan State Fair, viz., Moss Rose 4th, red and white (vol. 35, p. 579), and of the old Pansy by Blaize (76) tribe. Two pounds of butter were made from her milk of one day, the weight of milk not being given.

The first prize cow at the New York State Fair was Kitty Clay 2d, yellow roan (vol. 21 p. 16,553), and, as the name indicates, of the old "Henry Clay stock." She is also the dam of the cows Kitty Clay 3d and 4th, named above, and gave 42 lbs. 13 ozs. of milk in one day, from which 1 lb. 11 ozs. of butter was made. She had her last calf August 1, 1890. The second prize was awarded to Constance of Brookdale 28th, red and little white (vol. 33 p. 596), her sire, dam and great dam all being roan. She gave 42 lbs. 3 ozs. of milk, which made 1 lb. 8 ozs. of butter (unsalted), and had her last calf Aug. 23, 1890. She is a descendant of imported Constance by Bridegroom—a family of Shorthorns which have been much more favorably looked upon as beef producers than as dairy cattle.

The next best cow at the same fair was Fillpail 3d, roan (the premier cow of 1889), her milk for the 24 hours being 31 lbs. 6 ozs.; butter, 1 lb. 4½ ozs. She had her last calf on April 17, 1890, and was again in calf from June 10th, thus being placed at a great disadvantage when compared with the two first prize cows.

The best heifer on the record is Chautauqua Belle, red (vol. 36), which gave 23 lbs. 10 ozs. of milk, 12 ozs. butter, in one day. She had her last calf April 15, 1890.

All other cows reported as receiving premiums at any of the fairs gave less than 30 pounds a day, excepting three that gave respectively 36, 33 and 32½ pounds of milk.

The premiums for 1891 were awarded to the cow giving the most butter in two days (according to the Babcock tester), the quantity made from one cow varying all the way from .321 lb. (less than half a pound a day) up to 4.2 lbs., or at the rate of 2.1 lbs. a day, the next best record being 3.857 lbs. for the two days. These latter were the first and second prize cows at the Western Pennsylvania State Fair, and were the best exhibits at 12 different State Fairs, including California, which ought to have done better.

The third best cow was Fillpail 3d, before mentioned, with 3.29 pounds butter to her credit at the New York State Fair, and the fourth best showing was made by Moss Rose 4th, with 3.25 pounds for the two days at the Michigan State Fair, where she made 2 pounds in one day in 1890, as before stated.

Fifteen of the nineteen cows that were awarded first and second premiums at the different State Fairs made over one pound of butter a day, five of these having over 1½ lbs. a day and less than 2 pounds, while only one cow gave 2 lbs. a day or over (4.2 lbs. in two days).

The two best cows for 1891 were red ones; of the six next best, four were red and white and two roan. As the weight of each cow's milk is not given, neither the time of last calving, both of which I think ought to be made known (as at the New York State Fair in 1890), we have not all the means by which we can form an opinion of what is a first-class dairy cow. As is well known, some cows give a large quantity of milk for a few months and dry up quickly after they are in calf again, while others will give a steady flow for several months and milk well up to or near the time of calving again, giving in the aggregate much more milk than many cows that make a better showing soon after calving.

Good Cattle in Dull Times.

In several articles that I wrote for the Rural Press last year, I brought out facts to prove that Shorthorn cattle are in no way behind any other breed for the production of beef on a given quantity of food, as well as for quantity of milk of a good or even superior quality. For these reasons there has been, through all these years of depression in cattle breeding, a steady demand for Shorthorn bulls, at paying prices, particularly for use on medium-sized farms, where dairying is one of the chief factors in making ends meet. It is true that the prices at which cattle have been selling of late years have afforded but little encouragement for investment in high-priced bulls, and many have held back from using even good bulls on that account, not, perhaps, bearing in mind that "the bull is half the herd."

Good bulls can be bought now for less money than ever, and for that reason it is to be feared that some breeders of pure-bred stock are being deterred from making any little extra outlay that may be required for either the improvement or keeping up of their herds to the past or present standard. Cattle cannot keep so low as they have been for much longer. For one reason, it has not been paying to raise them, and people cannot or will not keep long at a thing that does not pay, at least if they can help it. Therefore, now is the time to buy good stock, "before the boom," as the real estate men say, though there may be few that are looking for one in cattle just yet; but they are bound to have their turn sooner or later, just as horses have had, and sheep are having it now.

Whatever I may have said about color, I want it understood that I have nothing against red; but I do object to the absurd course of sacrificing useful qualities for the sake of having a herd of one color, thus practically breeding out one of the distinguishing characteristics of the breed.

As well might breeders of Holstein cattle aim to breed their cattle all black, or Hereford breeders do away with the white faces peculiar to that breed, as breeders of Shorthorns attempt to breed out the white color that is naturally in them. But, fortunately for the cattle, there has been no such foolish attempt made by breeders of the two former breeds, so far as I am aware at least, but they have sensibly stuck to developing the leading characteristics of the respective breeds—milk in one and beef in the "white faces." If a red Shorthorn is a better animal than one of another color, for that reason, and that only, he will be worth more money.

The low prices of cattle ought to have the stimulating effect of encouraging the breeding and rearing of only such cattle, whatever the breed, as will make profitable returns for the food consumed, in beef or milk, or both together.

Whatever we have of useful qualities in our herds, let us endeavor to keep and improve upon, if possible, by every means in our power, and stick to the old and tried blood, while we despise not her true and ancient colors.

Robt. Ashburner.

Southern Oregon Cattle.—Letters received from Southeastern Oregon state that the past winter has been very favorable for the cattle on the ranges in that section. Stockmen have been stocking their ranges with young cattle from California, and their herds are beginning to be as numerous as before the heavy loss of the hard winter of 1889 and 1890. In Warner Valley the cattle are now luxuriating on the sweet young grass. Farther north, in Baker county, the winter has not been so favorable, and in Idaho it has been still worse; and on all the ranges from Idaho to Salt Lake there has been a heavy percentage of loss. Montana, which used to be a large buyer of young cattle in the Willamette Valley, is not buying any here now, and has had a succession of such cold winters as to be very injurious to her cattle interests. The young cattle of this valley will be needed to stock the ranges of Eastern Oregon and Washington.—Salem Statesman.

Horestry.

Notes on Eucalyptus Species.

La Manda Park, Los Angeles Co.

To the Editor:—The last report sent in to me showing the experience of tree planters in difficult belts, comes from a district, not in the Antelope valley, but under the same climatic conditions.

This report shows that, among the eucalyptus, the *E. pilularis*, *E. corynocalyx* and *E. diversicolor* will not stand much frost—about the same as the blue gum. When growing on a slope or otherwise protected from heavy frost the *Eucalyptus corynocalyx* or "sugar gum" was found to stand the drought and heat the best. The *E. Viminalis*, "manna gum," and *E. rostrata*, "red gum," resisted frost the best.

It may be well to recall the fact that the *E. Viminalis*, "manna gum," has been very extensively sold in California for the red gum. The *Viminalis* has long lanceolate leaves of greenish-grey color; it is drooping and graceful in its new growth. The new wood and young branches are a bright mahogany red. The tree is a little more rapid grower than the red gum, but it is by no means so valuable a tree. The lanceolate leaves of the red gum are less long and narrow than those of the *Viminalis;* they are also grayer in color. The red gum is stiffer in its habit of growth than the manna, and generally not so attractive in its early years. How the mistake originally happened it is now impossible to say, but we may congratulate ourselves that the tree substituted for the red gum, while inferior, is still a fine tree, with excellent adaptive powers to our climate.

It is fortunate that our seedsmen and nurserymen are so generally careful and reliable. Most of the cases where seeds and trees of one variety have been sent out as belonging to some other, were doubtless the result of mistake. It is, however, a mistake of a most serious character. A farmer who plants forest or fruit trees cannot afford to devote his land and attention over a number of years to find, after all, that instead of the valuable timber or crop he might legitimately expect from his selected variety, he has an inferior variety with a comparatively worthless crop. Carelessness that permits this deception and injury approaches crime.

Abbot Kinney.

Poultry Yard.

What Shall the Chicken-House Floor Be?

Although the true way to keep fowls on a commercial scale in this State is the itinerary method, where the house floor shall be continually fresh ground, there must be fowls kept in some places in stationary houses. Of what shall the floor be made? is therefore a matter of considerable importance. The experience of a number of correspondents to the *Rural New Yorker* will be found to reflect the experience of our own readers to a great extent and will therefore be useful to beginners. The name of the writer will be found at the ends of the several paragraphs:

I have given considerable time and study to the subject of poultry-house floors. In the beginning of my present poultry business and in building my first poultry house, I was firm in the belief that a floor of earth would be just the thing needed if properly constructed and dry. I was careful, therefore to place a good drain under the foundation walls and fill inside to a depth of two feet with stone and gravel, with a foot of dry loam on top to be changed twice a year if necessary. The house was built at odd spells during the summer, and was thoroughly dry when the hens were put in it on September 1—50 in each apartment, 12x20 feet. At first all went well; the hens were out in the parks a good share of the time; the windows were open on warm, sunny days, and the floors kept dry and in good condition; but as the winter set in with a fall of snow that remained all the season, and the hens were consequently confined entirely to the house, the floor soon began to show dampness from the droppings, which condition grew continually worse until about February 1, when, in spite of my efforts to keep the floor in proper shape by using cut straw, chaff and other absorbents freely, it was far from satisfactory, being damp and sticky to a depth of five or six inches. Although dry below that, there was continually arising a strong, disagreeable odor, which I finally succeeded in checking by a free use of plaster; but the floor remained damp and grew worse until spring came, when, with warm days and open windows, it dried into a hard crust six or eight inches deep, which it was something of a job to dig up and carry out.

The condition of the hens as to health and egg production during the fall and fore part of the winter was quite satisfactory, with a flattering prospect for the entire winter. The condition rapidly fell off, however, as the floor grew damp, and along toward spring, when they should have been laying nearly at their best, I was getting few eggs and there were many sick and ailing hens, and, in fact, I lost a number.

The conclusion that I was able to draw from this experience was that while an earth floor which could not conveniently be changed at least two or three times during the winter, might answer for a small flock in a house large enough to allow the dry earth of the floor to absorb all the moisture from the droppings without becoming damp and disagreeable until the spring came with its conveniences for changing it, I should have to use a solid floor with absorbents to cover it, that could be changed often to enable me to keep in proper condition so large a number in so small a space.

In looking around for a material for the purpose, it seemed to me that grout or concrete would be the proper thing; but as I found that I could put in a board floor somewhat cheaper, I concluded to use it, as I considered its employment only an experiment; in fact I was rapidly finding out that nearly all of my work in connection with poultry keeping was as yet more or less experimental. I bought a lot of cheap but sound hemlock and laid the floor, being careful to join the edges as closely as possible without planing or matching. This I kept well littered with a layer of dry earth and cut straw, which was changed as often as needed, with the best results all through the next winter, which was severe, and the hens were kept closely confined all of the time. So well was I pleased with this floor and the method of keeping the house dry and clean through the winter that I have not looked for a better.

I know of no real objection to grout or concrete for the purpose. Some, however, have raised the objection that a floor of that kind is always cold and disagreeable to the touch and consequently uncomfortable for the fowls confined upon it. Without having had any experience with it, I am strongly of the opinion, however, that if properly covered with dry earth and litter of some sort, as all poultry-house floors should be, this objection would be entirely overcome. This being true, the facts that it is far more durable than boards, and that it is proof against rats and similar vermin, combine to make it the best as well as the cheapest in the end. There may be other objections to it of which I am not aware, and were I to adopt its use, I should do so in an experimental way at first.

In building and arranging for my present poultry business, I was obliged to build cheaply or not at all. This seemed very inconvenient at the time, as it compelled me to go slow and carefully study all sides of the question; but now I look back to that time with no feeling of regret, as I am quite sure that had I been possessed of ample means, I should have built too much without the necessary study to have made my building a success.—*C. H. Wyckoff.*

I find boards better than earth or concrete for poultry floors, as they can be renewed, and are easily cleaned, and are warmer. Earth floors become foul, and must be frequently renewed. Concrete floors are cold to the feet, unless well littered, but for preventing rats from entering the poultry house they are excellent. Were it not that they provide a harboring place for rats, boards cannot be excelled.—*P. H. Jacobs.*

I think the best floor for a poultry house is sand. If I could have one as I want it, I would concrete or cement the bottom up to the sill and then put on four inches of quite course beach sand. My reason for this opinion is that fowls eat a great quantity of sand or grit, and in the winter when they cannot range at large they always have the sand to pick. I also believe one-half of the diseases of poultry are caused by their not having grit, and the best kind of grit is sand. I do not believe there would be much, if any chicken cholera if the fowls had access to it.—*P. Williams.*

According to our experience, a floor made of good, matched and planed lumber gives the best satisfaction in a hennery, as it can he kept dry and clean more easily than any other with which we have been familiar. We always keep our floors well littered with fine straw having as much chaff in it as possible. We see no objection to a cement or concrete floor if it can be kept equally dry and be built as cheaply.—*Knapp Bros.*

Fruit Marketing.

Cooperative Fruit Marketing.

C. C. Agee of Solano county, who was one of the committee appointed by the Fresno Convention to develop a plan for the cooperative marketing of California fruits, writes the following article for the Dixon *Tribune* of April 15:

We all realize the necessity for fruit growers to have a system by which they can sustain this branch of industry, which, if properly sustained is worth millions to this State (the county of Solano alone producing more than a million dollars worth of fruit annually). In our present condition and with the prevailing manner of marketing, it is found to retrograde to a serious extent, which will cripple the finances and prosperity of this State. It is in the power of producers to sustain this industry by uniting in a cooperative body of our own people and thus do our own business, and if we thus unite, the organization will be larger and more influential than any other in the State of California, and why should it not be accomplished?

I would make the suggestion that the fruit-growing localities of the State take stock in an organization of this kind to the amount of one dollar per acre of bearing fruit and the stockholders to select from among their number a competent business man to represent the district, and from these a board of directors shall be chosen to serve one year, only stockholders to be eligible to hold office. All fruit raisers may become stockholders by taking stock to the amount of one dollar per share, fruit producers also who have young trees or vines may take stock on the same terms as their trees come into bearing. I would suggest for carrying out this work that each local company or producer pack in suitable condition for market a sample package of their product, accompanied by the name of the producer and the probable amount of the yield, said packages to be on exhibition at the principal office in San Francisco, where purchasers may buy the fruit of any part of the State through the agency.

The duties of the Board of Directors shall be to rent suitable office rooms, exhibit the samples and sell the fruit as markets and purchasers shall be found. It would be advisable to have the Directors establish branch offices in large cities, where there is a demand for our goods and have a limited amount kept on hand to supply the market at any time. It shall also be the duty of the managers of these agencies to attend to the delivering of any shipments made from any of our companies or agencies, and to see that payments are made and sent to the shippers, retaining five per cent of the sales, which amount is to be sent to the head office in San Francisco to defray the necessary expenses. The prices must be set by the parent board through the representatives of the local board and are not in any case to be undersold, the price to be made in San Francisco, with transportation added.

Some of the advantages to be derived by this corporation are as follows:

1. A permanent price on each grade of goods.
2. The goods to be handled by men of our own choosing, not speculators but men of our own vocation from various parts of the State.
3. To have our own agent in cities to deliver goods and receive payments and forward same to the producer without risk or loss.
4. There being at present a difference of 100 to 150 per cent between the producer and consumer after the freight has been paid, the producer is thereby unjustly deprived of a legitimate living.
5. To prevent overloading markets and being compelled to reship to other localities by shipping from the packing houses in various parts of the State, direct to the consumer.
6. Having our headquarters in San Francisco we will be prepared to show samples while our goods may be stored at home, and be under no expense until the fruit is started for its destination.
7. In case of unusually large production we might ask the railroads to make reductions for a season to help market our products. In case they refuse to make any concession we could retain more at home and save expenses and losses.
8. In sustaining our vocation it means millions to our State; it affords labor to men, women and children; it diversfies our crops, thereby strengthing all our producers.
9. No individual corporation can expect a permanent price as it would come into direct competition with itself.
10. While the producer works 16 hours a day to cultivate and prepare his products and eke out a bare living, the speculator works eight hours and takes all the profits. Now are we to become slaves to such men or are we going to transact our own business. Some say that the farmers are the biggest fools on earth, since they have the power and will not use it. Let's break the record. It is of the utmost importance for reasons already stated that every fruit grower should come up and help to inaugurate this important movement. A committee authorized by the citizens of the State have the necessary papers to take stock, incorporate and call stockholders together to effect a permanent organization, and they are now ready for signatures. Do not hesitate; there is nothing to lose but an opportunity to maintain your calling in an honorable manner.

Swine Yard.

Pull the Cord and the Hog Does the Rest.

Wilder Ranch, Santa Cruz.

To the Editor:—In the first place, get the hogs in a small pen, so you can get among them conveniently. Now take a bale rope and make a slip noose or loop. With the rope in one hand and the loop in the other, work up to a hog gently and drop the loop over his nose. With a little manœuvering, you can get him to take it in his mouth; then draw the loop back so as to get it over his tusks and draw it tight and you have him fast by the upper jaw, and he will set back for all he is worth. Now make the rope tight and fast and you can ring the hog at your leisure and he will hold still. D. D. Wilder.

Another Play on the Hog's Nose.

Plymouth, Mich., April 6.

To the Editor:—There appeared in the Press, some time since, an inquiry as to the way of holding hogs while ringing them. As a hog's nose is the most sensitive part, a good way is to slip a small cord, with a slip noose in it, over his nose just back of the tusks and fasten the cord to a stake or let another hold it, and the hog can be handled in any way with no danger of struggling, or he may be easily led anywhere with but little force. A large Chester White boar was once loaded into a wagon at one of our State Fairs by a man pulling on the cord and leading him up an inclined plank, when four strapping fellows failed to handle him in the ordinary way, the owner offering to bet $50 that I could not load him alone. J. S. Tibbits.

A Noose and a Chute.

Covina, Los Angeles Co.

To the Editor:—In the Rural practical information in ringing hogs is being given, and I will give mine. No matter what size the pen is, but leading from it there should be a narrow passageway, so that only one hog can enter at a time. Have the passageway open at the top, and when the hog gets to the farther end have a silde door to shut down behind him, and you are ready for work. Take a stout cord, make a slip noose and place it in his mouth around the upper jaw. Fasten to a post in front and the hog will at once pull back and hold perfectly still. After ringing, open the door in front and let him pass out. Pull your slide door and let in another hog. You can do it very rapidly. It is easy work and there is no danger of injuring your hogs. Should the hog refuse to open his mouth, stir him up a little with a stick. R. Baldridge.

The Field.

Send the Weeds to the World's Fair.

N. J. Experiment Station,
Brunswick, N. J.

To the Editor:—In order that the exhibition of weeds at the World's Columbian Exposition may be large, and representative of all sections of the country, the undersigned (having this feature in charge) respectfully asks for specimens of the worst weeds from all States and Territories.

It is suggested that each botanist or local collector, who may be pleased to assist in the work, secure at least three specimens of the worst weeds in his State or section. In making the specimens it is important that the following points be considered: 1, seeds are especially desired; 2, seedlings important in various stages of development; 3, the root system is essential; also, 4, the flower and flower cluster, and, 5, the seed vessel.

It may be necessary, therefore, to secure these various essentials at different times during the coming season. If the weed is a large one, stress is laid upon the procuring of specimens while they are small enough, so that the whole plant, roots and all, can be mounted, without bending, upon an herbarian sheet of ordinary size, that is, not over a foot in length. They are not to be mounted, however, by the collector.

That unnecessary duplication may be avoided, persons who contemplate collecting specimens should signify their intention to the undersigned, and allotments will then be made, the assignments depending largely upon the locality. It is hoped that each State in the Union may be represented by specimens, in this national exhibit, of our worst weeds.

The collecting must all be done during the present season, and the specimens sent in for mounting, labeling, etc., by December 1st. Correspondence is solicited.

Byron D. Halsted.

Prof. Hilgard of the State University is preparing a comprehensive exhibit of California weeds for Mr. Halsted's exhibit.—Ed. Press.

The Court in the Horticultural Building at Chicago intended for the California Citrus Orchard is now being filled to a depth of several feet with rich soil, the purpose being that the trees shall be well protected and show themselves to the best advantage. More than double the amount of available space in the Horticultural Building has been applied for, and great pressure was brought to bear to have a portion of the court roofed over and used for exhibit rooms, but Chief Samuels has fulfilled his promise that one of the courts should be reserved for the California Citrus Orchard.

The Home Circle.

Our Childhood's Faith.

O the summer long ago!
When we saw with laughing eyes,
Crowned with gems of rosy light,
Each new morn in splendor rise.
O the swift-winged radiant days!
Earth, caressed by sun and dew,
Donned her fairest robe of bloom,
Over all heaven's tender blue.

O the warm and languid eves!
Filled with fragrance, rich and sweet,
From the dewy, scented flowers,
Crushed by lingering little feet.
O the dark-browed solemn nights!
When we murmured drowsily,
"Now we lay us down to sleep,"
Heads bent low at mother's knee.

Now the patient mother rests
Calmly 'neath the churchyard sod,
Gone for aye from clinging hands,
Hers the endless peace of God.
Years, long years, have come and gone,
Swept the glamour from our eyes;
Now the earth is bare and brown,
Pitiless the cold gray skies.

Still, amidst the clash and clang
Of the world's bewildering strife,
Soothing every anxious care
Of this restless, burdened life,
We can hear an undertone,
Echoing from the long ago,
Trembling through world-hardened hearts,
With a rhythm sweet and low.

O those blessed early days!
Listening to that soft refrain,
We forget all pains and loss;
Heaven seems near us once again.
Then, with heads low bent, we pray
As we prayed at mother's knee,
While our childhood's happy faith
O'er the soul broods tenderly.

—*Eva Douglas.*

Duties Near at Hand.

The north wind roared loudly. Showers of sharp, cutting icy snow sprinkled down thickly. A hired man had just returned from Payson, bringing to Julie and Ralph Waldo a generous mail—letters and favorite periodicals. In the bright warm library the two young people enjoyed their good things, drawing near to the fire in the big heater. Julie said:

"Dear Uncle Sam, how much I love him and his mail bags. Waldo farm isn't lonesome if we are almost 'shut in' when the winter storms and deep mud make driving a wearisome task."

"What is it, Sis?" inquired Ralph as Julie exclaimed emphatically, "Oh!"

"It's this, Ralph," sighed Julie, her round, rosy face lengthening: "One reads of so much kindly, helpful work being done. Brother, I cannot think of a single person who needs our ministrations. Nobody that's within our reach needs doing for."

"That they don't, Sis," returned Ralph earnestly, with the air of one who knows whereof he speaks.

"Our neighbors are in better circumstances than we are. My! but the wind roars loudly. Silver Hill will be sleet covered in the morning. I wish everbody was snugly sheltered from this storm."

"Ralph! Julie! Come into the dining room to the south and east windows," called Cousin Edith, the housekeeper during Mrs. Waldo's long stay in the South.

"I see nothing," said Ralph, polishing the glass in the east window, "but old Dobbin, the rick o' bones that neighbor Rogers doesn't value sufficiently to shelter and feed decently. Oh, yes! there's our ponies, Lady Bird and Yellow Mane, out from their shed."

Julie looked out of the south window. Sancho Panza, an ancient donkey, stood with his back to the nipping wind, with head downward, shivering and feebly resisting the gale that spared no man or beast.

Mouse Ear and Diadem, two yearlings, were exposed to the storm.

Rover, old and stiff, crept about the house searching an aperture in the underpinning that he might creep under the piazza or find his old corner near the big brick chimney.

Ann Sullivan limped down the kitchen stairs saying to Jonas Wing:

"If misthress Waldo was at home, she'd know of somethin' that 'ud soothe me itchin', burnin' fate. They've been frosted when I milked the contrary Jerseys that'll not bide a mon near 'em. The shed bees cowld for me fate, an' now I must shlip around aisy in me loose rubbers, not being able to wear a boot. It's dreadin' the comin' sthorm an' gettin me toes nipped again that I am."

"Poor old Dobbin looks friendless. I wonder if he was a faithful horse," said Cousin Edith.

"A dear, good, honest old friend. The Rogers children loved him. Mr. Rogers should be ashamed of being so mean and heartless," cried Julia indignantly.

"His valuable Nimbletoes doesn't lack for care and a warm stall. Poor, forsaken, old Dobbin."

"I-I am not sure, Sis, that we have been kind and careful with our four-footed friends," said Ralph thoughtfully, watching Sancho's feeble effort to resist the wind and storm.

"Sancho doesn't look any too comfortable. Our ponies are not warmly sheltered. The yearlings haven't good quarters. Rover hasn't a kennel. The blooded stock have the warm stalls and the hired men look after them, not caring for these old wornout creatures, the ponies or the yearlings. When you and I, Julie, ride to school, we halter the ponies in a convenient place. They stand three hours in the sun, storm and cold. When we are in the humor for a race we run them, not thinking that they have stood several hours cramped, dinnerless, and often without water.

"By denying ourselves a little we may have them cared for near the schoolhouse.

"Two of the largest Plymouth Rock chicks stub around toeless. During last winter's cold weather their feet were frozen. We have laughed often as they get about in their queer, clumsy fashion."

"The poor things. I'll see after the chicks that they have a warm place," said Julie sympathetically.

"And I will look after Anns frozen feet," added Cousin Edith.

"And I," said Ralph, "will take care of Dobbin to-night, and Sancho shall not hump up to keep warm ten minutes longer.

"I'll see Tom Rogers to-morrow and between us we'll look after the old and less valuable animals that the hired men neglect."

The clock struck nine when Ralph, with Jonas Wing, came into the farm kitchen and extinguished their lanterns.

Julie's hands had not been idle ones. Dick Brand, a chore boy, was suffering accutely in a fireless room, threatened with an illness.

The homeless lad had suffered in silence uncomplainingly, until intense pain wrung from him a humble appeal to Cousin Edith for help.

"Julie dear," said Ralph, "we needent stir from Waldo farm in father and mother's absence to find work.

Our ministrations are needed. Sancho and Dobbin are enjoying the quarters that Jonas and I fitted up for them, in a way that makes me ashamed of my previous selfishness."—Ella Guernsey in Prairie Farmer.

In All Things Charity.

The immortal poet never said anything truer than that

Things without remedy
Should be without regard.

The art of not referring to things distasteful, unpleasant or disastrous is a very fine one in household life. However greatly an occurrence is to be regretted, if it is inevitable, if no amount of discussion or allusion to it can in the least affect the result, then let it be ignored, and the sooner it is forgotten, the better. Regrets over this, that or the other are not only idle, but they are absolutely demoralizing. The crash of the best china, or the burglary of the silver may be a most disastrous and inconvenient affair; the loss may be a serious one, and one even impossible to replace; and still, life should always be regarded as a question of values, and a mere accident and material loss should be very distinctively separated from a sorrow or from a moral failure. "The life is more than meat;" wholeness of character is infinitely removed from mere material prosperity, and may exist without it quite as well as with.

To hold the tone of life in the home as something high, pure, consecrated, indeed, is the one desirable thing. For consecration is not too high a term. The ideal of character and the supreme value of achievement in constant spiritual victory, day by day, is the ideal to which domestic life should be amenable. A child should not be made to feel as badly because he carelessly breaks a vase or does some other mischief as if he had yielded to ill temper, or untruth, or unkindness. Moral wrong, mental inertia, are serious faults, to be constantly striven against and rebuked and exterminated so far as education and influence can make it possible, while the accidents and incidents of life, however well it is to teach caution and care, should not be assumed to be as serious as a fault that has to do with moral character or intellectual growth. To define very clearly this scale of values is perhaps the best part of a child's education.

Faults are often best corrected indirectly. Stimulate the virtues, and faults diminish of themselves. The good crowds out the evil. The first cure for darkness is to admit the light. The surest way to eradicate evil is to call forth the good. A child should have the inestimable advantage of always breathing the atmosphere in which generous and heroic aims are held as the essential and the significant elements of life, while material successes or gains, however desirable, are still recognized as being on a lower plane, and while they may be reasonably desired, are yet not to be widely sought.

The grace of gentle breeding is the one best gift and grace that can be conferred upon the child, and the key to this is a just appreciation of the true values of life; the relative values of essential qualities of character. "Thus, in life, too," says Epictetus, "this is the chief business, to consider and discriminate things; and say, 'Externals are not in my power; choice is, where shall I seek good and evil? Within is what is my aim.' But in what is controlled by others, count nothing good or evil, profitable or hurtful, or any such thing."—The Budget.

Spice of Life.

—Better late than never—Husbands.

—It is not safe to judge a man's courage by the tone of voice he employs when he speaks to the office boy. Wait until you hear him address his wife.

—Mr. Jones—I move that Mr. Smith's resignation be accepted. The Chairman (surprised)—What resignation? Mr. Jones—The one he ought to send in.

—Mr. Tozer (sadly)—Nothing equals the scepticism of married women. Mrs. Tozer—You're mistaken, my dear; there is one thing. What is it? The credulity of the unmarried ones.

—Mrs. Van Pelt—If you work for me, Bridget, you will have to wear caps. I suppose you do not object. Bridget—Sure not, mum. I can borry wan from me cousin. It has ear taps and a 'possum tail on top.

—He took her fancy when he came; he took her hand; he took a kiss; he took no notice of the shame that glowed her happy cheeks at this. He took to coming afternoons; he took an oath he'd ne'er deceive; he took her father's silver spoons, and after that he took his leave.

Let Us Tell The Truth.

Written for the Rural Press by Isabel Darling.

Let us tell the truth, at least when we profess to do so. When writing stories, building, in one sense creating, we are allowed and expected to take more or less liberties with names, places and circumstances, but even then readers are more honorably treated if all that is asserted has been or might be under the given conditions.

There is nothing disgraceful in the making of oleomargarine, but let us not call it butter, thereby disturbing the market for both. To represent a dairyman as slaughtering a fresh cow every day for butter material would be ridiculous and certainly not poetical or true; but it is just as ridiculous to picture, as present, old-time simplicity which was generally wearisome in convenience. Especially is this true in descriptions of farm life, which is as little benefited by an imported sham gorgeousness as is the face of our native lumber by a coat of paint that is zig-zaged and spotted by combs or thumb nails, or some other contrivance, in imitation of a grain that was much more beautiful before. We have read poem after poem on farm life, and felt that between the poetry from afar and the prose of experience there had been "a great gulf fixed." One published lately was dated, I was glad to see, from the city, so the writer was more excusable for asserting that "The dairymaid trips with her milking pail." *Where* does she do that and *who* is the dairymaid? The use of the word corral in mentioning the cattle yard shows that Pacific Coast, probably California farm life was meant, so we will hunt for her up the hills and down the valleys. Through inland or wheat counties, where miles of grain stretch out like a broad green sea without a break or fence, wandering cows would be nuisances, therefore the one or two kept at the house to supply milk not butter usually circulate around a picket pin with no larger sphere of operations than that swept by a stout rope fastened around the horns. They may "low" enough, but they have no "trail" to follow, and a professional milkmaid, though she might be an ornament, would not be a necessity for these one or two cows. If she was, who would she be? The American girl seldom learns to milk, and the Irish girl "ditto." The Chinaman "No sabbys," if he can help himsef, and no stretch of the imagination can make a tripping dairymaid out of him.

If we go through the wheat lands to the dairies of the coast, she is not there, for only men were advertised for and only men presented themselves. On foothill places, where the cultivated area is small and the products various as to kind or uncertain as to quantity, the wife and daughters may help, but generally for economy and not for fun.

There are parts of the world, of the United States, where the suggestion of a milkmaid would not seem so much out of place. That reminds me of an Ohio family among the pioneers who settled on a certain Minnesota prairie many years ago. There was a large and increasing number of children, all boys except two, and the mother waded about (it was nothing less, for the grass was tall and dews very heavy) night and morning to do the milking. If she was belated, perhaps the father would say pleasantly, "Come, mother, it is time to pail the cows." All the neighbors were indignant, not because the work was degrading, but because the men were better able to do it, and in that place it had always been considered a man's work. Where they had lived it was not. But neither Ohio nor Minnesota are California in customs any more than in scenery, and when we prepare supplies for agricultural papers, should we not label foreign products and not exhibit a rare specimen as a type of the whole? Is it worth while to sacrifice truth for a sentimental gloss over prosy facts? It does little good to represent the country as one great Eden without even the serpent, hoping in that way to turn some part of the city into the fields. Those who have had experience know better, and those who had not soon learn. There is poverty which means hunger, rags and poor shelter, inconvenience, debt and other miseries, in the country as well as in the city, as there are also the opposite conditions in both. Not every farmer sits contentedly on the porch blowing smoke in the face of the setting sun. That is the time to be taking care of the animals, if the regular day's work is done, and in that old pipe I see nothing poetical, but should say that the farther he flung it from him the better it would be for the atmosphere about the place.

In this State the farmer occupies a higher social position than in any other where I have lived, often being a leading power in town, county or the State at large, and does not need to be shown by these false lights. Here he does not always smoke a cob or any other pipe nor use ungrammatical language, although he might do just as good work if he did say he "haint got no time to look none at pooty posies nohow." He is not a distinctive character; he is one among others, looks and acts like any other man, or perhaps better, and his wife and daughters cannot always be told from others by their ignorance, nor are they invariably uniformed in calico and sweet simplicity.

The country is beautiful, of course it is, each locality in a different way, and if we look we can find beauty in apparently unlovely things. To many it offers enjoyments that more than balance the discomforts, but others see there only loneliness, inconvenience, misery, and they will not be converted by pictures that are untrue to life.

A farmer who thinks of changing his Eastern home for one here will naturally examine the literature of the agricultural papers for something by which to judge of what life here is like. He cannot find it unless we tell the truth, the truth as it is in California, not in Massachusetts, in Louisiana or in England.

—A certain clergyman would not believe the eggs brought by the milkmaid in the morning were new laid unless they were warm. On one occasion they were cold, and on his asking for an explanation, she replied: "Well, sir, the reason is that the cat that usually sits on them to make them warm has been out all night and did not return in time."

Young Folks' Column.

Joe and Nell.

Written for the Rural Press by Aunt Susie.

"Poor little birdie, you look so cold. I'm cold myself, but I'm bigger 'n you and can stand it better. If you'll let me catch you, I'll warm you."

So said a ragged little bootblack in New York one cold day. He was watching the numerous little birds that swarm in Union Square, where there are many little houses for them, and where they are fed every day by the keeper of the park. Sometimes a little bird gets so chilled he can't hop or fly; then, if no helping hand comes, he soon ceases to feel the cold, and becomes chilled beyond all warming.

But Joe, our bootblack, reached out his hand carefully and picked up the poor little half frozen birdie, and, hailing a companion, said:

"Come, Sam, let's take this poor little fellow over to the grating, where the steam comes up, and warm him and ourselves at the same time. These little fellows can't stand as much as we can."

So the two boys sat down by the grating and stretched their hands out over the bars. It was a vent for steam and heat from the underground kitchen of a restaurant, and while the tired and overheated cook was grateful for the escape of the hot air, the two little cold urchins were as grateful for the hot air that warmed their poor half frozen bodies. The dear little bird soon began to twitter and chirp as it became warm, and it looked about this way and that, and seeing the two boys, turned its little head on one side and seemed to say:

"Did you bring me here to get me warm? If so, I thank you very much, but I do hope I can go back to the birds in the park. I'd be awful lonesome all by myself, no matter how good you were to me."

Then he twittered some more, but seemed content to sit on Joe's hand while he stroked its feathers.

"What yer going to do with it, Joe; take it home to yer sister Nell, when it gits good and warm?"

"No, indeed; may be its got a sister over in the park, and it would feel bad, anyway, to be shut up in the house. I'd lots rather let it go and be with the other birds than to try to keep it, even if I had a cage, which I haven't, so now, little birdie, here you go."

Joe opened his hand, and away flew the bird with a glad chirp of thanks.

Just then Joe saw a young lady watching him, and fearing she thought he tried to keep the bird, he said:

"I didn't hurt him, miss; I warmed him and let him go."

"I know you did. I have been watching you ever since you sat by the grating, and I want to talk to you, but I can't do it here, the sidewalk is so crowded with people. I know the man who keeps the shoe store: come in here and let me talk with you," said Miss Holmes.

"I wasn't doin' nothin' mean; don't yer send for a p'liceman to 'rest me, will yer, miss?"

"No, indeed; I know you were kind to the bird, and I wan't to be kind to you."

So Joe followed Miss Holmes into the store. She said a few words to the clerk, and he put a chair for her where she could talk without disturbing the customers.

"I heard your friend call you Joe, so suppose that is your name?"

"Yesum."

"Well now, Joe, have you a home and parents?"

"No'm, I hain't got no father nor mother, but I've got a sister named Nell. She 'n me lives with a woman named Mrs. McCarty, since mother died. She is good to us, but often we don't have no fire nor much to eat. That's what made me want to warm the little bird. I'm cold so much myself I know how bad it is."

"Do you love animals? Would you like to leave the city and live in the country?"

"O yes'um, but I couldn't go unless Nell went. I promised mother I'd never leave Nell."

"Where does Mrs. McCarty live?"

"On Tenth avenue and Sixth street. It's an awful old tenement house, and she has only one little room, but it's lots better 'n sleepin' out doors these cold nights."

"Well, Joe, I have a plan in my mind for you and Nell, and perhaps for Mrs. McCarty too, but it will be several days before I shall know certainly about it, but you take me to see Mrs. McCarty now."

So the two started off, and at last they reached the house. It was indeed a terrible place. They climbed several rickety stairs, and at last Joe opened a door. The room was very small, and the two straw beds were on the floor, but they were neatly made up and the room was clean. Even the one little window had a white curtain to it. Joe said:

"This is Miss Holmes; she seen me up town and wanted to see you, Mrs. McCarty."

"Sure an' it's a bright day for the loikes o' me that fetches sich an illigant leddy to me room. Take a chair, miss, it's clane, I scrubbed it the day."

"Yes, Mrs. McCarty, your room looks clean, and I am very glad to see it. Now, Joe, you run off and get as many "shines" as you can. I want to talk with Mrs. McCarty. Where is Nell?"

As Joe passed out Nell came in. She was a bright-looking child, very poorly dressed, but her face was clean and her hair neatly braided, though tied with a piece of string. Nell handed Mrs. McCarty a package of tea and three potatoes. Miss Holmes said:

"Have you enough for dinner to-day?"

"We war just agoin' ter have these three praters and a cup o' tay."

"Well, Nell, you take this 25 cents and get some meat. What do you want?"

"O, me 'n Joe would ruther have bacon nor anything, the gravy is so good."

"Well, then, get 15 cents worth of bacon and ten cents worth of potatoes."

So Nell ran off with a hearty "Thank ye, miss," and as soon as she reached the street, exclaimed to the urchins swarming about:

"There's a grand lady in our room, and she just gimme 25 cents to buy bacon and potatoes with," and was soon out of sight.

"Well, Mrs. McCarty," said Miss Holmes, "I saw Joe warming a poor, half frozen bird, and it made me think he must be fond of birds, animals and all such things, and that he would be happy in the country, and perhaps I can find a home for him, but I don't know about Nell. Are you fond of the children? Would you mind giving them up?"

"Sure an' indade an' I do jist loves thim childers. I lost all me own, a bye and a girrul, and thin me ould man died, may the saints rist his saul! an' so it seems loike as if thim mitherless childers is all I have in the worruld. I do the bist I can fer um. I go out washin' and house-clanin', and arne all I can, but coal is so high we don't allers have a fire. To-day I was paid a dollar that has been owin' me sometime, so I bought some coal and sint Nell after some tay and the praters. There's nothin' loike a cup o' hot tay to warrum a body on a could day."

Just then Nell burst in the room, with her hands full. As she put the bacon and potatoes on the table, Mrs. McCarty exclaimed, "Sure an' its foine dinner we'll have the day! Now, Nell, ye jist rin out and git in the sun somewhere, whilst me'n this foine leddy has a tark."

When Nell was gone, Miss Holmes said, "I know a farmer who lives in Vermont, by the name of Brown, and it may be I can get a home for you all there; would you go if I can?"

"Sure an' would I go! Indade an' I would that. Jist to think o' seein' the grane grass and praters a growin' makes me heart jump and go back to me home in the ould counthry. I was only a slip o' a girrul whin I come to Ameriky, but niver can I forgit the ould counthry."

"Well, I will write to Mrs. Brown and see if she thinks she could find work for you. There is a little house on their farm that they don't use; if you could live in that with the children, and they go to school, how nice it would be. If I hadn't found your room clean, I shouldn't think of doing this."

"Thank ye, Miss. I tries to kape clane, but its not an asy thing to do in a room the loikes o' this."

"I must go now. In a few days I will come again."

"Good day to ye, Miss. May the sints bliss ye for yer gude heart. If ye don't git us a home in the counthry I thank yer for lettin' me see yer pritty face an' hear yer swate voice. May the howly vargin protect ye!"

Miss Holmes went home and told her mother all about these people and her plan for them. One summer, she and her mother had boarded with Mrs. Brown on their farm, so she wrote to her, giving a full description of Mrs. McCarty and the children, and asked, if she would pay their traveling expenses, could they live in the little house on the farm, helping Mr. and Mrs. Brown in any way they could, being paid for what they did in food, clothes, or money, and pay her a little rent for the house, so they would feel some object in working.

In a few days an answer came. "Mrs. Brown was not very well and wanted some one to work for her two days in the week, and there was plenty for the children to do and go to school besides. She would be glad to have them all come, only please not let them bring many things. She had her own idea of tenement houses and would rather provide beds, etc., than have them bring things."

Miss Holmes was delighted that her plan was developing so quickly, and went at once to see Mrs. McCarty. After telling her what Mrs. Brown had written, she said, "Sure, Miss, an' I don't wonder she don't warnt me ould duds in her house; indade an' I'll give 'em all to Mrs. O'Brien what has little enough o' her own, but whatever shall we do for clothes? Nather of us has a dud that is fit to go on the cares with at all, at all."

"I thought of that, and my mother says if you will work for her, house-cleaning for three days, she will fit you and the children all out with good clothes and pay your traveling expenses."

"Sure an' indade, Miss, I'd worruk me fingers to the bone for the loikes of yez and ye mither before ye."

So, after several very busy days for them all, Miss Holmes, Mrs. McCarty and the children started for Vermont. The children enjoyed the journey very much, and when they arrived at the little country station there was good-hearted Mr. Brown with his big sleigh, ready to take them all out to his farm. The children were nearly wild with delight; the merry jingle of the sleigh bells and the swift motion were a great delight to them. They laughed and clapped their hands. Mr. Brown asked if it was their first sleigh ride, and Joe said, "Yes, sir; me'n Nell never had a ride at all before, and the snow in New York gets dirty so quick. It never shines and sparkles in the sun, as this does."

Mrs. McCarty was, of course, more quiet about it, but enjoyed it, nevertheless, and said, "Sure an' I niver see the loikes o' this before; sames as if we was jist a flyin' over the snow."

When they arrived at the little house Mrs. Brown was there to greet them, and her motherly heart went out at once to the children, they looked so happy.

The house had three rooms. In one was a cooking stove and many things to make a kitchen comfortable. In the first bedroom they found an old-fashioned, high-post bedstead with a thick, feather bed on it, and made up with clean comforters. In a smaller room was a single bed for Joe, as clean and comfortable as the big one. A little pantry opened from the kitchen and on its shelves were a pan of rich milk, a pat of golden butter, and many good things the children had never tasted in their lives. After they had seen everything, Mrs. Brown said, "I know you are all tired. We will leave you to have supper. The teakettle is boiling and you will find plenty to eat in the pantry. Hope you will have a good night's rest. After breakfast come up to the house and we will tell you the plan we have for you."

"Good night to yez; sure an' may the howly vargin watch over yez and all the saints bliss yez for yer gudeness to a poor widdy woman and the mitherless childers."

Mrs. Brown and Miss Holmes went on to the big farmhouse. The old-fashioned fireplace, with its strong fire-irons and big backlog, gave the sitting room a most cheerful look. Mr. Brown came in and they had a long talk.

The next morning, bright and early, came Mrs. McCarty and the "children." "The top o' the marning to yez," was her greeting to them.

"Good morning; come in here by the fire. It is too cold to talk out there. How did you all sleep last night?"

"Och! Sure an' indade we shlept that sound we niver wane o' us waked up at all, at all, till a rooster crowed this blissid marning, and Nell, the poor childer, niver heered the loikes o' it before, and was that scared she grabbed holt o' me. I tould her it was a pritty rooster a sayin' good marning' to her. Thin we all got up an' the childers they found the six hins and the foine rooster in the little yarrd, and I jist thought Joe'd fly out o' his skin, he was that glad. Are the chickens to stay there all the toime?"

"Yes; they are worth fifty cents each in the market, and Joe must help me feed my chickens, at fifty cents a week, till he has paid for his, and Mr. Brown will sell him wheat and corn to feed his. We want you to earn all you have here, you will enjoy it so much more. Joe is 11 years old and he can do many things to help Mr. Brown. He will pay him fifty cents a week. Nell is so little and only seven years old, but she can bring in chips for me and do many little things and shall have 15 cents a week for the present. You, Mrs. McCarty, can work for me two days in the week at $1.00 a day. If you like, you can buy all your food of us, and we will charge you $2.00 a month rent for your house. If you want me to, I'll keep account of it all in a little book, and pay you each month what you have left, after taking out your rent and supplies."

"Sure, marm, an' I shall be as rich as a quane an' I'm that proud o' me little house. I'll kape it as clane as snow all the toime, sure indade, an' that I will."

"The children must go to school when spring comes, and I have three friends who live not far from here and would like to have you work for them one day each week, and they will pay you $1.00 a day, so it seems to me you will have a good living for yourself and the children."

"Indade an' we will that, sure, an' I shall save all I can for Nell so she can larrun to play on the pianny and be a foine leddy when I'm dead an' gone. May the sints rist me saul."

Miss Holmes went home the next day, and the children had a fine sleigh ride to the station and back. The days went quickly and happily. They were all so busy, and the pure air and good food made the children grow rapidly.

The next Christmas, Mr. Brown gave Joe a pretty little Jersey calf. He was so gentle with her and loved her so, she soon learned to follow him all about the barnyard. Joe had a good chance to show his love for animals and was soon able to milk the cows and earn more wages.

Years passed and good, kind Mrs. McCarthy grew too old and feeble to work, but Joe and Nell earned enough to give them all they needed, and Nell kept the little home bright and clean. Joe had a sitting room built on, so they were very comfortable.

Mr. Brown grew feeble and needed more help, so Joe went to New York and hunted up Sam, who had grown into a good-looking young man. After he had been at the farm a few years, he and Joe built more room to the house, and Sam and Nell were married one bright, June day in the little village church. She looked very pretty in her snow-white muslin dress. They all lived together and Mrs. McCarty never tired of telling Nell's children how "Joe warrumed the little birrud an' the foine leddy seen him, and was that plased wid him for it she wrote a letther and got this foine home for 'em all. Sure an' we can niver be thankful enough an' can niver pay her at all, at all."

A few years after Joe wooed and won a rosy-cheeked maiden in the village and built a good house. Mr. and Mrs. Brown gave up the care of the farm to Joe, Sam and Nell, and never regretted having opened their hearts and helped them to a good home.

Domestic Economy.

Tested Recipes.

Written for the Rural Press by Ada E. Taylor.

Strawberry Cream.—Cover half a box of gelatine with half a cup of cold water, and let soak half an hour. Mash a quart can of strawberries and press through a sieve to remove the seeds; add a cup of sugar and stir until dissolved. Stand the gelatine over boiling water, and when melted, strain it into the strawberry juice; mix; turn into a tin pan, set on ice and stir until it thickens, then add a pint of whipped cream; stir until thoroughly mixed, pour into a mould and stand in a cold place to harden.

Chocolate Pudding.—Boil one pint of milk, add half a teacup of butter, a teacup of sugar and three ounces of grated chocolate. Put on to boil, let cool, and add the beaten yolks of three eggs. Bake a sponge cake about an inch thick, pour the custard over it, and bake. When done, cover with meringue made of the whites of the three eggs stiffly beaten, with half a teacup of sugar and a teaspoonful of vanilla. Set in the oven until slighly browned.

Cocoanut Balls.—Bake plain white cake in sheets and cut out when cold, with a sharp biscuit-cutter. Dip them in frosting and then in cocoanut, until they look like a ball of snow.

Tartare Sauce.—Rub the yolks of two eggs to a paste with a tablespoonful of dry mustard, a teaspoonful of salt and a quarter of a teaspoonful of pepper. Add gradually, four tablespoonfuls of oil, beating until a thick jelly, then very gradually, three tablespoonfuls of vinegar, and a teaspoonful of onion juice. Lastly add a tablespoonful of chopped capers and one of pickles.

PATRONS OF HUSBANDRY.

The Week.

The past week has been another quiet time in the Grange canvass. For various reasons, Worthy Master Davis was unable to keep his appointments with Temescal and Eden Granges, and the meetings were only fairly successful. In addition to Mr. Davis, Past Master Coulter and Past Master Flint were expected to be present, but only Mr. Coulter was able to keep the faith. He did his best, and two very enjoyable meetings are reported, although it must be confessed that the attendance was small and the interest confined chiefly to persons already enthusiastic Patrons. Perhaps, on the whole, these meetings of a few faithful members are as useful and productive in their ultimate results as larger assemblages, and it is as true in fraternal work as in the Service of a higher sort that there is always a blessing when two or three are gathered together. Mr. Davis attended the Dixon meeting, and there was a large crowd and an exceptionally interesting occasion. The meetings to have been held by Alhambra Grange at Martinez on the 11th and Valley Grange at Pacheco on the 12th, were postponed on account of sickness in the neighborhood, which made it impossible for many members to attend. During the coming week, Mr. Davis has no appointments, and will probably remain at home in St. Helena attending to the desk duties of his office.

Past Master Overhiser and Worthy Lecturer Huffman have already started on their northern trip, heretofore announced in connection with the Grange canvass, and were to have been at Vaca Valley on the 18th. They are booked for Grimes on the 20th, Antelope on the 22d, Orland on the 23d, Millville on the 25th, Anderson on the 26th and 27th, Red Bluff the 28th, Nord the 29th and Chico on the 30th. Wherever either Overhiser or Huffman may chance to be, there is always a good Grange meeting; and when they combine to pull in double harness, as they are doing on this trip, no assurances need be offered of a series of meetings exceptional in their interest to Grangers and farmers generally.

The Grain-Bag Committee, whose interview with the Director of San Quentin Prison we referred to last week, have made no formal report. It is understood that they do not consider the question closed by any means, and that they will not cease their efforts until the price of prison bags is put down or the prison director can give a better reason than he has yet set forth for not doing so. We print on another page a very notable communication from Hon. C. P. Berry, a member of the committee, who was unable to join his fellow members in a visit to San Quentin. He states very clearly and forcibly the view held by the Grangers interested in this movement. The logic of his position is simply unanswerable.

The Picnic Season.

We fell into an error last week in the matter of picnic dates, due to no fault of our own but to a mistake of a printer who published the official circular of announcements. The dates were all wrong, and even the State Secretary, at whose office we have made inquiry, is unable to set them right. We trust the picnics will go on just the same, that the sky will be as blue, the lunch baskets as full and the laughter as merry as if the State officers at large knew all about it.

The *Marysville Democrat* has the following to say concerning the picnic to be given at Yuba City on May 4th: "The annual spring reunion and picnic to be given in Yuba City on Wednesday, May 4th, by the Grangers, bids fair to eclipse any previous demonstration given by that Order. While the usual order of exercises will be carried out, many new features will be introduced to entertain and amuse the public who will assemble on that occasion. The principal speakers will be Gen. N. P. Chipman and Grand Master, E. W. Davis. A May-pole dance by 16 little girls, will also be a part of the program. Brass and string music will be in attendance, and games, races, etc., have been arranged. Further particulars will be given later on." Concerning the same above, the Sutter *Independent* has the following: "The time has come when our people should begin to think about, talk about, and prepare for the grand Grange Reunion which is to take place in Yuba City, May 4th. This is to be not a picnic for Yuba City, but for the whole county and all the surrounding counties. It will be held under the auspices of Yuba City Grange, but it is to be a reunion of all Granges within accessible distances and of all the people who choose to come. This annual gathering is already celebrated for the excellent manner in which it has been conducted, and though it will be difficult to excel former efforts, the attempt will be made this year. The whole category of possibilities in the way of entertaining features will be overhauled and such selections made as long practice and observation in such matters may dictate as most attractive. Gen. N. P. Chipman of Red Bluff has consented to be present and deliver an address, and we can assure our readers who have not heard him that that alone will be worth coming many miles to hear. The Master of the State Grange, E. W. Davis, will also deliver one of his splendid addresses. Now you want to begin to talk it up and arrange your plans and business so that you can be sure to come and bring all your folks along."

The Attitude of the Grange.

Iowa Homestead.

The attitude of the Grange and its work is explained far better by the following letter to State Lecturer J. W. Stockwell of Massachusetts, and his reply, than it can be done in any other way, as they were written without any expectation of publication:

"*To the Lecturer of the Massachusetts State Grange:*—It was with pleasure I received your communication to the Lecturers of the local Granges of the State, setting before us so clearly the work needed to be done severally and mutually by us in order to succeed, that the advantages of the Grange may become so apparent to the members as to arouse intense enthusiasm and abiding interest among them, and so apparent to those outside the Order that every worthy family in agricultural communities shall find a home in our Order. Then can the great objects of this organization be realized, and not till then. God speed the day! So far as possible, I will use my best efforts to second yours for the bringing about of this desired end, by raising the standard of Grange work and of literary work, and any communication will be most thankfully received. My duties as pastor of a scattered flock limit the time I would like to devote to the work. I accepted it with a desire especially to help the young people. Yours fraternally, A. B."

In reply, Mr. Stockwell writes: "DEAR BROTHER: Your letter is at hand and its contents gladly noted. It seems strange that such an organization as the Grange—so helpful, so in accord with the highest instincts of our better natures, and the teachings of God's word, should not be more generally embraced by those whom it seeks to serve. It is profitable to every man, intellectually, morally and financially. Appealing to the lowest, it has benefited and is benefiting every farmer by the laws it has helped to enact and the benefits that are secured under them more than all the dues or other expenses incident to membership tenfold. Besides, in its ritual founded so entirely on God's word, every line so imbued with His spirit, every teaching so filled with brotherly kindness and unselfish love, it cannot but draw us nearer to our Heavenly Father, better fitting us to do His work here, and doing that, we shall be prepared for His praise in the Heavenly Grange. When the teachings of the Grange in their fullness become the living of us all in our work, we shall realize, as we cannot now, the fulfillment of the prayer, 'Thy kingdom come.' Thanking you for your earnest work and inspiring hopes, I am very truly and fraternally yours, J. W. STOCKWELL."

Grange Meeting at Lodi.

The Lodi *Sentinel* of April 16th reports that an interesting meeting was held there on the previous Saturday under the auspices of Washington Grange. In the morning the Grange initiated seven members in the third and fourth degrees, at the conclusion of which the Grange and invited friends enjoyed a splendid banquet at the Clements Hotel. At 2 o'clock the exercises were renewed in the town hall. After several selections by the Clements Brass Band, Messrs. Flint and Walton addressed the assembled farmers and discussed the questions which affect their material welfare. Hon. B. F. Langford, in a forcible and logical address, won the sympathy and convictions of his hearers, after which the meeting closed with a renewal of the bonds which hold the farmers together.

Chaplain Goodenough at Watsonville.

Chaplain Goodenough, whose eloquent and able presentation of Grange doctrine won such hearty applause in San Jose last week, has continued his travels in the counties farther south, and was reported on the 8th as having addressed a splendid meeting of Watsonville Grange, held at the Opera House. Walter H. Bowman presided. There was music by a Grange orchestra, singing by a Grange choir, and recitation by Mrs. Josie French.

Mr. Goodenough spoke of the necessity of organization to protect and promote the interests of labor, and admitted that the lack of organization was a detriment to the agricultural industry. One of the principal things accomplished by the Grange was that it had taught, and is still teaching, the farmers how to organize for their own protection and make their power as an important factor in the Government felt. The isolated condition of the farmer had a tendency to make him self-reliant and independent. He was too apt to hold aloof from the organized forms of other labor associations, and be content to take care of his own individual interests. This peculiar independence of action had its peculiar drawbacks, and it was the duty of the Grange to divert it into other channels.

He was pleased to say that the Grange had passed through the period of test and uncertainty and was now recognized as an established and permanent institution. Its members were no longer "crazed" or "cranky." They were able to study out the conditions that met them and determine with good judgment their course of action. They had impressed the legislators of the land with the fact that they were backed by brain and judgment, so that when the National Grange sent a delegation to Congress to demand the rights of the farmer, it was listened to with attention. The Grange really represented the farmers of the land, and it was accordingly respected by Congress. Of the beneficial legislation secured by the Grange, the speaker mentioned the passage of the Interstate Commerce Act, and the checks that had been placed on that gigantic trust, the Standard Oil Company. Among the matters that the Grange proposed to call to the attention of the Government were the suffrage of woman and a system of rural mail delivery. It was also proposed to obtain the right to establish a cooperative system of fire insurance for farmers.

Mr. Goodenough urged his fellow Grangers to work for the reforms they needed in spirit of Christian charity, brotherly love and kindness. He cautioned them to remember that they were made of common clay with those against whom they complained, and added that perhaps there was not one of them who would not pile up millions as fast as Jay Gould if they had the ability. He protested against unjust exactions, but he protested in a spirit of good-will. Hate and violence never accomplished anything good in this world. To gain good it was necessary to learn wisdom and be loyal to the cause.

FOR KILLING CATTLE.—One of the indirect results of the adoption of electricity for the execution of criminals, says the *Electrical Review*, is the consideration of its suitability for superseding the poleax for the killing of cattle. Humanity can be as well served by the use of electricity in public slaughter-houses as in prisons, and the question is shortly to be set at rest in Scotland. The abattoir at Aberdeen is about to be lighted by electricity, and as soon as the alternating plant, which will be employed, is installed, a trial will be made of the capabilities of the electric current for dispatching oxen. If it is proved that the current has no detrimental effect on the quality of the meat, it is anticipated that this new application will soon become general.

CITY REFUSE.—The disposal of city refuse is no more profitable in Edinburgh than in other large cities, notwithstanding the glib talk of some who find great profit—theoretically—in disposing of it to farmers. The Edinburgh Councils lately sent out 1521 circulars to farmers in their vicinity, inviting tenders for about 51,900 tons of refuse and manure, or about one-half of the yearly product. Only 47 tenders came in, and these under conditions that practically required the city to pay all expenses of transport, and even, in some cases, to pay the farmers so much a ton for accepting it.

PRINCESS CHILLED PLOWS
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PACIFIC AGENTS,
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MENTION THIS PAPER.



GALE CHILLED PLOWS
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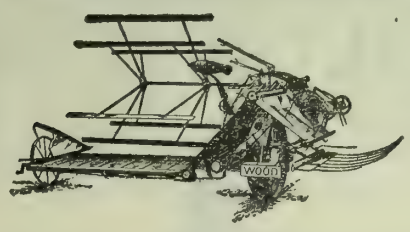
100 Per Cent Profit

IN USING WALTER A. WOOD MACHINES.

Menlo Park, Cal., Jan 27, 1892.

Frank Brothers Co, Nos. 33 and 35 Main St., San Francisco, Cal.:

Gentlemen—On the 23d instant you wrote asking about the new Single Apron Twine Binding Harvester that we bought from you last year. Will say that we ran the machine for about 20 days, and found that the Single Apron was a great improvement over the old way of elevating long straw, as there is nothing to retard the free flow of the straw to the Binder. Three four-year-old colts pulled the machine all the time, without any exertion more than would be necessary for two of them to pull an ordinary mowing machine; there is no perceptible side draft, and the machine can be perfectly balanced by the driver's weight so there is no weight on the horse's necks. **The Binder is as near perfect as possible, and never gives any bother** more than to shift it to place the band in the middle of the bundle.



We find the Single Apron a great improvement over the old machines of three aprons, and think that **the machine will save its price in one season,** on account of not threshing out the grain, as do two aprons running together. Will say we are perfectly satisfied with the machine.

Yours truly, COOLEY BROTHERS.

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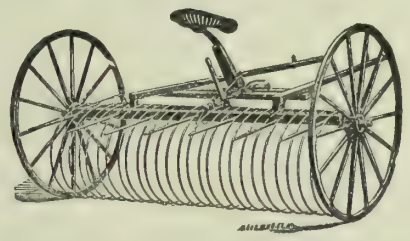
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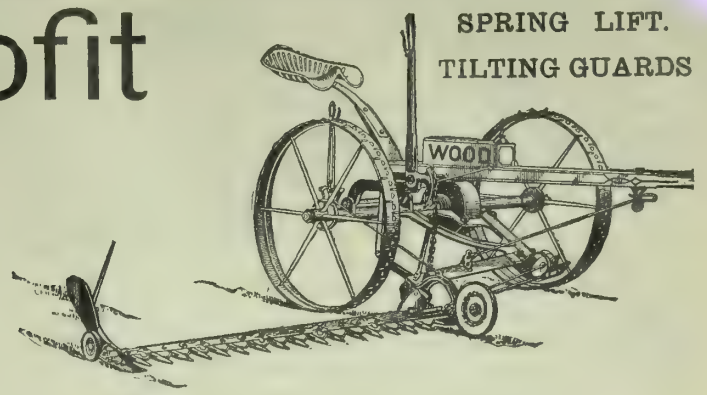
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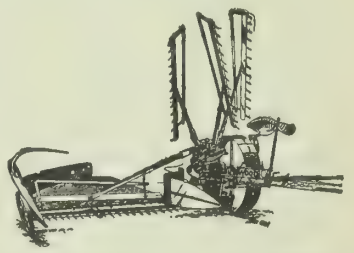
Livermore, Cal.

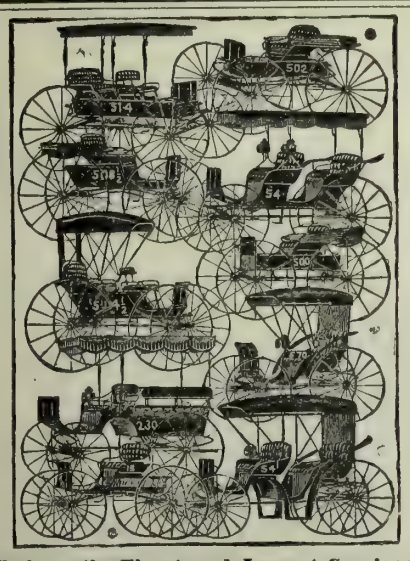
After trying to cut my crop last year with a good ——— mower, and could not on account of the squirrel grass and clover, I purchased from J. H. Dutcher one of his **Walter A. Wood Mowers, with which I cut all my crop, and also very difficult pieces of hay for others,** and will say that it is the **very lightest running mower** and the **least liable** to get out of repair of any I ever used or saw in use.

HENRY R. CRANE.

WE SUM UP BELOW WHAT ARE CONSIDERED THE CAUSES OF THE SUPREMACY OF THE WALTER A. WOOD INCLOSED GEAR MOWER:

Tremendous strength.
Lightness.
Simple construction.
High class steels, malleables and brasses.
Direct underdraught through the floating droop frame.
Only purely floating cutting apparatus.
Smooth action without jar and tremble when cutting.
Both wheels always driving with full power.
Wide frames and wide wheel gauge for the wide cuts.
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Milled malleable guards bolted on.
Wrench tight nuts and tightly fitting bolts---driving fits.
Wood's special steel sections and guard plates.
Brass boxing, lock nuts, guarded pitman.
High wheels.
Comfortable double-spring seat.



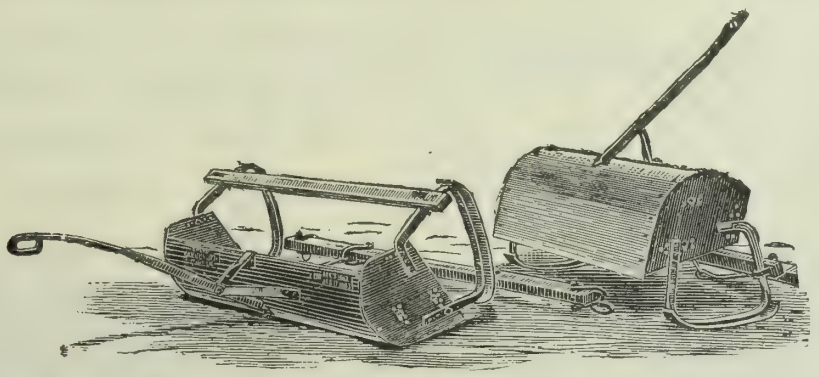


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Mr. Jas. Porteous, Fresno, Cal.—Dear Sir: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

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The hotter the season the more abundant the crop. Nothing like it for sprinkling private roadways, for the distribution of liquid manure—it will not clog—or for sprinkling liquids for poisoning insects.

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SQUIRREL EXTERMINATOR.

This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

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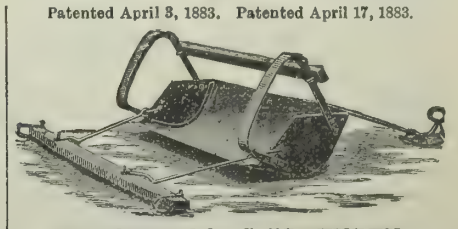
Shrewd farmers get the **"Planet Jr."** Catalogue to **study** it. Be sure you have the latest (1892) edition, for some **novelties** have been added which surpass all previous machines. Sent free on application to the manufacturers.

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Porteous Improved Scraper

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Manufactured by G. LISSENDEN.

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This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

☞ This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, **$40**; Steel two-horse, **$31**. Address all orders to **G. LISSENDEN, Stockton, California.**

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City vs. Country Life.

Advantages Possessed by Rural Dwellers.

There is no room for doubt that moral and material interests will be served by attracting population from the city to the country. To do this something more than the beauties and blandishments of the country are needed, for these come in competition with the attractions of the city. On its streets by day pass processions of humanity. In work and in pleasure a keenly increasing competition appeals to the gain-getting ingenuity of men, and from the fakir on the corner who lathers himself with magic soap, or imitates birds on a bit of tin, or shouts to sell magic medicines that cure every thing from a bad breath to bad manners, clear around to the merchant who enlists art in the decoration of his windows and the display of his fabrics, and from him to the politician whose picturesque lies are a part of the kaleidoscope of a city, there is a concert of sights and sounds and sensations, that, put behind and lost, leave a sensation of loneliness. More than this there are refinements in great cities, and the means of polishing the taste and the manners which are strong attractions to many.

But the discriminating eye looks upon the city as an effect and penetrates beyond its shows and shams, its vices and virtues, its sorrows and successes to its cause. What put one stone upon another, and paved wide and far-stretching streets, and carved columns, frescoed ceilings and made the city? It is but a transmutation. The city was dug out of the ground by country people. All that is in it ripened in yellow fields, blushed in orchards and purpled on vines. Labor produces the wealth that builds cities, and without rural production the refinements of cities would be impossible. Men admire architecture, that art of poetry in stone which makes cities attractive. But the country plodder is more than an architect. He studies nature, and wise in her ways draws the furrow and plants the tree and vine, and following his foot marks in the fresh ground rise structures that art cannot imitate. The building of a single head of wheat, the planning of a blossom or a leaf are beyond the power of artist or mechanic. Nor can oil and brush, square and compass, plane and saw combined, gather the conditions which coax nature to their construction. The farmer, the rural laborer, touches the button, and unless he touch it, who will do the rest? He swings his hoe or drives his team afield, and cities rise like the mirage. When and where he is not, they are not. Stop rural production in California and the coyote would sleep on the housetops of our cities within five years. But dismantle the cites and distribute their population and the plow boy would still chorus with the whistle of the meadow lark and seed-time and harvest would witness the planting and the gathering into barns. The farmer in California can produce all that he needs to eat and drink and wear. Effects may disappear in one place and reappear in another, the freaks of commerce, deflections of trade and rise and fall of mercantile fortunes are not as easily estimated as the flight of a bird, but the cause of commerce, the cause of cities, the cause of trade, is steadfast as the soil which shelters it. That cause is rural production.

In no other part of the earth are its conditions as constant and the needful toil to promote it as light as in California.

Why will not the youth of cities exchange the cigarette and dice box for the plow and pruning hook?

By this is meant that the life-sapping cigarette and devotion to the goddess of chance are the special vices to which boys are exposed. They represent that hideous train of temptations and transgressions which deform city life.

These surplus boys who are not absorbed into the industries and activities of the cities should be taken up by the country. They should breathe the better air, partake of the higher moralities and put their hands to the noble productions of the country. Every ranch in California should have room for the employment of boys and young men. I regret that this is not the case. I regret that rural labor in this State, in the quarters furnished to it and in many other respects, approximates the conditions of rural labor on the European continent.

In the East the "hired men" on the farm are part of the family. Their conduct is under domestic restraint and discipline. Their manners are formed in the atmosphere of a home. When their earnings have accumulated so that they may own land and marry, they carry into their own homes the example of virtue and gentleness that has been before them during the years of toil that have led to independence.

No attention need be called to the different economic organization in this State. Here the daughter of one farmer does not take service in the household duties of another farmer on terms of perfect social equality and recognition, nor do the sons of farmers take work and wages of their neighbors on like equal terms.

Whether the fault be in large landholding, and the distance it puts between neighbors, with its bar to rural society, or whether the reason lie elsewhere, the fact remains.

My own judgment is, the remedy is to appear in that multiplication of small, highly farmed, and fertile plantations which I see is in process in Kern county.

The trend of population from country to city is surely somewhat due to a desire to escape the isolation of rural life, where the homes are so far apart that the evening lamplight is not seen from one home to another and the watch dog's bark wakes no answer but the echoes of the night.

This accounts for the absence of a coherent public opinion, a continuity of public purposes, a tendency of each individual to retain his atomic angles uncombined with other atoms.

When Daniel Webster was in full glory, in important respects the foremost intellectural character of the age, he returned to Boston at the close of a session of Congress, worn with work and fixed upon nothing but rest. Just as he had arranged for his vacation, a number of plain men from his old home in New Hampshire called on him with the request that he go back with them and defend a man who was about to be put on trial for crime, in a matter where purely circumstantial evidence seemed to foreshadow his conviction while his friends believed him innocent. Then ambassadors flattered Webster's professional pride, appealed to him in the name of his native State, and sought by every means, even to a large fee, to induce him to go with them. But Webster was obdurate. He was tired and his refusal grew firmer as the importunity grew stronger and finally reached the ultimatum. He would not go and no inducement would move him. The disappointed committee rose, with sad faces, and as they shook hands in parting, one old man said, "Webster, under the circumstances, after it was all talked over, the neighbors thought you would come."

Instantly Webster's whole manner changed. The word "neighbors" brought before him the vision of the New Hampshire hills and the homes clinging to them, and the wholesome rural life of the people who were neighbors to each other, and between whom was the higher law that legislatures cannot make, the ineffable authority of the neighborhood, which is called public opinion. He begged the committee to wait a moment while his luggage was packed and the committee bore the divine Daniel back to the granite hills in triumph, and in obedience to the wish of "the neighbors," he defended and delivered the man from bonds and prison.

Small holdings, social neighborhood association, the sense of social equality are the refining and civilizing influences which make for the elevation of a community, and are the wholesome substitutes for the close contact of great cities.

Kern county is making pleasing progress toward the conditions outlined. It is a region that has great charms for the lover of rural life, and the fertility of its soil is a bond endorsed by God, promising to redeem every obligation that it owes to the toiling farmer for the labor he invests upon it.

You may not draw those now in the fever of city life, but your region, with its large possibilities developed on the line now evident, will save to robust and honest rural life, the youth born in the midst of your inspiring scenery.—John P. Irish in The Californian.

BRANDY DISTILLATION.—Those engaged in brandy production will be interested in a pamphlet just issued by the Viticultural Commission on the subject. It contains a good historical sketch of brandy production in California, the grapes best for this purpose, the most popular forms of stills manufactured in this State and description of European methods, including an illustrated treatise translated from the German on cognac manufacture. It is a timely publication and should be secured by all who are engaged in any branch of the brandy interest. Application for copies should be made to the Viticultural Commission, 317 Pine street, San Francisco, enclosing postage of 4 cents for each copy.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. E. F. Giddings as above.

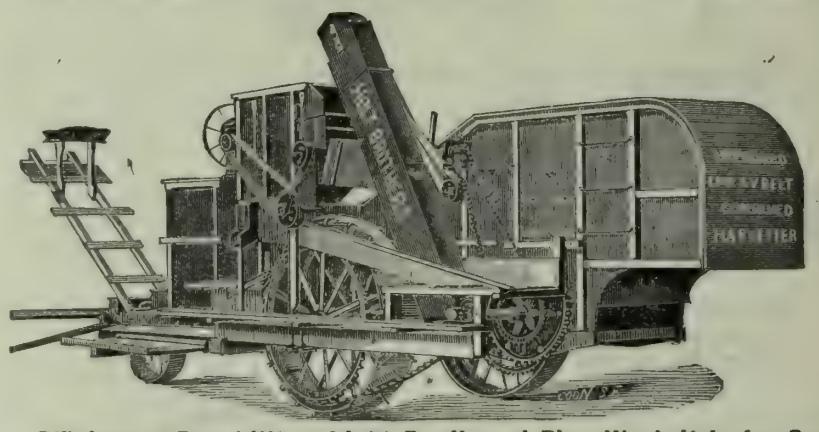
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For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

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By using CARBOLINEUM AVENARIUS 1000's of Dollars will be Saved.

FARMERS, Orchardists, Wine-Growers, Hop-Growers, Chicken-Ranchers, let us tell you:

Save money and work by painting your Fences, Barns, Stables, Troughs, Stakes, Poles and all wood exposed to moisture or climatic influences with the celebrated Carbolineum.
IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.
It is at loggerheads with Insects, Chicken Lice and Vermin. They don't like Carbolineum; they keep away.
It is an enemy to Rats and mice; they lose their appetite for wood treated with Carbolineum.
It disinfects Barns and Stables and destroys Microbes.
It prevents Shingles coated with Carbolineum from rotting, warping or cracking.
It makes Rope nice and pliable, it beats tar coating.
It contains no acids or injurious or poisonous ingredients.
It is THE BEST WOOD PRESERVER IN THE WORLD. We state facts and have testimonials genuine and indisputable.

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ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

Produces all fruits possible to both the temperate and semitropic zones.
The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
Owned by the largest land company in California.

The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

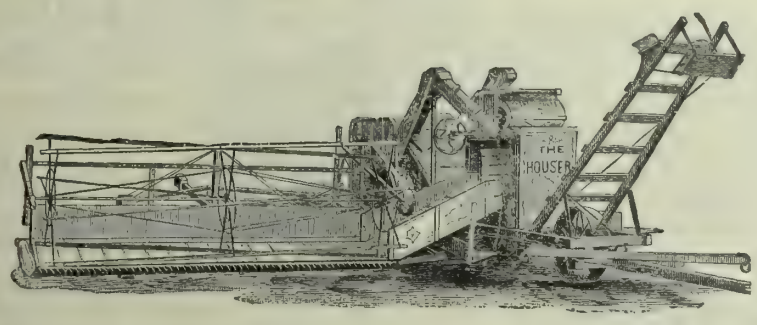
This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

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The "HOUSER"



LEADS ALL OTHERS.

Strongest & Most Durable.

Lightest Draft and Most Popular Machine on the Coast.

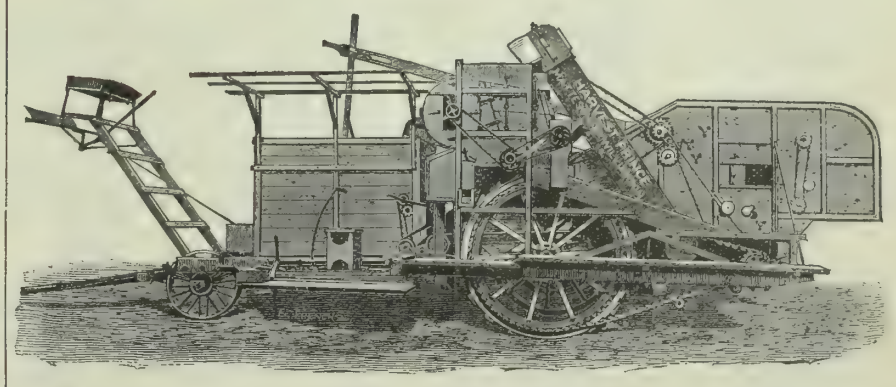
SEE OUR NEW ANGLE STEEL SICKLE BAR, LAUFENBURG SHOE AND "STAR" CLEANER AND NEW ANGLE HEADER.

SEND FOR CIRCULARS, ADDRESS

STOCKTON C. H. &. A. WORKS,

Box M. STOCKTON, CAL.

New Improved Belt Combined Harvester "PRINCE."



Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

HARVEST "PRINCE."

It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by 4-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, mak'ng an average of 35 acres per day. FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

STOCKTON, CAL.

Farmers' Alliance.

Executive Committee Meeting.

The Executive Committee of the Farmers' Alliance held its first session of the quarterly meeting, which will last about a week, at the rooms of the Chamber of Commerce Monday.

The members present were John S. Dore of Fresno, Chairman E. M. Wardall, of Los Angeles, J. B. Johnson of San Jose, L. M. Landsborough of Sacramento, and Secretary Jesse Poundstone of Colusa.

The meeting, of course, was executive, at which the main proposition discussed was the Nicaragua canal question, upon which President Marion Cannon has taken a pronounced position, who feels that the various bills before Congress upon that question will result, so far as the producing classes are concerned, in the control of the company by capitalists and schemers, just as the great transcontinental railroads have been.

The project of building the canal was indorsed by the adoption of the following resolution without dissent:

WHEREAS, The Farmers' Alliance and Industrial Union of California, through its various organizations, State, county and subordinate, has unmistakably placed itself on record in regard to the Nicaragua canal; and, whereas, it has been the policy of the press of the State to misrepresent the position of the Alliance as taken on this question; therefore be it

Resolved, That the Farmers' Alliance and Industrial Union of California, speaking through its Executive Committee, positively and emphatically declares that it is in favor of the canal, and demands that the Government of the United States take all necessary steps for the speedy construction of said canal, and own and operate it in the interest of the commerce of the United States and the world.

The committee will hold meetings every day this week, and, following out the platform and policy of the St. Louis Convention, will discuss what is the best course to pursue with respect to the political situation in California. The St. Louis Convention of last year decided to place a third ticket in the field. The two most prominent candidates in the field named for President are James B. Weaver of Iowa, and L. L. Polk of North Carolina. Whether the delegates to be selected from California shall favor one or the other is a matter which shall come up for discussion. What is likely to be done in giving moral support to one gentleman or the other is something that the members of the committee will not discuss with outsiders, but there is no disguising the fact that the majority lean toward General Weaver because he is a Northern man. At any rate, it is the general opinion that Weaver will be the nominee.

The committee, it is said, will go over the lines upon which the campaign should be conducted in California very thoroughly, and the necessity of having a newspaper in San Francisco will bear no unimportant part in the deliberations. The committee is uncertain whether it is best to establish a daily or weekly in this city.

There seems to be no question that Mr. Cannon will be put up for Congress in the Ventura district, and Mr. Dore in the new district, of which Fresno is regarded as the central political point.

At the convention of the Ventura Co. Alliance, held at Ventura, April 1st, Mr. J. B. Alvord was particularly happy in his introductory remarks, which we find reported as follows in the Ventura *Unit:*

I suppose there is not an organization or body of men on the face of the earth just now who are receiving so much advice as the Farmers' Alliance. It is all gratis, which is very peculiar, considering that a great share of it comes from those whose advice usually comes very high, the legal fraternity. Everybody, nearly, outside the Citizens' Alliance and labor organizations, chips in. The banker, the merchant, the manufacturer, the capitalist, the spectator, the railroad man, and even the ministers of the gospel, especially those whose congregations seek to cross the Jordan in palace cars, volunteer whole volumes of advice. None are quite so generous as the third-rate politician and the fourth-rate country newspaper. At first we were told that there was no need of the Alliance anyhow; that all the evils which called it into existence were imaginary; that the way to prosper was to raise something to sell; to raise more corn and less hell, etc.

When the Alliance became a fact, when its numbers climbed into the millions, it was patted on the back and told that, as a social and brotherly sort of an affair, it was all right; that after working 12 or 14 hours every day in the week, it was a fine thing for farmers to brush a little of the hayseed out of their hair and to spend a few hours of a Saturday evening in cultivating neighborly feelings and the social graces. But they should not go beyond this; they should not trench on the domain of the speculator and middleman; that it was wrong to make combinations in buying and selling, that would be trying to corner the food of the poor, etc.

But, behold! Now they say that as long as the Alliance confined itself to its social and business features, it was a good thing; but they should never go into politics, that is, except to follow the experienced fellows. There the line should be drawn and drawn hard. Yes, you cannot take up a partisan newspaper now without finding whole columns devoted to showing what bad policy and what bad taste it is for farmers to go into the third party.

The third party! What a nightmare that phrase seems to be to the old politicians. To the Republican, it is political blasphemy; to the Democrat, sin against the Holy Ghost. I am not sure that they will not be recommending it to keep owls out of the henroost and crows out of the corn.

But, my dear friends, why should there not be a third or fourth or fifth party, if they be necessary, that honest men may vote according to their convictions? For my part, I am willing to vote with any party which I believe, if successful, will strive to legislate for equal rights for all and special privileges to none. And when the purpose which called any party into existence is accomplished, I am willing it should die. Yes, I am even willing to hurry its exit a little and help bury the corpse.

Is the Alliance Doing Good?

Correspondence American Stockman.

This is a proper and practical question such as every practical farmer who contemplates joining the organization should ask, and we propose to devote a few moments to an affirmative answer.

First—It is an organization with a State and a national head and therefore brings the agricultural classes in conjunction with one other. All departments of labor and trade are organized and have mediums through which they express their demands, let other classes know their desires, and especially what resolutions they wish enacted into laws.

* * * * * *

Second—The farmer does not wish an elaborate and expensive organization. It is available power he is after. Now, the Alliance of the north is simple in ritual, has the elements of power, and now offers all secrecy necessary for a reserve force in case of an emergency.

Third—Among the long-felt needs of the farmer and his family is a place for literary cultivation, the exchange of views and comparison of experiments. Too often after the farm boy has quit school he ceases to practice public speaking. He has no place to go where he can exercise this talent, and when he finds himself with other men, in a political convention, he is silent from force of habit rather than from the lack of having something to say.



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6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

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1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

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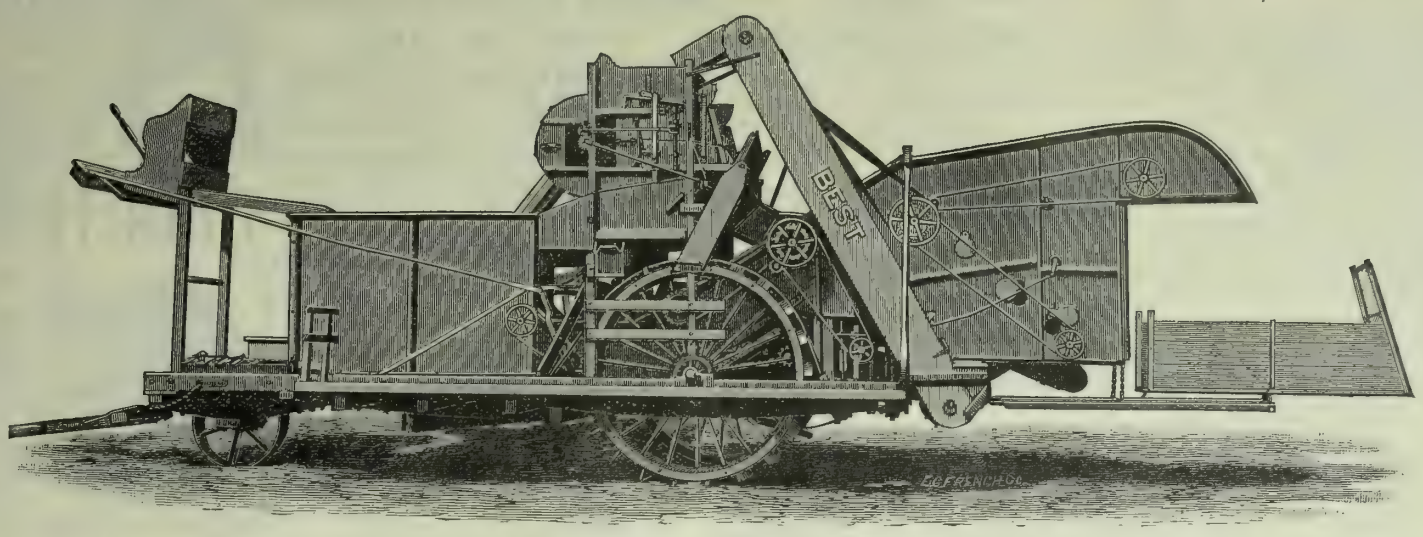
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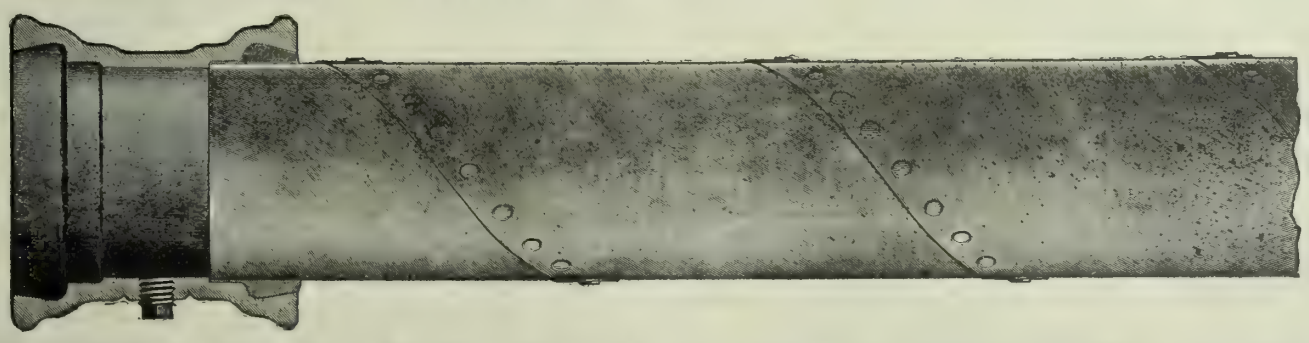
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The word massage signifies motion and pressure applied to parts of the living body for curative purposes. Massage is the application of motion and pressure to the soft tissues of the body by the hand of the operator, and should be given under the guidance of the educated and experienced physician. Massage is not good for every disease which afflicts the human family, and a knowledge of anatomy and physiology is essential to the proper application of massage, which is based on plain physiological laws, and has nothing in common with magnetism; nor is it a form of exercise or gymnastics, or a system of rubbings. There should be no surface friction or skin rubbings in the proper massage treatment. In a general way, without going into details, it may be described as a system of kneading, compression, rolling, wringing, percussion, and vibrating the soft tissues of the body. The Swedish movements are a system of slow motions, with and without resistance, made by the director or physician. They are often combined with the massage treatment. The rationale of this method of treatment is that the circulation is invigorated, oxygen is carried to the tissues more rapidly, the blood is purified more effectually, and the carbon and debris of the body are liberated more freely. This is done without any expenditure of will power or nerve force. Old adhesions are broken up, and inactive muscles are brought into action. The forces of the organism are mostly expended through the circulatory and muscular systems, and less vital energy is exhibited in the nervous. The expenditure of vital power is accelerated. It is a law of vitality—of all living things—that the development of vital power and strength is accomplished only by augmenting the expenditure of this same power. The athlete knows by continuous effort and exertion that by great expenditure of vital power he can gain the strength and power to perform his herculean task. So the horse trainer is aware of this law, and takes advantage of it in developing his horses. This is the philosophy of the massage and Swedish movement treatment. It is not only adapted to the sick and diseased, but is a method of treatment highly beneficial to the business man or woman whose incessant application in the office has enfeebled his or her vital energies, and made them feel the need of recuperating their physical powers.

"Seeing Snakes."

There is an optical illusion, usually the result of debilitated health, consequent on over-indulgence in alcoholic liquors, that frequently takes the form of "seeing snakes." An authority thus explains this phenomenon to the *Optician:* The eyeball is covered by a network of veins, ordinarily so small that that they do not intrude themselves visibly in the path of the light that enters the sight, but in the course of some disease these veins are frequently congested and swollen to such a size as to become visible, and when this happens the effect generally is to appear as if there were an object of considerable size at a distance from the eye. Of course, this vein is generally long, thin, and sinuous, like a serpent, and the figure seen is frequently startling like a snake. That they seem to live is due to the fact that they are often not in perfect line with the direct front of sight. They are either to the side, up or down from the focus, therefore, when discovered, the victim naturally turns his eyes toward the effect, and the effect, of course, moves away. The eye follows, and thus a continuous and realistic motion is obtained. Now, if the eye be quickly turned to the front again, it will see another snake, which, if watched, will glide away in the same manner. One individual who was afflicted with malarial disease, and had his eyes thus congested, had strange shapes and clouds pass before his vision, which, if he were in a state of nervous collapse, might easily have taken the form of the shapes seen by those suffering from delirium tremens.

Bacteriology.—The recent advances in our knowledge as to the action of certain microorganisms in the production of disease in animals and man have been largely made by laboratory methods, and indicate clearly that the study of bacteria and microzoa, and of their development, products and effects, must be an essential part of the work of a hygienic laboratory, which should provide the peculiar arrangements and apparatus which are required for this sort of work. In fact, several so-called hygienic laboratories are simply bacteriologic laboratories, the interest in this particular branch of investigation having, for the time being, overshadowed all others.

Fabiola Hospital.

To the Editor:—In Oakland, the ladies have built and now maintain a hospital and training school for nurses. This institution is one deserving notice as a good place to go when sick and a good place for the girls to learn how to make themselves useful and independent.

The writer had two terms of sickness of about equal length within the past two years, one of which was passed in a country town in a private house near physician's office and the other at the hospital. The expense at Fabiola was about one-third as great and the attention superior to what can be had at any private place. Resident physicians can be summoned at a moment in case of any change of symptoms, and expert nurses are in attendance working under constant direction of physician. In any critical case, this is a marked advantage. Sanitary arrangements and freedom from anxiety are marked advantages in favor of a hospital thus conducted. The girls in the training school devote about half their time, for two years, to study and the balance to actual practice. Their pay while there gives them a comfortable support, and after graduation, they can do better than the average teacher, type-writer or book-keeper. It is an education specially desirable in the family or community. Graduates have been well received and steadily employed by physicians. As the institution depends on private charity, and assists many deserving people in need of help, it would be well for farmers to remember that butter, eggs, fruit and vegetables cost about as much at retail when commission merchants are dumping them in the bay as at any other time, and it is a good thing to help those who stand ready to help others. At Fabiola, everybody has a good word and a pleasant smile for everybody else. A Patient.

Jugglery in the Kitchen.

Some of the Tricks Practiced in the Sale of Adulterated Baking Powders.

Chronicle, San Francisco.

Is there not some city ordinance that will protect housekeepers from the peripatetic female with the baking powder tests? Nobody wishes to turn a woman from the door, but really the frequency with which this one, or her sister, is sent around by the baking powder concern that employs her makes her, even if the cleverest of her sex, a bit tiresome.

Then the tests she makes are so unscientific, not to say fraudulent, that they are likewise becoming a bore. Here, for instance, is one of them: A sample of the baking powder found in the kitchen visited, and which it is intended to defame, is placed in a glass, mixed with a little water and stirred. Being a pure powder it foams up like champagne, although the bubbles of carbonic acid gas will continue to rise for a long time. The tester then takes a sample of the powder which she is trying to introduce and treats it in the same manner. The result is a glassful of yeast-like foam. This action, she claims, is evidence of the superiorty and greater strength of her powder, whereas it is caused solely by the flour with which the powder is largely adulterated, and it is indisputable evidence of such adulteration. To prove this, add a little flour to the other powder, mix thoroughly, add the water, stir it up, and the same result will be produced to a degree dependent upon the quantity of flour used.

Another "test" consists in placing the can on a hot stove or over a lamp or gas jet, or in boiling the baking powder with water. If the baking powder is good for anything, the heat will, of course, expel the gas, which is apparent to the sense of smell. The claim is then made that this gas indicates something detrimental, although, as a matter of fact, a baking powder that would give off no gas when subjected to heat would be without leavening power and valueless.

The object of these people is, of course, to deceive the consumers as to the qualities of their baking powder and the baking powder used in the kitchen visited.

The attempt to injure honest goods and make a market for an adulterated article by such methods is dishonest and despicable. But to try to palm off upon any woman such silly tricks for a scientific test is an insult to her intelligence.

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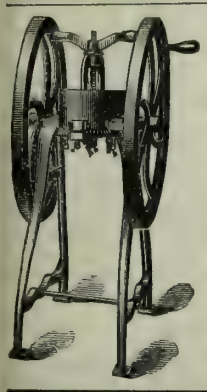
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

OLIVE AND FIG PLANTING.—Oroville *Register:* H. S. Langdon has now 20 men at work putting out trees and vines on the fine tract of Col. E. S. Weeden in Thermalito. Sixty acres will be in olives, and many trees are already planted. The varieties will be Mission and Picholine. There are now 40 acres set to White Adriatic figs, and five more will be planted. One hundred acres will be set to vines. Of these, 40 acres will be to Flame Tokay and 20 acres to Seedless Sultana and 40 acres to White Muscat, the last two varieties being for raisins. About 40 acres of vines have already been planted. The recent heavy rains have retarded the work, as the ground is very full of water. Mr. Langdon is putting out 20 acres in oranges, olives and vines for Miss A. C. Biggs of Chicago and 10 acres in olives and vines for Mr. Frank Biggs of the same city.

SMALL FRUIT CROPS.—Oroville *Mercury:* An idea has prevailed throughout th Sacramento valley that there would be a large fruit crop this year. But in conversation with extensive fruit growers, the *Mercury* learns that this is a grave error. Last year there was a large crop, generally, and according to the rule, this is evidence that the crop this year will be smaller. It is also true that the continued rains and the recent hailstorm knocked off a large percentage of the crop set upon the trees. In many localities, of course, where the trees escaped the recent hail, small orchards are loaded with young fruit; but generally speaking, the deciduous fruit will not average more than one-half of what we had last year. T. B. Hutchins of Central House and B. F. Allen o Chico, two of Butte's most prominent and successful fruit growers, bear us out in the above statement.

Humboldt.

CREAMERY NOTES.—Eureka *Watchman:* Peter Heally & Bro., of Eel river bottom, near Dungan's Ferry, have just perfected and put in operation a most complete creamery capable of handling five tons of milk a day. The brothers will milk about 120 cows this season, and will buy milk from all who wish to sell. They have christened the new venture the Pacific Creamery, and it is equipped with a ten-horse power engine, two separators, and most complete creamery appointments. This is the only creamery this side of the river. A correspondent at Grizzly Bluff writes: The cheese factory is running but Mr. Early has hired Mr. Vedder to make the cheese, while he (Mr. Early) buys the milk. Several of our dairymen wanted to make cheese, but he will give them no chance. Our creamery is up and inclosed, the boiler set and the engine house will soon be finished. We have been detained this week on account of not getting the separators and other machinery in time. The milk fever is taking off the best cows from many of our herds. There has been a greater loss this season than in any former season.

ARCATA CREAMERY. — Arcata *Union*: The Arcata bottom creamery opened its doors to customers on April 6th, and commenced operations. Everything worked as well as could be expected for a beginning. On the first day 3000 pounds of milk was received, and on the second day 4000 pounds.

Inyo.

LARGE CREAMERY AT BISHOP. — Inyo *Register*: At a meeting of the Directors of the creamery, the bid of G. G. Wickson, of San Francisco, to furnish machinery was accepted, the next best figure being from Chicago. It seems that the report of a price for milk having been placed at a stated low rate is not true, as no price has yet been fixed. The Directors will pay all the business will reasonably bear for the milk used. It is safe to assume this without a statement from them. The primary object of the enterprise being to convert into coin to the best advantage all the dairy products of the valley, the stockholders will not complain at a good price being paid for milk.

Kern.

WELL-MANAGED FARM. — Bakersfield *Echo:* W. J. Price at Mountain View tried a variety of crops between the rows of trees last year and found several that yielded well. This was the case with bayo beans; still he does not like to raise them, as it is almost impossible to keep the weeds down. This year he will plant several acres to squash and feed the crop to his hogs. A year ago he started in with two sows and 16 pigs. During the year he sold $169 worth of hogs and had 40 or 50 shoats left. All the feed for these grew on his 40-acre farm, 30 acres of which were planted to orchard. On 8 or 10 acres of alfalfa he kept his hogs and three cows and six mules. That shows what can be done with a little alfalfa and some good management.

Los Angeles.

NECTAR-BEARING FLOWERS.—L. A. *Express:* At the last regular meeting of the Southern California Horticultural Society, C. N. Wilson read an instructive paper on nectar-bearing flowers. He remarked that the number of these flowers is so great that it would be far easier to enumerate the flowers which do not furnish nectar. Special reference was made to the plants which possess the highest value for bee keepers in Southern California. First, the manzanita, with reddish, smooth bark, oval evergreen leaves and clusters of red berries. The leaves are small and tea-green on the upper side. The shrub grows to a height of 25 feet. It is often used for walking sticks. The plant blossoms from January to the last of April. The California lilac is another plant of great value to the honey industry. It is a low shrub with dense clusters of purplish flowers—*ceanothus thyrsiflorus.* The blossoms and their nectar exhale a most delightful fragrance. It blooms freely in the month of April. The delicate perfume gives a peculiar harm to the lilac honey. Bees linger longer on its blossoms than on any other flowers. The honey from these blooms has a very clear appearance. The third plant mentioned was the Yerba Santa, an evergreen shrub, seldom more than three or four feet in height. It blossoms from April 1st to the latter part of May. It furnishes excellent food for bees, being specially valuable for the production of honey of superior flavor and color. Its leaf resembles the peach leaf. Mr. Wilson, in reply to questions, stated that the aroma of honey is not materially changed by any action of the bees. Sage honey is superior to that from sunflowers. Orange blossoms yield honey of a fine flavor and odor. But the pepper tree near orange groves often nullifies the good qualities of orange honey. Tar weed has a nectar of a very dark color. Much honey is taken from sweet corn after a shower. Very little honey is taken from the nightshade or other poisonous plants.

Mendocino.

DAIRY NOTES.—Ukiah *Press*: Hopland and vicinity supports two of the largest dairies of the State. Mr. C. E. Brooks has a thoroughly equipped cheese manufactory, and Mr. Foster, the San Rafael capitalist, a butter dairy. The output of both is in great demand. Mr. Foster is putting in a fine dairy house and concrete building for a milk house. He has also just received an engine for pumping purposes, etc., and will shortly put in a machine which immediately separates the cream and milk.

San Bernardino.

COFFEE-GROWING.—Redlands *Citrograph:* J. T. Benjamin, proprietor of the Hotel San Carlos, at Retalhuleu, Guatemala, has been in this section for some days and has investigated the Alessandro valley in regard to coffee-growing. He is of the opinion that it can be made a success. He offers to take stock in the company for the purpose of starting a plantation and making a test of this industry. Mr. Benjamin furnishes us the following figures in regard to the expense and income from a 40-acre plantation: His idea would be to put two acres in nursery which would yield 80,000 sprouts per year, worth 25 cents each, and to set 38 acres to trees. This would require 30,400 trees, and the estimated yield on the third year would be 91,200 pounds, valued at 20 cents per pound, or a total of $18,240. The fourth year after planting the yield would be $24,340, figuring four pounds to the tree.

San Diego.

THE WOOL CLIP.—National Ranch Cor, *San Diegan:* The wool clip this spring will far exceed that of last year by several thousand pounds. The lateness of the season has caused a delay in shearing, but with all the drawbacks, it is safe to say that the clip will be of excellent quality, the herds in the majority of cases being entirely free from scab. The flocks of S. Echeneque & Bro. of National ranch are models of cleanliness; also the flocks of N. Echeneque & Bro. of Otay ranch. These gentlemen have more sheep than any other stock raisers in San Diego county, and I can safely say the lambs are healthy, big and fat, and as playful as a basket of kittens. The following list will give the quantity of sheep to be shorn in this part of the county: Echeneque Bros., close on 10,000; Gambette & Co., 5000; Andreas Bros., 5000; P. Hagie, 4000; J. Sausaal, 5000. This does not include flocks at San Bernardo, San Jacinto and other points. The number to be shorn will aggregate 65,000 head. The entire spring clip is consigned to W. W. Stewart & Co. of San Diego.

Santa Clara.

FRUIT-CROP PROSPECTS AT LOS GATOS.— Cor. San Jose *Mercury*, April 16: The small rain of yesterday increases the prospects for bounteous crops of fruit. Crandall, of Crandall & West, fruit driers, has been examining the orchards in the country around and reports an abundant setting. The Moorepark apricot, as usual, is uneven, but all other varieties are in excess, needing much thinning out. Complaint is made that the prune is falling off. He says that in no instance was there enough blasting of the young fruit to affect the yield. All varieties of fruit show the same abundance. The prospects for a big crop were never better. Crandall & West (formerly Crandall & Rice), have put up buildings that nearly double the capacity of their drying works.

Sacramento.

PREPARING FOR RIVER FREIGHTS. — Sacramento *News:* The steamer San Joaquin No. 4 was launched April 5th. It will be several weeks before the vessel will be ready for traffic. Many other steamers are undergoing refitting and repairs. Arrangements are being made by both the Sacramento Transportation Company and the Southern Pacific Company for a heavy freighting business on the river this summer. The heaviest shipments of fruit in the history of river navigation is anticipated. Almost all the warehouses along the river are being enlarged. The many hundred acres of reclaimed land which will yield the first crop this season will add to the river freights thousands of tons of hay, grain and other products.

Sonoma.

CROP PROSPECTS. — Healdsburg *Enterprise:* Abundant crops are assured in the Healdsburg district, and it has been many a year since we had a more favorable prospect. The winter has been a mild one, and our stockmen report no losses. In fact, the increase is a large one; hence cattlemen and sheepmen are jubilant. The spring clip of wool, in point of quality, will be first-class and in quantity a large one. There has been an immense acreage planted to grain this season in the districts tributary to Healdsburg. Much new land has been sown, and many acres of hill land will grow a crop of grain for the first time this season. Many new orchards have been planted, and the yield of fruit promises to be enormous. The outlook for good prices seem favorable, still it is yet early to safely predict in this regard. It is also probable that all the canneries in the county will run largely.

CREAMERY MACHINERY.—Petaluma *Courier*: A carload of creamery machinery has arrived for Charles Martin, proprietor of the Tomales creamery. The shipment consists of engines, boilers, separators, milk coolers, cheese vats, etc., and fills a very large car. From the character of the machinery he is putting in, it is evident that Mr. Martin has decided on having one of the best equipped creameries in the country, which is none too good for the best dairying section on the coast.

Sutter.

FRUIT CROP.—Yuba City *Farmer*: The season for thinning fruit will soon begin. Several varieties of apricots will have to be thinned as they are too thick. Almost all kinds of peaches are bearing heavily and some of our orchardists will begin thinning them in a week or two. In some orchards are noticed peaches growing in doublets, and even four or five in one cluster, but only a few varieties are forming in that way.

ALFALFA AND HOPS TO BE TAXED.—Yuba City *Independent*: The State Board of Equalization have had under consideration the matter of assessing alfalfa and hop fields, and have instructed County Assessors to assess them. Heretofore, they have been regarded as growing crops and were exempt, but under these instructions they will be treated the same as orchards and vineyards. The State Board decided thus on the ground that hop and alfalfa fields improve with age and do not require an annual planting. In some counties the Assessors have decided to assess alfalfa at about $10 an acre and hops at from $25 to $50, in addition to the value of the land.

Tulare.

RAISINS AT THE EAST.—Hanford *Sentinel*: Andy Buckner of Lemoore has returned from a trip East, where he was sent by the Lemoore Packing Company to investigate the fruit business, particularly the raisin trade. He visited Chicago, St. Paul and other cities in the interest of his company. He says that prices in the retail market in Eastern cities are from 5 cents to 30 cents per pound. There is occasionally a firm who will make raisins a "leader" to attract trade for a time and mark the price of the article down to as low as 5 cents per pound, but the ruling price at which raisins sell is strong and the people generally are not getting the article any cheaper than when California growers were getting 5 cents in the sweat-boxes for them. Mr. Buckner said that he found the wholesalers very desirous of purchasing direct from the producers, and that, as a rule, they disliked the commission men as bad as the producers do. The way out of the present depression is for the producers to stop consigning to the commission men, and sell direct to the wholesalers. Fred Winstanley, who has a large raisin vineyard in the southern part of the State, returned several weeks ago from a mission East to sell the raisins from the Winstanley vineyard, which had been packed under Mr. Winstanley's personal supervision. In speaking of his trip, Mr. W. said that, while Eastern dealers admitted that California could produce excellent raisins, and that good California raisins were in demand, they had been swindled so often that they positively refused to purchase from samples, in many instances the goods being almost worthless; and in his opinion Californians will have to restore confidence in their product before the market will be what it once was. Until none but first-class goods are shipped as such, this confidence will not be obtained, and the market will suffer, even though middlemen are headed off.

LARGE ACREAGE TO RAISIN GRAPES.—*Sentinel*: The Providence Raisin Co., of Providence, Rhode Island, was organized in 1891, under a charter from Rhode Island. The stockholders are among some of the most prominent men of Providence, R. I., and Boston, Mass. The company purchased of the West Coast Development Co. 300 acres, which is now in process of improvement by the latter company. The force engaged in plowing, harrowing, floating and planting was composed of about 50 men and 80 horses. The plows were running at a depth of 12 inches, drawn by 8 to 10 horses to each two-gang plow. The harrowing and floating with heavy planks pulverized the soil in fine shape, so that the planting of raisin grape roots, which was then in progress on the south side of the tract where fitting the ground first began, was, as a matter of course, easy to accomplish in a thorough manner.

ROCKYFORD ORCHARD AND PACKING CO.—Porterville *Enterprise*: Tuesday afternoon we paid a visit to the Rockyford Orchard and Packing Company's orchards, six miles west of town. The 160 acres known as the Boatman tract has been all levelled, fenced with a rabbit-proof fencing and put out—143 acres to prunes, 8 to peaches and 5 to pears—some 15,000 trees being planted in all. A 60-foot avenue runs right through the property, which leads to the Rhodes tract, consisting of a further 160 acres, also belonging to the company, and on which 20,000 prunes, which were in a nursery on the grounds, will shortly be planted. R. L. Wilson says that the company intends putting in 800 acres in all.

BRIGHT PROSPECTS.—Visalia *Times*: Fortune has favored our county this year. From all parts come the cheering word that a good crop is almost certain, and that all classes of people are buoyed up by the bright prospects ahead. Every branch of industry is estimated by the certainty of an abundant harvest. This is a country of great fertility and having a soil that produces a variety of products, Tulare is at once among the banner wheat counties; her oranges and lemons are attracting the attention of the State; our raisins are known to be among the finest, and in the culture of choice fruit our place is in the front rank. Yet being but partially planted to trees and vines, the great income of this county is the revenue from the grain fields. With a reasonable amount of rainfall, our wheat fields return ample compensation for labor performed, and the area seeded this year is large. In many previous years there has been a dry spell in February and March which has several times greatly stunted the growing grain and prevented an otherwise certain large yield. This year has seen no such drouth, and showers have come at short intervals ever since rains began last fall. During a good wheat year the cereal yield of this county is immense.

Ventura.

THE HONEY YIELD.—Santa Paula *Chronicle*: According to the estimates of J. F. McIntyre, of Fillmore, who is thoroughly acquainted with the subject, there are some 10,000 colonies of bees in this county, and the average yield for 16 years of one large apiary has been 74 pounds per colony. The average price is four cents per pound. The honey is extracted by machinery and sold in 60-pound cans, and the comb returned to the hive. Ventura county ships honey by the ton and has shipped 3,000,000 pounds in one year. The immense tracts of unclaimed mountain land covered with sage are the favorite foraging ground of the busy bee, and many persons are supported by this industry with comparatively little outlay.

Yuba.

HOP NOTES.—Wheatland *Four Corners:* — In the yards the vines are almost ready to tie up. Hopmen are busy stretching their wire and tying down string; over 50 white men and as many Chinese being employed in the yards. The white men are preferable when the trash is sifted out, but growers are not prepared to feed and lodge very large crews.

ARIZONA.

LARGE INCREASE IN THE NUMBER OF ORANGE TREES.—Phœnix (Maricopa Co.) *Herald:* Figures taken from the books of the M. & P. railroad show that ten carloads of trees have been received, containing an average of 15,500 per car, or 155,000, which swells the total number of trees set out this spring considerably. This does not include the many smaller lots received by private individuals, which, at the lowest calculation, will make up another car, or a grand total of 170,500 trees. This, upon careful estimating, makes the total acreage of orange trees planted in the season just passed, fully 2000.

LARGE LAND PURCHASE. — Yuma *Times:* Recent visitors to Yuma county were several Detroit capitalists, who visited the Mohawk ranch and other properties; among them were Allan M. Fletcher of the firm of Geo. M. Fletcher & Sons, Detroit, Mich.; and Alfred M. Low, a real estate man of Chicago. Mr. Fletcher is one of the proprietors of the Mammoth mine. They have arranged to organize a company in Detroit to purchase 2500 acres of the Mohawk ranch, one-half being bottom land and the rest on the mesa. It is proposed to commence this fall and set out 300 acres in fruits and vines, and also 200 acres in vegetables for shipment to Eastern markets. The remaining 2000 acres will be divided into 20-acre tracts for Michigan and other Eastern parties.

NEVADA.

ENCOURAGING APPLE CULTURE. — Reno *Gazette*: With a view of promoting the industry of raising apples in this section of Western Nevada, the Southern Pacific Company has joined the Virginia and Truckee railroad in a reduced rate from Carson and Franktown to Sacramento and San Francisco of 37½ cents, and to Los Angeles of 57½ cents per hundred pounds, for carload shipments, the rate heretofore having been 62½ cents to San Francisco and 92½ cents to Los Angeles. Under this reduced rate a number of apples have been shipped, during the past month, to San Francisco, by Ross Lewers and M. Lamb of Franktown, and H. F. Danberg of Carson valley, all of whom have received such satisfactory returns as to warrant them in sending East for the choicest and best varieties of trees to enlarge their orchards.

THE VAIL RANCH CREAMERY.—Dayton *Times:* The building for the creamery of the Vail ranch on the Carson river, below Dayton, is nearly completed, and machinery will be placed there in a few weeks. The creamery is located on what was formerly the Fitch ranch, about a mile below the Vail ranch, and will be supplied with milk from the Stinson, Vail and Pray ranches. Probably a thousand cows will be milked to supply it.

WASHINGTON.

A LARGE CANAL. — Tacoma *News*: The Yakana ditch is now completed for 25 miles, into which the waters of the Yakima river will be turned within two weeks. The plan is to make the system, arteries and veins, 65 miles long, and bring directly under irrigation 80,000 acres of land. What those figures mean to the commerce and wealth of this State only those can appreciate who know the wonders which irrigation has worked in California. We need not go so far from home, however, to realize the promise of irrigation to this State. Dr. Blalock of Walla Walla bought land at $2.50 an acre a few years ago, to which he brought water, and from 40 acres of which he last year obtained a return of $400 per acre. He has now 400 acres in prunes and other fruit, which, when it comes into full bearing two or three years hence, will yield not less than $150,000 per year net, averaging the prices and crops of years together.

It Stands the Test!

NITROGENOUS SUPERPHOSPHATE

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Mexican Phosphate & Sulphur Co.,

Now favorably known throughout the Citrus Growing Sections of the State, Stands Unrivaled as a True Fertilizer.

Certain in its Action, Great in Results, it maintains a high standard of fertility without undue stimulation.

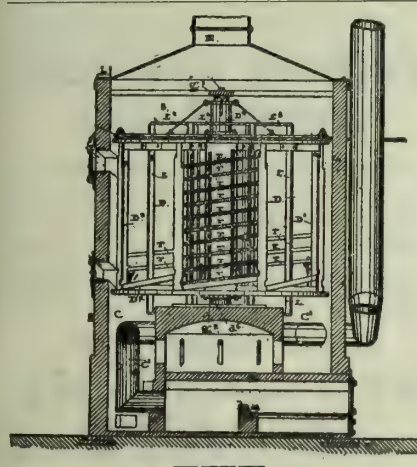
Growers in San Bernardino County—notably Riverside—and Butte County—notably Palermo—can attest its merit.

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This unequaled apparatus is constructed on a new and novel principle, by which its capacity for rapid and uniform evaporation of fruit is attained to a degree that is wonderful. It creates a rapid and continuous current of hot air and distributes it equally and uniformly over every portion of the fruit surface, carries off every particle of moisture as fast as extracted and leaves the fruit bright and clear and of excellent flavor.

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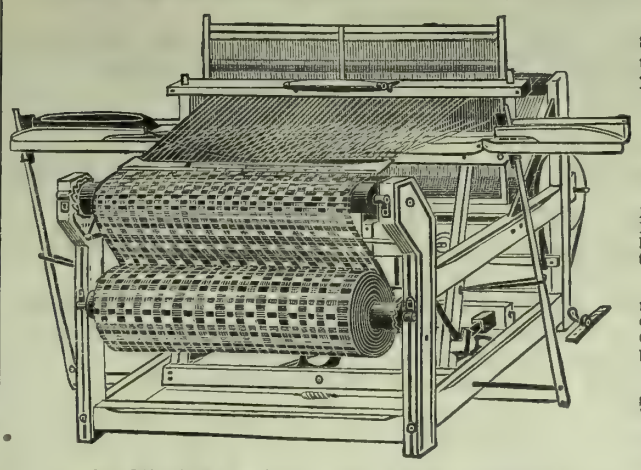


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We will send you our large Fall Catalogue, Free, which will show you how $10 per day can be made on this machine.

We have hundreds of testimonials and many sworn affidavits which prove the capacity of this Loom to be 100 yards per day, and upwards.

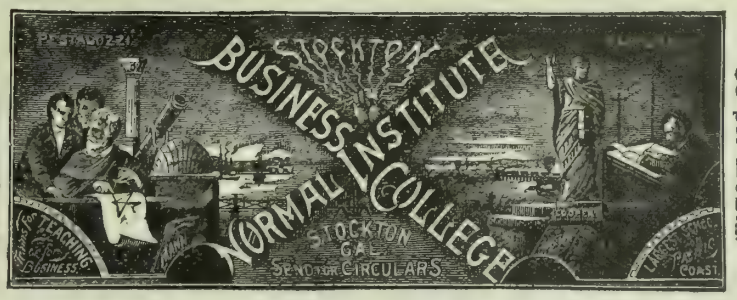
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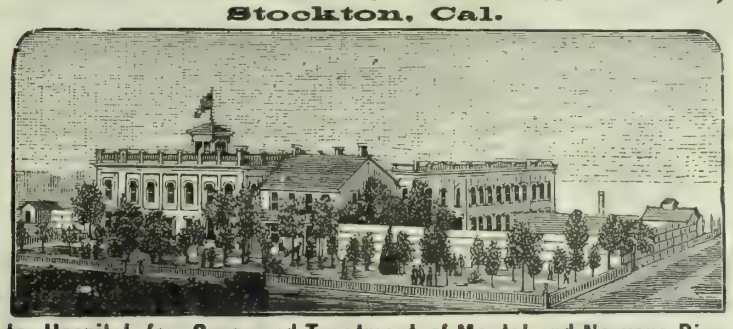
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Private Hospital for Care and Treatment of Mental and Nervous Diseases.

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FOLDING Sawing Machine.

9 CORDS IN 10 HOURS.



Send for free illustrated catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket-knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 42,000 in use. We also make larger sized machine to carry 7 foot saw.

Order from the general agent for California.

The machine will cost you less than by single shipment direct from the factory at Chicago.

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Is a marvel. Saves Time—Labor—Hay.
An economical remedy for scarce help.
Will Load a Ton of Hay in 5 minutes.
Gathers the Hay clean. Loads loose Grain.
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Strong, Light, Easily Hitched to Wagon.

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FARM, DAIRY, ORCHARD OR SHOP.



EVERY TOOL GUARANTEED,

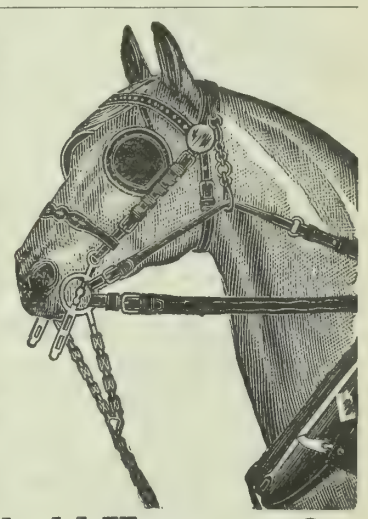
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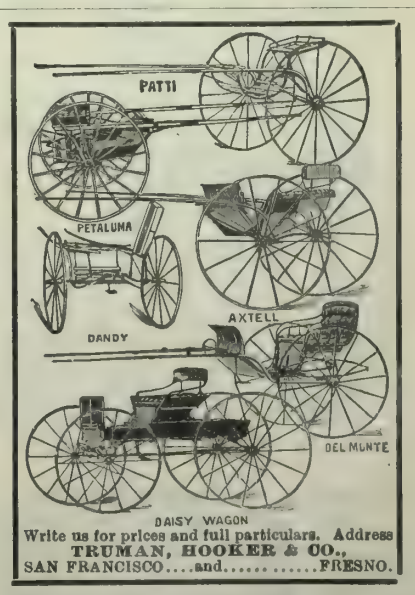


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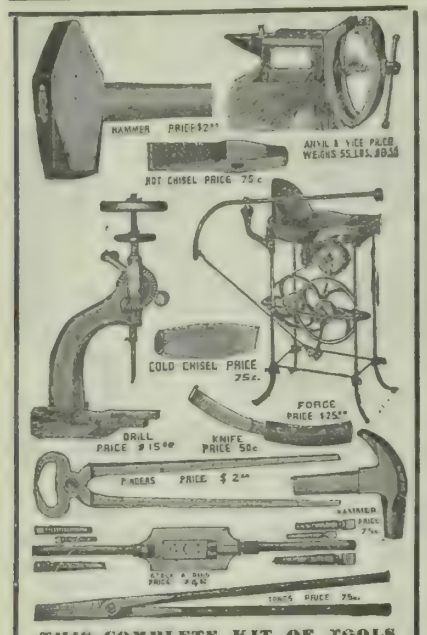
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AT A COST OF FROM 1 CT. TO 2 CTS. PER TREE.

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CEILING, SIDING, SHEATHING AND CARPETING. Easy to apply—just the thing for Houses, Barns, Ice Houses and Outbuildings—Durable and Cheap.

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HERCULES Gas and Gasoline ENGINES

Have fewer parts, and are therefore less likely to get out of order than any other gas or gasoline engines now built. Just light the burner, turn the wheel, and it runs all day.

MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark.

For Simplicity it Beats the World.
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FOR DESCRIPTIVE CIRCULARS APPLY TO
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YOU WILL BE A LONG TIME DEAD
To be Happy buy a
DANDY STEEL MILL
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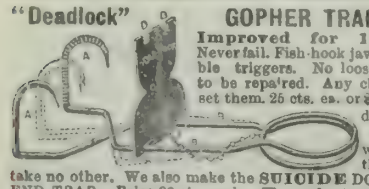


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The Giant Powder Co. having built Black Powder Works, with all the latest improvements, at Clipper Gap, Placer County, known as **THE CLIPPER MILLS,** offer this powder and guarantee it the best.

CAPS and FUSE at Lowest Rates.

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Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

Ongerth Liquid Tree Protector,

The only effectual remedy in the market. Indorsed by the University of California.

When Grafting or Budding use our Liquid Grafting Compound.

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WATER ALKALI ACID PROOF!

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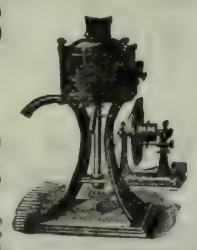


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At Gottenburg, Sweden, August, 1891.

The EXTRACTOR-SEPARATOR, was awarded the

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This is the GREATEST CONTEST in all Europe, and leaves the EXTRACTOR-SEPARATOR as the

VICTOR over All Competitors.

It is the ONLY BUTTER EXTRACTOR. It is the **Best Cream Separator,** and has a capacity of **2,000** to **3,000** pounds per hour. We guarantee this machine in every respect—material, workmanship and separation of the cream—**equal to any.** The bowl is made of **imported Swedish steel,** the best and strongest steel in the world. It is **superseding** other cream separators, because of the **larger amount of milk** separated with greater thoroughness. **Send For Full Illustrated Circulars.**

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Manufacturers of Creamery, Cheese and Dairy Supplies.

CLUFF BROTHERS,
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Send for Price List, or send us a list of what you want and we will put prices to it and mail it back for your approval, by which you can see what you save by ordering from us.

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Reliable evidence is always accepted without question. The evidence of the value of the **BREED WEEDER** as a labor saver and a money saver is furnished by farmers of national reputation.

JOHN GOULD, of Ohio, writes: "I wish I could show all farmers a field as free from weeds as a road-way, made so largely by the use of the **Breed Weeder** at the right time." Do you want your fields free from weeds? Do you want to increase your crop by this means of cultivation? Write to us for illustrated pamphlet, "The Growth & Culture of Crops." **KNAPP, BURRELL & CO.** Gen'l Agts., **Portland, Ore.**

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SHIPPING ORDERS A SPECIALTY.

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Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
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ELM STREET, DALLAS, TEXAS.

S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 20, 1892.

General trade continues inactive, with trading in farm products being no exception thereto. Money continues easy, with no marked call from any particular source. The general inactivity is reflected in bank clearances, which show a falling off for each week compared with the like week in 1891. Although the present situation is not favorable, yet the future holds out encouragement for expecting much better times to set in soon, provided crop prospects continue favorable.

Foreign Grain Review.

LONDON, April, 18.—Mark Lane *Express* says: The average price of wheat throughout the country is 31s 4d, a decline of 5s since January 1st. Foreign wheats remain quiet at a recovery of 6d. Both France and Germany were buying. California left off firm at 38s. Indian was depressed, the fall in silver causing forced sales at 32s. Corn is weak; cargoes of mixed American are quoted at 20s. Oats are 3d dearer and barley is dull.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June.	July.	Aug.
Thursday	7s 04½d	7s 02½d	7s 01 d	7s 01 d	7s 1½d
Friday	.....	.....	.....	.....	.....
Saturday	.....	.....	.....	.....	.....
Monday	.....	.....	.....	.....	.....
Tuesday	7s 04½d	7s 01½d	7s 00½d	7s 00½d	7s 01 d

No. 2 Red Winter are quoted and not No 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. O.	P. S.	N. D.	Market for P. S.
Thursday	36s9d	36s6 1	36s6d	Firmer.
Friday	.....	.....	.....	
Saturday	.....	.....	.....	
Monday	.....	.....	.....	
Tuesday	36s9d	36s3d	36s6d	Generally dearer.

To-day's cablegram is as follows:

LIVERPOOL, April 20—WHEAT—Cheaper to sell. California spot lots, 7s 5d; off coast, 36s 3d@36s 6d; just shipped, 36; nearly due, 36s 3d; cargoes off coast, quiet; on passage, quieter; Mark Lane wheat steady; French country markets, very quiet; weather in England, cold and wet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug
Thursday	....	....	....	....	....
Friday	....	....	....	....	....
Saturday	153⅝	151¼	150	150	149½
Monday	155⅝	152½	151¼	151¼	149⅝
Tuesday	154½	151⅝	149½	149⅜	149⅜

The following are to-days' telegram:

NEW YORK, April 20 WHEAT—92½c for April, 90¼c for May, 89¼c for June, 89¼c for July, 89¼c for August, and 91⅜c for December.

CHICAGO, April 20—WHEAT—80¼c for May, and 80c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H	L.	Seller 1892. H.	L.
Thursday	153½	152½	....	....	139¾	139
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	154½	153	....	....	140½	139½
Tuesday	154½	153⅜	....	....	140½	140⅜

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal session: Buyer season—500 tons, $1 53½; 100, $1.53⅜ ₩ ctl. Regular session: Seller 1892-100 tons, $1.40½ ₩ ctl. Afternoon—Seller 1892—200 tons, $1.40⅜; 300, $1.40½ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	*May H.	L.	June. H.	L.
Thursday	100½	100	....	....	....	....
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	102¾	101½	....	....	....	....
Tuesday	103⅜	103⅜	....	....	....	....

*New crop.

The following are to-day's recorded sales on Call:

Barley—Regular session: Buyer season—200 tons, $1.02⅜; 100, $1.02½. Seller 1892, new—100 tons, 93½c; 200, 93c ₩ ctl. Buyer season—100 tons, $1.02⅜. Seller 1892, new—100 tons, 93c ₩ ctl

Bran—Seller 1892—100 tons, $15.62½ per ton.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, April 17.—Offerings of domestic are unimportant, with our supplies reduced and strong. With London prices sellers are satisfied, and the market is at bottom figures, but all seem willing to close out their remnant at the late low prices, to be ready for the new clip. Depressed prices have ruled now nearly a year. One benefit has attended them, for at the low cost manufacturers have been enabled to make experimental combinations of material to a degree that has permitted the outturn of a quality of goods which satisfies the claims of the trade, which formerly adhered to imported stuffs. It is to be hoped in another season the grower will get his share of a prosperity to which he has contributed so prominently.

Boston sold 1,106,000 domestic and 1,411,000 foreign, half the latter Australian, the rest mainly carpet. Philadelphia reports stock going out readily with a more confident tone.

NEW YORK, April 19.—The demand for print cloths at the East has declined and stocks with first hands are larger. Coarse ginghams are selling slowly, wool dress goods are fairly active, and the blanket mills are busy. The advance at the London wool sales is about 2 cents, contrasted with the opening which strengthens the staple here. Dealers and manufacturers differ as to the probable permanence of this improvement. Eastern market prices are below a parity with Western dealers. Raw cotton is ⅜ cents higher on widespread renewed investment purchases and a demand for "shorts."

Eastern Dried Fruit Market.

NEW YORK, April 18.—Unpeeled peaches are readily parted with at 6@6½c. Prunes are weaker, and small sizes are the great detriment to sales. It is difficult to get buyers to indulge in much of them. The named sizes of last week are ⅛ cent to ¼ cent off, with choice fifties and sixties unchanged. A block of 6000 boxes sold at 7¾c for four sizes. Raisins—Slow and offered low. Some good Three Crown boxes were slaughtered at 90c. Three Crown "E" bags sold at 4½@4¾c, full prices. Apricots—Moving fairly at low figures. Boxes sell at 6½@8c; bags, 6@7. Several round lots 1890 crop, sold at 3½@4c.

CHICAGO, April 19—California Dried Fruits—Large transactions are not heard of at present. It is rather late in the season for anything of this kind. Certain lines, however, sell very well, in fact there may be said to continue a moderate to fair demand for choice goods of all lines, with the exception of raisins. The market for this line is ruling quiet and slow, with considerable stock on hand.

Eastern Hop Markets.

Ho s advanced under an active speculation and strong interior feeling. Fancy State still tend upward. State '90's common to choice are held at 25@32c; Pacific, 25@31c; all-winter '90's 16@23c. Closing option rates for May, 29c bid, and 33¼@33½c was asked; June, 29¾@32c; July, 29¼@34c. Exports for the week were 471 bales.

Miscellaneous.

NEW YORK, April 17.—Lima beans—Much to the relief of receivers the heavy lots, ex-Mineola and those of this week by the Pacific Mail are pretty much placed. The market is firmer, $1.65@$1.70 per bushel spot.

NEW YORK, April 19.—Lima Beans.—The stock of California lima beans is reported small, and $1.75 per bushel is quoted on strictly choice spot.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending April 18, '92, were as follows:

Flour, qr. sks	88,539	Bran, sks	11,766
Wheat, ctls	73,310	Buckwheat "	....
Barley, "	38,150	Middlings "	2 512
Rye, "	505	Chicory, bbls	155
Oats, "	492	Hops, "	....
Corn, "	1,542	Wool, "	6,107
Butter, "	1,9.9	Hay, ton	1,436
do bxs	1,048	Straw, "	48
do bbls	....	Wine, gals	152,440
do kgs	37	Brandy, "	3,330
do tubs	....	Raisins, bxs	1,431
do ½ bxs	269	Honey, cs	24
*Cheese, ctls	1,101	Peanuts, sks	....
do bxs	361	Walnuts "	....
Eggs, doz	56,740	Almonds "	62
do "Eastern	....	Mustard "	....
Beans, sks	2,756	Flax "	36
Potatoes, sks	5,478	Popcorn "	....
Onions, "	481	Broom corn, bbls	....

*Overl'd, 203 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to April 18, '91.	July 1, '91 to April 16, '92.
Flour, ½ sks	251,343	386,690
Wheat, ctls	1,304,132	1,224,221
Barley, "	265,057	51,533
Oats, "	315,409	378,058
Wool, bales	5,949	6,013
Hops, "	443	431
Rye, sks	210	3,352
Potatoes sks	89,874	123,027

Oregon Crop Advices.

The Portland, Oregon, circular letter for the week ending April 16, of Oregon State Weather Service in cooperation with U. S. Weather Bureau of the Department of Agriculture, reports as follows.

In Western Oregon the weather conditions have been unfavorable to all crops. Fall wheat is generally in good condition, though in wet places it is obtaining a bad color, it has little growth, but is reported to have stooled well and as being well-rooted. The spring seeding has been delayed and in many sections it is not over half done yet; reports indicate a general tendency towards a much larger acreage than usual. The frosts have undoubtedly done damage to the fruit buds, though the exact damage cannot now be ascertained. A freezing temperature existed on the mornings of the 11th and 12th in many localities and it was then that the supposed damage was done; it is however surmised that not more than the necessary pruning of fruit was done by the frost. The hopmen are busy in their yards and preparations are being made to prevent, if possible, the ravages of the hoplouse. The Agricultural College at Corvallis is issuing valuable information to the hop growers of the State on the subject of the hop louse, which should be heeded. Sheep shearing and lambing are in progress. The wool clip has never been excelled for quality. Strawberries are in blossom; small berries are formed and garden truck is growing slowly, though promising.

In Eastern Oregon the soil is in first-class condition, being unusually moist. Spring seeding is nearly completed. The acreage of spring grain is the largest on record. There has been a marked increase in acreage in Grant county, owing to two flour roller mills being erected. All the reports indicate the wheat prospects to be better than ever before. Stock is in excellent condition and the range furnishes good feed. The frosts did damage to fruit and tender vegetables, though not to any great or serious extent. The lambing season continues and with most excellent results. Wool growers report the heaviest and best grade of wool clipped this year that has ever been secured. Cereal, stock and wool interests were never more promising than they are at present throughout Oregon.

Cereals.

London cables of April 19th report as follows: Wheat and flour on passage to United Kingdom, 3,009,000 qrs.; Continent, 1,296,000.

New York mail advices to April 13th report as follows: Recent crop reports from France are more favorable. Some damage is believed to have been done in Germany, but it is said that fine, warm weather would remedy it. In Belgium the outlook is favorable. In Northern Holland the prospects are satisfactory, but reseeding is necessary in some other parts. In Hungary wheat is looking exceedingly well, and the prospects are good in Spain and Italy. In Russia, owing to the reduced acreage, an average crop cannot be reaped under the most favorable circumstances. The weather in India has favored the wheat crop.

The local wheat market the past week, under review, was interrupted by a two days' holiday, but as far as trading on Call is concerned, the holiday season might just as well have continued up to this writing. In futures not only very little is being done, but there is not likely to be improvement until silver advances in prices and other unfavorable influences are removed. The trade is watching with considerable interest the weather at home and abroad. It now looks as if the wheat crop in the United States will be short by fully 100,000,000 bushels when compared with the yield in last year. There are those in the trade who contend that this shortage will be largely offset by a large carryover. There is no doubt but that this country will have a large carryover, yet it is not at all likely that it will equal the shortage in the crop. With this being the present situation, foreign crop prospects become an important factor in shaping future values

The barley market continues to fluctuate. The receipts are heavy, but the bulk coming to hand is off colored. The feed consumption demand continues very free, considerably larger than ever before at this time of the year. Crop prospects in the southern part of the State are poor, and unless that section is visited by rains soon the yield to the acre will be less than any within several years past. In the central counties the yield will be large.

Oats are firm, with a fair demand ruling. The stock in this city is being depleted under a steady withdrawal. The tendency of the market appears to be upward.

In corn, continued light receipts and a fair export movement create a strong market at the recent advance. Crop prospects in this State are not of a very promising character.

Rye continues slow and heavy.

Feedstuff.

The market for feedstuff holds strong. Some dealers are looking for slightly higher prices. The feed consumption demand is free, with the supply of bran and middlings lessened very materially.

Hay is reported weak for all kinds. The supply of compressed is in excess of the demand, owing to there not being much of a demand for shipment either by sea or overland. It is claimed that if the dry weather continues in the southern part of the State, and at several points in the central counties, there will be a large increased acreage cut for hay.

Dairy Produce.

Butter is weak at unchanged quotations. The receipts continue to increase, and as the outlets up north are being cut off, it looks as if further concessions will have to be made soon so as to clean up consignments. A firm in this city which receives large consignments is said to be packing quite heavily.

Cheese is weak at the lower quotations. The decline is due to heavy receipts and buyers' offishness. Buyers are expecting still lower ranges in quotations, and therefore they will not take hold unless offered concessions

Eggs show signs of receding under free receipts of California and liberal supplies of Eastern on the way. The consumption has fallen off very materially,

Vegetables.

In garden stuff the market shows slightly more strength for both rhubarb and asparagus. Peas and string beans are weaker. The weakness is due to free receipts and rapidly increasing supplies from which to draw. Shipments to up north ports are quite free. Marrowfat squash are scarce and higher.

Onions made a slight advance the past week, but eased off again and closed at our quotations. The higher prices are causing freer shipments to this port. New onions put in an appearance the past week.

New potatoes are in heavy supply. The more matured, which are of good size, are readily placed at the outside figure and sometimes at even higher prices. For old potatoes the market shows more strength for both California and Oregon Burbank. Other kinds of potatoes do not show any material change.

Fruit.

One basket of raspberries and a few gooseberries came in the past week.

Strawberries fluctuate daily, the price being dependent on receipts. Yesterday the outside price for the more choice was $12 a chest, and to-day it was $9. The quality shows an improvement.

There are not enough apples coming in to justify quoting. Those received come from Honey Lake Valley and the State of Nevada.

Limes and lemons are weak and lower.

The demand for oranges is quite heavy, but owing to free receipts the market is lower. The quality averages better than it did one month ago, yet there is room for further improvement. Redland and Highland oranges continue masters of the situation.

In dried fruits there is absolutely nothing new to report. Receipts are light. Supplies to draw from are said to be light, being about cleaned up. The inquiry is chiefly for jobbing lots. The same remarks apply to raisins.

Live Stock.

Mutton sheep are weak at the lower quotations. Bullocks are barely steady. Dairy hogs for the block are firm, but heavy packing hogs are in buyers' favor. Dairy calves are fairly steady, but range calves favor buyers.

Wool.

The market is slow. While we do not quote any higher prices, yet it is said that a few sales of choice clips have been made at a slight advance on outside quotations. The situation of the markets at the East and abroad does not, at this writing, warrant expecting much of an improvement for the better unless it be later on in the season. The very low price of silver, it is claimed by English papers just to hand, has cut off several large demand markets for woolen goods, which has made itself felt in the textile industry. The clip on this coast averages better in cleanliness, strength, etc., than for years. That coming from Nevada is exceptionally good. The six months' wool from the southern part of the State is shorter than usual, owing to scant feed for sheep during the winter.

Miscellaneous.

From reliable advices up to April 20, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	223,004	258,308	*†135,756	54,594
San Diego	14,753	17,454	5,592	.....
San Pedro	1,571	2,773	....	17,530
Oregon	24,205	30,415	10,211	
Puget Sound	9,161	55,004	.....	
Totals	272,697	343,916	144,335	85,405

*Engaged for wheat, 1892, 19,974; 1891, 52,521 †For new crop loading, 6,803.

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,0 8,524	10,676,149
Flour, bbls	873,072	931,020
Barley, ctls	786,338	208,535

Poultry is slightly lower, with still lower prices looked for, owing to liberal receipts expected from the central States.

Beans are slow, but firm.

Alfalfa is about out of market.

Hops are strong, with sales reported as high as 30 cents for a giltedged article. For new crop hops contracts are reported as high as 20 cents. This is said to be an exceptional high price.

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	8 @—
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	11 @—
Do do prime	3½@ 4	Do do choice	12 @—
Do do choice	4 @ 4½	Do do fancy	13 @—
Do sliced, common	3½@ 4	Evap, peeled, in boxes, choice	15 @—
Do do prime	4 @ 4½	Do do fancy	16 @—
Do do choice	4½@ 5½	**PEARS.**	
Evap. bleached, ring. 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com.	2½@ 4	Evap, sliced, in boxes.	6 @ 8
Do do prime	5 @ 5½	Do ring do	10½@—
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @—	Pitted, sun-dried	4½@—
Do do choice	7½@—	Do evap. boxes, choice.	—@—
Do do fancy	8½@ 9½	Do do do fancy	—@—
Evap. choice, in boxes.	9½@10	Unpitted	2 @ 2½
Do fancy, do	10 @10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5½@—
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	6 @—
Do white	3½@	Do do 40 to 60	8 @—
Do do washed	—@	Fancy sell for more money.	
Do do fancy	—@—	**RAISINS.**	
Do do pressed	—@—	London Layers, choice ₩ bx	$1 50@ —
Smyrna boxes	—@—	Do fancy, do	1 75@ —
Do sacks	—@—	Layers, ₩ bx	1 25@ —
GRAPES.		Loose Muscatels, common, ₩ bx	1 00@ —
Sun-dried, stemless	2 @ 4	Do choice, do	1 20@1 30
Do unstemmed	1 @ 2½	Do fancy, do	1 50@ —
NECTARINES.		Unstem'ed Muscatels, in sacks, ₩ lb	4@ 5
Red, sun-dried	3½@ 5	Stemmed do do	5@ 5½
Do Evap., in boxes	5 @ 6	Seedless do do	6@—
White, sun-dried	4 @ 6	Do do ₩ 20-lb bx	1 15@ —
Do evaporated	6 @ 7	Sultanas, unbl, bxs	1 15@1 40
PEACHES.		Do bleached, in bxs	1 30@1 60
Sun-dried, unpeeled, common, bleached	3½@—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do prime, do	5 @—		
Do do choice, do	6 @—		
Do do fancy	7 @—		
Evap, unpe'd, choice	7 @—		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

WEDNESDAY, April 20, 1892

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	2 00 @ 2 20	Extra, City Mills	4 80 @ 5 00
Butter	2 40 @ 2 80	Do Country Mills	4 65 @ 5 00
Pea	2 20 @ 2 80	Superfine	3 00 @ 3 30
Red	1 90 @ 2 15	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	4 @—
Small White	2 20 @ 2 55	Do Choice	6 @—
Large White	2 20 @ 2 45	Do paper shell	7 @—
Lima	1 95 @ 2 20	Almonds, sft shl.	10 @—
Red Peas, blk eye	1 30 @ 1 50	Paper shell	12 @—
Do green	1 30 @ 1 50	Hard Shell	6 @ 7½
Do Nlies	1 25 @ 1 40	Brazil	6½@ 8
Split	3 85 @ 4 15	Pecans small	11 @ 13
BUTTER.		Do large	14½@ 16
Cal. Poor to fair, lb	12½@—	Peanuts	1½@ 3
Do good to choice	16 @—	Filberts	10½ @ 12½
Do Giltedged	—@ 18½	Hickory	7 @ 8
Do Creamery rolls	—@ 18½	Chestnuts	11½@ 16
Do do Giltedge	—@ 19	**ONIONS.**	
Eastern	—@—	Silver Skin, Choice per ctl	2 00 @ 3 00
CHEESE.		Fair to Good	1 20 @—
Cal. choice mild	10½@ 11	Cut	75 @—
Do fair to good	9 @ 10	**POTATOES.**	
Do gilt edged	—@ 11½	Early Rose, ctl	25 @ 40
Young America	—@ 13	Burbank Seedling	50 @ 70
EGGS.		Do do Oregon	90 @ 1 15
Cal. ranch, doz	19½@—	Do Humboldt	40 @ 75
Do do selected	—@ 21	River Reds	15 @ 35
Do store	17 @—	New	50 @ 80
Eastern	16 @ 19	Sweets	—@—
FEED.		**POULTRY.**	
Bran, ton	16 50 @17 50	Hens, doz	6 00 @ 8 00
Feedmeal	26 00 @28 00	Roosters, old	6 50 @ 8 00
Gr'd Barley	22 00 @23 50	Do young	8 00 @12 00
Middlings	19 00 @20 50	Broilers, small	3 50 @ 5 50
Oil Cake Meal	—@25 00	Do large	6 00 @—
Manhattan Food ₩ cwt	7 50	Fryers	7 00 @—
HAY.		Ducks	6 00 @ 9 00
Wheat, per ton	12 00 @—	Geese, pair	1 75 @2 25
Do choice	14 00 @—	Goslings	2 00 @ 3 50
Wheat and Oat	10 00 @ 13	Turkeys, Gob'r	15 @ 17½
Wild Oats	10 00 @—	Turkeys, Hens	17 @ 19
Cultivated do	11 00 @—	Manhattan Egg Food ₩ cwt	11 50 @—
Barley	8 00 @ 12	**PROVISIONS.**	
Alfalfa	8 00 @ 10	Cal. Bacon, be'vy, lb	9½@—
Clover	—@—	Medium	11½@—
Straw bale	45 @ 60	Light	12 @—
GRAIN, ETC.		Lard	9 @ 11
Barley, feed, ctl	1 00 @ 1 03½	Cal. Sm'k'd Beef	11½@—
Do Choice	1 05 @—	Hams, Cal salt'd	10 @—
Do Brewing	1 05 @—	do Eastern	12½@—
Do do Choice	1 15 @—	**SEEDS.**	
Do do Giltedge	1 18½@—	Alfalfa	12 @ 12½
Do Chevalier	1 05 @ 1 40	Clover, Red	14 @ 15
Do do Giltedge	1 45 @ 1 50	White	20 @—
Buckwheat	1 70 @—	Flaxseed	1½@ 2
Corn, White	1 25 @ 1 35½	Hemp	3½@ 4
Yellow, large	1 30 @ 1 36½	Mustard, yellow	3½@ 4
Do small	1 32½@ 1 36½	do Brown	3 @ 3½
Oats, milling	1 42½@—	**WOOL.**	
Feed, Choice	1 38½@—	**SPRING, 1892.**	
Do good	1 30 @—	Humb't & Mend'cino	—@—
Do fair	1 22½@—	Sac'to valley	16 @—
Surprise	1 50 @—	S Joaquin valley	11 @ 14
Black Cal	1 10 @ 1 40	Cala'v & F'th'll.	14 @ 16
Do Oregon	1 20 @ 1 47½	Oregon Eastern.	10 @ 17
Gray	1 20 @—	do valley	—@—
Rye	1 47½@—	So'n Coast, def.	10 @ 12
Wheat, milling. Gilt edged	1 57½@—	**HONEY.**	
Do Choice	1 55 @—	White Comb, 2-lb	10 @ 13
Do fair to good	1 51½@—	do do 1-lb frame	12 @ 14
Shipping, cho'ce	1 51½@—	White extract'd	6½@ 7
Do good	1 50 @—	Amber do	5½@ 6½
Do fair	1 47½@—	Beeswax, lb	22 @—
Common	1 45 @—		
Sonora	1 45 @ 1 57½		
HOPS.			
1891 Choice to Ex.	26 @ 30		
Fair to Good	22 @—		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 20, 1892

Limes, Mex	3 00 @ 4 00	Beets, sk	—@ 1 00
Do Cal	—@—	Carrots, sk	35 @—
Lemons, box	1 00 @ 3 00	Okra, dry, lb	15 @—
Do Sicily	5 00 @—	Parsnips, ctl	—@ 1 25
Oranges, Seedlings		Peppers, dry, lb	10 @—
Redlands	1 75 @ 2 00	Do green	—@—
Riverside	1 50 @ 1 75	Turnips, ctl	50 @—
Los Angeles	1 25 @ 1 50	Cabbage, 100 lbs	40 @—
Do Navels—		Garlic, lb	2 @ 3
Redlands	3 00 @ 3 50	Squash, Mrft, tn	12 00 @15 00
Los Angeles	2 50 @ 2 75	Do Summer, lb	1 00 @—
Riverside	2 50 @ 3 00	Tomatoes, box	2 50 @—
Duarte	2 50 @ 3 00	Asparagus, box	1 00 @—
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Do choice to ex.	2 00 @—
		Peas, green, sk	1 00 @—
		Do sweet	2 @ 3
		Rhubarb, box	25 @ 1 00
Strawberries, per chest—		String Beans	8 @ 10
Longworth	7 00 @ 9 00	Cucumbers, doz	75 @ 1 25
Sharpness	5 00 @ 7 00	Mushrooms	10 @ 30

Live Stock.

BEEF.		MUTTON.	
Stall fed	6½@—	Wethers	8 @—
Grass fed, extra	6½@—	Ewes	7½@—
First quality	6½@—	Do Spring	9 @10
Second quality	6 @—	**HOGS.**	
Third quality	5½@—	Light, ₩ lb, cents	5½@—
Bulls and thin Cows	2½@ 3½	Heavy	4½@—
VEAL.		Feeders	3½@ 4
Range, heavy	4½@—	Stock Hogs	3½@—
Do light	6 @—		
Dairy	7 @—		

SECOND EDITION.

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MOLECULES IN AIR.—Curious evidence shows that a cubic inch of air at sea level contains about 350,000,000 molecules. If the law of regularly diminishing density holds good, a cubic inch air at the height of 100 miles will contain about 350,000 molecules, and at less than 222 miles only 1 molecule. Opinions differ, however, as to the actual height of the atmosphere's upper surface. Prof. Young declares that no definite upper limit can be stated, while Prof. Forster of Berlin contends that a thin air, connected with that of the earth, pervades the whole solar system.—Chicago Journal of Commerce.

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NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY, Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2.00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.
Office, 111 Front Street, San Francisco, California.

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An experienced married man to take charge of and work a forty-acre fruit ranch forty miles from San Francisco, on railroad. Good neighborhood. Good house. Give number in family; your age; amount of experience and reference. Address,

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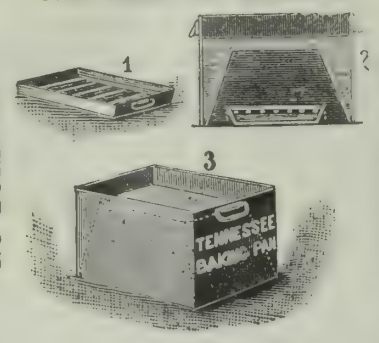
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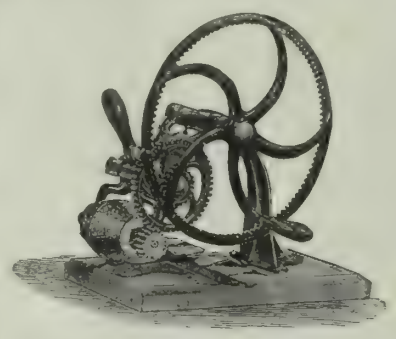
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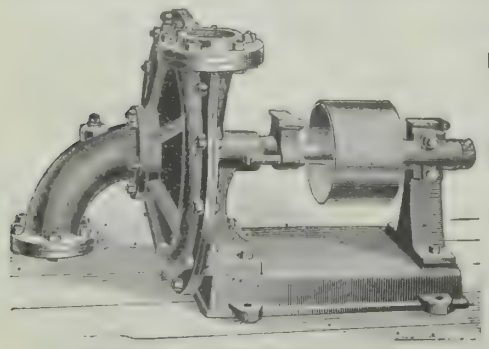
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Has more the spirit of success in its pages than any Pacific Coast publication we have yet seen.

Ponoma Times
The most distinctively Californian of any magazine ever published west of the Rocky Mountains.

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The success of the publication is assured, for the Pacific Coast has long waited for a magazine of some literary merit, and will not be slow to appreciate it, now it has materialized.

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We commend this beautiful monthly to the readers of the *Observer*.

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Has earned for itself a place within the pale of American magazine literature.

Santa Clara Valley
Up to the full standard of a high-grade magazine.

Woodland Mail
Is finely gotten up and compares very favorably with its Eastern competitors.

St. Louis Observer
Starts off with articles of a high literary character, showing that there is a great deal of enterprise behind it.

Hartford Post
Among the best literary monthlies of the country. It is well illustrated, and the fact that it comes from the extreme western border of our land gives it additional interest.

Eureka Standard
It maintains the high standard which its initial number indicated . . . The magazine takes rank among the first in the Nation.

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THE CALIFORNIA ILLUSTRATED MAGAZINE is a welcome addition to the usual monthly file, and shows that the West Coast in matter and manner is not far distanced by the East.

New York Christian Intelligencer
It certainly is the leading magazine of the Pacific Coast.

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THE CALIFORNIAN will rank with *Harper's, The Century, Scribner's,* and other first-class monthlies.

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It is of as high order of merit as the leading Eastern magazines.

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The magazine is a success.

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The young monthly is to be highly commended and will be heartily received.

California Christian Advocate
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New York Congregationalist
It is bright and enjoyable in substance and externally attractive.

The California Crown Vista
Equal to the leading magazines of the East.

Coast Advocate
It ranks with the leading magazines of the country—equal in tone, contents and appearance to any of the Eastern productions.

Los Angeles Porcupine
At last we have a distinctively Californian Illustrated Magazine, in which we may take a just and pardonable pride. THE CALIFORNIAN for April is a number that should be found in every home in the State.

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This is undoubtedly the best magazine ever published in California and should be a welcome visitor to every home in the State.

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Beautifully illustrated.

Petaluma Argus, Cal.
THE CALIFORNIAN ILLUSTRATED MAGAZINE for April is a superb number, abounding in excellent reading and fine illustrations.

Woodland Mail
THE CALIFORNIAN ILLUSTRATED MAGAZINE for April is beautifully illustrated, many of its articles being embellished by artistic sketches making the issue the peer of any of the elaborately illustrated magazines of the East. The magazine is an honor to California and we bespeak for it long life and prosperity.

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New periodicals are springing up on all sides, but it is rarely that one immediately takes a place in the front rank as does the CALIFORNIAN ILLUSTRATED MAGAZINE * * that compares favorably with the best of our large magazines, and may well claim an honorable position alongside of the *Century*. * * The CALIFORNIAN is a first-class magazine, and we wish it the success it well deserves.

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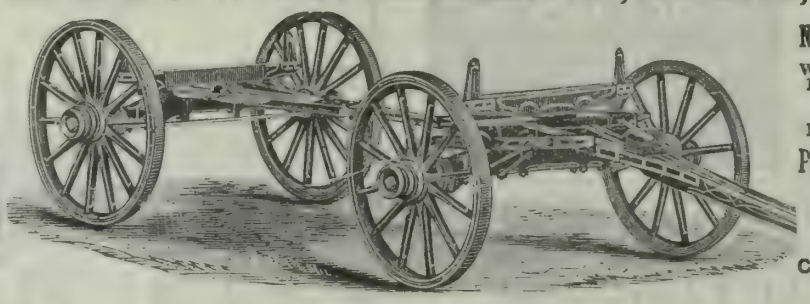
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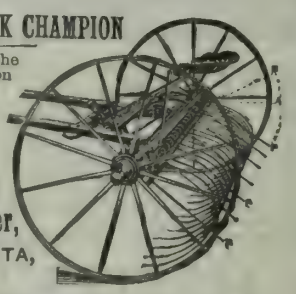




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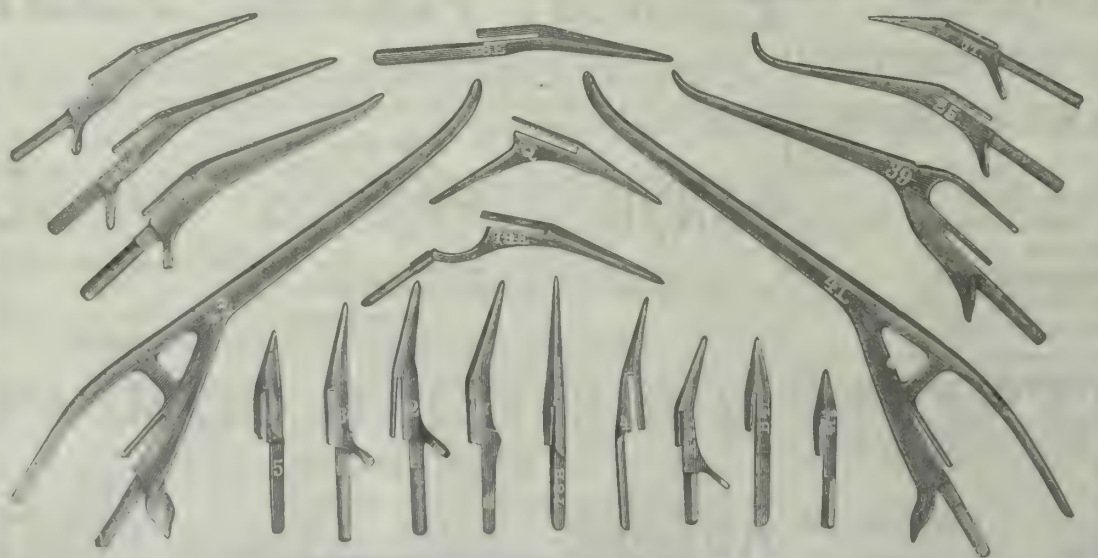
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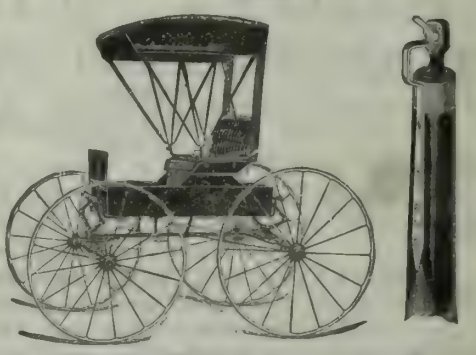
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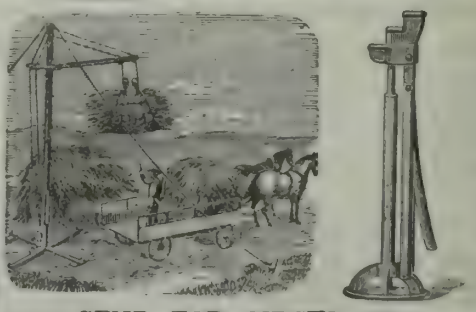


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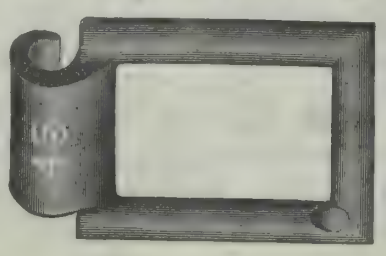
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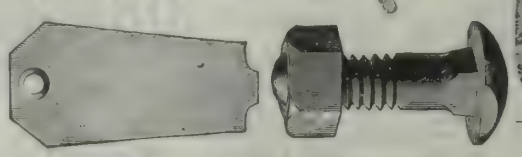






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ILLUSTRATED CATALOGUE MAILED ON APPLICATION.

PACIFIC RURAL PRESS

Vol. XLIII. No. 18. SAN FRANCISCO, SATURDAY, APRIL 30, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Alfalfa-Haying in the San Joaquin Valley.

As pertinent to an issue which deals largely with the hay product of the State, we give upon this page a composite plate illustrative of alfalfa-haying in Kern county. The scenes are laid upon the various rich farms of the Kern County Land Company of Bakersfield, but they are representative also of other counties where alfalfa is grown upon a large scale. In fact, the scenes are distinctively Californian in the glimpses of the valley landscape and in the scale and methods of the haying operations which are portrayed. Nowhere, probably, are means employed which bring vast quantities of good hay into permanent form so cheaply as in this State. This is in part owing to the enterprises and resources which characterize some of our large-scale producers, but probably greater credit must be given to the peculiarly favoring climate which makes such simple and cheap arrangements safe and satisfactory, and to the irrigation system which puts the moisture into the ground where it does most good without dropping it through the air where it may do much harm. The distant reader can hardly realize the comfort of haying leisurely where no storm is feared, in an atmosphere for curing which reduces the handling of the hay to a minimum and almost banishes turning and tedding, and the industrial advantage of stacking the hay in stacks a quarter of a mile long, if you please, without a shred or a shingle to protect it. California is, in most of its area, an ideal hay country, for the same agencies which produce peerless raisins and dried fruits for human food are equally kind to the beast of burden in peerless provender.



ALFALFA HAY MAKING IN THE SAN JOAQUIN VALLEY.

Grass and Hay.

Bread is called the staff of life with reference to the human species, but it bears a light burden as compared with the weight which another great division of the animal kingdom throws upon grass. A large proportion of the human family never sees bread of any kind. The fruit eaters of the tropics and the flesh eaters of the frigids know little of the mill or the bake oven. On the other hand, the countless hordes of the graminivora go to grass as a food supply, which meets all the requirements of their organisms. Remembering, then, the relations of the graminivora to the human species, both in its highest civilization and its lowest barbarism, and remembering also the incalculable value of the products of the graminivora to mankind, it becomes apparent that bread is rather a dress cane than a staff of reliance, and that an older writing, that "all flesh is grass," is a truer generalization—though perhaps in a different sense than the writer intended.

In view of this, it is not remarkable, though often forgotten, that the grass crop, green and dried, is by far the greatest single source of wealth in this country. It is the foundation of all kinds of farming, for there is no line of field production which does not employ the labor of the grass and hay-eating animal. For this reason, we believe that the discussion of hay production, which may be found to occupy large space in this issue of the RURAL, will awaken wider interest than any other single subject which could be mentioned, and will afford to all practical information which they cannot otherwise obtain.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate, Two Dollars a year. While this notice appears all subscribers paying in advance will receive 15 months' (one year and 3 weeks) issue. For $2 in advance, five months. Trial subscription, three months, if paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Per inch, 1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN ..... General Manager

Saturday, April 30, 1892.

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BUSINESS ANNOUNCEMENTS.

[New this issue.]

Agricultural Implements—Deere Implement Co.
Agricultural Implements—P. P. Mast & Co.
Agricultural Implements—D. M. Osborne & Co.
Agricultural Implements—Allison, Neff & Co.
Agricultural Implements—Frank Brothers.
Agricultural Implements—Byron Jackson.
Agricultural Implements—Baker & Hamilton.
Hay Presses—L. C. Morehouse, San Leandro.
Fruit Tree Protector—Bonestell & Co.
Jersey Cattle—Henry Pierce.
Sewing Machines—White Sewing Machine Co.
Agricultural Machinery—G. G. Wickson & Co.

☞ *See Advertising Columns.*

The Week.

These bright days have been sharply ushered in and the blight of frosts has rested upon many valley areas. Upon another page a brief sketch of the visitation is given. Fortunately, such ills prove usually somewhat less grievous than early conclusions indicate, and we trust such may be the experience this year.

Some have held the prevailing low temperature and the sharp frosts as surety that another storm is needed to settle the weather. We do not guarantee the deduction, but certainly more rain is needed to finish out a good crop. Some parts will have very small returns unless more moisture falls, and nearly everywhere more rain would be welcome to field crops, at least.

Damage by Frost.

Frosts, the past week, did considerable damage to the more tender vegetables and fruits in the central and northern counties. Many gardens devoted to the cultivation of tomatoes will have to be reset, and similar reports are coming to hand regarding potatoes. It has been several years since frosts have done such extended damage to garden truck and fruit.

The damage to tree fruit is reported quite heavy in many localities as far down as Fresno county. While considerable damage has been done, yet there is a general opinion that the uninjured fruit on each tree will grow to larger size and be of much better flavor than it otherwise would. The vineyards, more particularly in the lowlands in Sonoma, Napa, Alameda, Contra Costa, Yolo, and in counties farther north, are reported to have suffered quite heavily. It is stated by conservative persons that the grape crop in the above counties will be from 20 to 50 per cent less than it would have been with a frostless season. Outside of the damage done by frost, wine-growing grapevines did not bid to have a full crop, owing to a lack of moisture in the soil. The fruit did not set for much more than a three-quarter crop. It is now claimed that if very hot weather is experienced in June and July next, that fully one-half of the vine fruit left by the frost will be dried up, owing to a lack of foliage for protection. Taken at its best, the fruit crop in the central and northern counties promises to be short from 10 to 15 per cent in tree, and from 30 to 60 per cent in vine, the shortage ranging according to locality. From the southern counties we are not advised of any damage by frosts.

Our Premium Letters—No. 1.

We are gratified at being able to lay before our readers this week the best exposition of haymaking in California which has ever been published. We are aware that there are important local particulars and methods which are not included in the statements we publish this week, but we hope to draw out the information necessary to round out the subject as will be described below. Still, as it now stands in our columns this week, the group of letters embodies more straightforward, practical information on California hay production than has ever been given in type before.

It is perhaps remarkable that a subject of such universal importance as the hay crop, has received so little attention from agricultural writers, but such is the case. To the general reader the hay crop has been looked upon as a crop which grew itself and afforded little chance for interesting study. Hay growers have known better of course, and have learned from their own experience, and from roadside discussions with their neighbors, that the way the crop was handled from plow to stack, really made much difference in the results. But there is very little glamour about as common a thing as hay, and so pencils were sharpened and pens dipped to write about a host of fashionable farm subjects of far less importance, and the hay crop was allowed to come along as best it could, Topsy-like.

We are very glad that it occured to the Rural Press to break in upon this monotony, and we are sure that all will agree from the persual of the hay letters we publish this week, that the subject has not been neglected from any lack of interest in its methods or because there is nothing to learn about it. The discussion shows that haymaking, all the way from choice of land to choice of market, is full of opportunities for close observation earnest thought and prompt action. Thus it enrolls itself amid all our progressive agricultural branches and we trust it will continue to occupy space in our columns in the future.

We are under great obligations to our subscribers who wrote for us their experience and observation in answer to our offer of awards. We are aware that some of them at least wrote as much or more to aid us in carrying out what seemed to them a progressive idea than for the award offered. While we thank them for so doing, we are troubled that some of them should have attained what seems to us nearly an equality in point of merit, because this makes a decision very difficult. Still we have the decision to make and trust it will commend itself to our readers. Our awards are as follows:

First Prize $10—For the letter signed "R.," written by A. W. Robinson Jr., of Napa.

Second Prize $5—For the letter signed "Farmer," written by R. A. Berry, Wheatland, Yuba Co.

Third Prize: One Year's Subscription to Rural Press—For the letter of H. Brockhurst, Orinda Park, Contra Costa Co.

Fourth Prize: *Neeley's Great Historical Chart, Political and United States Map*—For the letter of Edward Berwick, Monterey.

Besides the above premium essays, we publish a few others this week, and several more will appear later. The writers should take to themselves the assurance that they have done a public service in bringing forward interesting and important facts which will help others in their work and increase their comforts and prosperity.

We have remarked that the letters submitted for the awards do not cover all the points of California haymaking. For this reason we make the following new offer:

Five Dollars in Cash to the Rural subscriber who writes the best letter in the review and discussion of haymaking which will follow the publication of these prize essays.

We shall rely upon this critical review of the subject to embody the following points:

1—Statements and advice of the essayists which do not accord with your own experience or with the general experience of your locality.

2—Methods of practice which are not as satisfactory as those you have adopted.

3—Important considerations in any branch of the subject which the essayists have overlooked or omitted.

We trust this invitation will lead to a full and free discussion, and the award will be based upon the importance of the points advanced by the reviewer. We shall expect to receive these letters promptly, for we desire to make other announcements of prize subjects as soon as possible.

Santa Clara Valley fruit growers and as many more as can attend should not overlook the announcement of a convention in San Jose on May 7th, of which full particulars may be found on page 414 of this issue. The time seems ripe for fuller cooperation among fruit producers, and the movement should be a strong one.

Hay From a Commercial Standpoint.

With more attention to fruit culture, comes a larger demand for hay, owing to the large increase in the number of work horses used by orchardists. A few years ago it was claimed by those in position to know that for every ton of hay fed out in this city, Oakland and Alameda, fully three tons were fed in the remainder of the State. Now it is estimated that for each ton fed out in the above-named cities, at least seven tons are fed out in the rest of the State. In this estimate, no reckoning is made of pasture-feeding, only of hay that is cut and cured. A fair idea of the hay crop can be gained by the following statistics of acreage devoted to it as returned for the year 1891 by county assessors:

County.	Acres.	County.	Acres.
Alameda	92,344	Placer	9,845
Alpine	250	San Bernardino	33,205
Amador	7,000	San Diego	18,762
Butte	11,000	San Luis Obispo	36,620
Calaveras	9,500	San Mateo	10,500
Colusa	3,696	Santa Barbara	13,500
Contra Costa	48,400	Santa Clara	35,178
Del Norte	135	Santa Cruz	5,285
El Dorado	4,927	Shasta	11,496
Humboldt	25,275	Siskiyou	52,686
Inyo	6,972	Sonoma	8,470
Los Angeles	13,500	Stanislaus	1,500
Marin	10,120	Sutter	4,555
Mariposa	6,330	Tehama	15,466
Merced	11,300	Trinity	3,500
Modoc	107,100	Yolo	11,500
Monterey	20,000	Yuba	10,000
Napa	16 785		
Nevada	4,289	Total	680,851

The remaining counties, from which no returns were received, it is estimated brought the acreage up to fully 800,000 acres. This year the acreage is claimed to be considerably larger than was that in 1891; but how much, no one appears willing to state. The amount of alfalfa seed sold the past winter is about 30 per cent more than ever before, and that of clover about 20 per cent greater. The increased acreage seeded to alfalfa and clover is due largely to more attention given to dairying, owing to creameries growing into favor. Alfalfa is also growing in favor for hog-feeding.

From George Morrow and other large handlers of hay in this city, we learn that the principal demand is for wheat hay, which is chiefly fed out to work animals and private teams. The next in demand is oat hay, which is principally fed out by owners of driving horses, roadsters and fast horses. Chevalier barley hay is growing in favor, and bids fair to soon take rank with that of wheat hay. Bald barley hay is considered very choice for feeding, but it is hard to raise, owing to very few localities being adapted to its cultivation. Timothy hay is unsalable. Of clover hay, the blue and red tops are the favorites with dairymen, with burr clover hay a good second. Alfalfa hay is used quite largely by dairymen in cold weather. Many of them claim that in warm weather the milk from cows feeding on it has an unpleasant flavor. Considerable stock hay is fed out here by butchers and stockmen. Experienced horsemen in this city claim that wheat and wild oat hay is the best all around feed for horses. They claim that new wheat hay is too laxative and when it is old it is too binding, both of which are neutralized by wild oats.

Dealers in hay claim that the best prices are obtained for hay when it is cut just as the milk begins to harden, and after being cut and properly cured, then stacked, and in stacking slightly sprinkled with salt. The salt is said to sweeten the hay and make it more palatable. The hay, they claim, should remain in the stack a certain length of time before baling, the length of time being due to the kind of hay, when cut, and also the locality where grown.

The receipts of hay at San Francisco in 1891 aggregate 43,694 tons the first six months and 78,853 the last half of the year, making a total of 122,547 tons for the year. This includes all kinds, for it is nearly impossible to segregate the varieties. Nevada farmers sent large quantities into this State in 1891. This was due to heavy losses of stock by the hard winter of 1889-90, and the hay crop being largely in excess of the home requirements. They were also able to market their hay in this State owing to the railroad giving them special freight rates, and also to the high prices that ruled for hay throughout California. For the first five months of 1891 the market in this city held around at a range of from $12 to $19 per ton. In the forepart of July prices for new at $9 to $14.50 per ton. When it became known that the crop in this State was short, buyers came in the market and bought quite heavily in the country, causing prices to move up from 50 cents to $1 a ton, and this advance held its ground in the market the remainder of 1891 and well into March of this year.

The market now is weak for old with poor grades hard to sell. For new-crop hay, offers are made at from $8 to $11 per ton, according to kind and quality. It is claimed that very little hay will come from now on from Nevada. This opinion is based on the well established fact that large numbers of sheep and meat animals have been driven into that State, and also to a very large increase in the number of milch cows owing to a rapid increase in creameries.

The State Press.

Yuba City *Independent*: "At no time in the history of this nation have so many active human agencies for good to the race been in operation."

Sacramento *News:* "Manifestly there is a lack of interest, especially by the farmers and fruit growers, in the Sacramento County World's Fair Association. There is not that genuine enthusiasm which marks deep appreciation of the objects of so important an organization."

Visalia *Times:* "The question as to whether the United States Senators should be chosen by the people will be voted upon at the coming election. If two-thirds of the States vote in favor of the change, it will be made. For the last 25 years there has been a tendency to centralize the Government. This change would be in the opposite direction and ought to carry."

Woodland *Democrat:* "The defense of the Pacific States in time of war should demand the thoughtful and patriotic consideration of the whole country. The Pacific Coast industries are now so large and varied, the population of that part of the Union so sparse, the distance around Cape Horn by sea so great, the long time required to reach there by water, the increasing needs of that part of the American Union, all point to and make necessary, as a matter of national safety, the building of the Nicaragua canal."

Central Californian: "The rate on nursery stock from Fresno to Redlands, in San Bernardino county, a distance of 300 miles over the tortuous windings of the Southern Pacific system is $2.58 per 100 pounds in less than carload lots. The rate on like freight from Los Angeles to Chicago, a distance of over 2986 miles, is $2.70 per 100 pounds in less than carload lots. Will any friend of the Southern Pacific Company say that the rate between Fre no and Redlands is just? When this matter is brought to the attention of our Railroad Commissioners, as it will be, will they do anything to right existing wrongs? Trade in the interior of California is in the grasp of a merciless corporation, and the State Board of Railroad Commissioners has the power to free it. Will the Board extend the relief which the people ask?"

Stockton *Mail:* "Look at the idiosyncracies of the average reputable elector. He does not attend primaries nor preliminary political meetings—not he. On the evening of the primary, caucus or slate-arranging meeting, you will find him at home with his newspaper, or on the street attempting to 'see a man.' The wheels within wheels of a republican form of government are being operated and the striker and political tough are out in force to see that the wheels are fixed to run as they desire, but the so-called 'good citizen' is apparently not interested in the way those wheels are manipulated; he is content to leave their operation in the hands of the striker and his boss. And so their fair political structure of the republic is built on a foundation which is rottenness itself. This is the chief cause of the corruption which is seen permeating official circles from the highest to the lowest. It behooves Americans to remember that a house which is founded on the sand cannot stand when flood comes."

Nutritive Value of California Hay Crops.—The fact that hay is usually made from different plants than used at the East and in Europe, and that the hay is grown under different conditions of soil and climate, it becomes very important to have chemical analyses of California hays, so that their nutritive value and equivalents can be intelligently set forth. This is the more important in view of the fact that we are tending toward the compounding of food rations for different animals performing different kinds of service, and this cannot be done upon Eastern formulas because our materials are known in a general way to be somewhat different. The University Experiment Station proposes, during the coming year, to give as much time as possible to investigations of this kind, with a view of making its work of especial value to the stockgrower and dairymen. Some analyses have already been made, but more are necessary to serve as data for generalizations.

Souther Farm Horse Sale.—The horse sale by Gilbert Tompkins of Souther Farm, San Leandro, held last week, was a notable event from several points of view. The attendance was very large and yet the hospitality of the proprietor was adequate thereto, both in material and sentiment. The sale was fairly satisfactory, we are told by visitors, both in aggregate and average. The appointments of Souther Farm as a breeding and training establishment, received very high praise from those who visited it. Mr. Tompkins is conducting his establishment on a liberal plan and with high aims, and merits the attention which he is securing from the public.

Hand Book of West American Conifers.—Prof. J. G. Lemmon, of Oakland, has published in pamphlet with the above title his plan for the adoption of approved English names for the cone-bearing trees of the Pacific Coast. The matter is similar to that contributed for the Rural Press of Jan. 23d and 30th, and is now in good form for reference and preservation. Copies of the pamphlet are sold at 25 cents each. Prof. Lemmon has now in preparation a volume of about 350 pages, to be entitled "West American Cone Bearers," fully illustrated. It will command wide attention.

The Premium Map.

The Rural Press map proves to be the most popular and successful newspaper premium ever offered in California. It was given to the public about the middle of February, and already nearly two thousand have been distributed. Calls for it have come from all parts of the coast, and more than a few from the farthest corners of the United States. Through its aid the circulation of the Rural is being widely extended, not only in California, but in other States, where California ideas and methods are read with interest. The map, with the historical chart which covers its reverse side, is, in our opinion, the most valuable publication of the kind ever given to the public, and its intrinsic value is many times greater than the price we ask for it. It was, in fact, originally sold by the publisher for $5.00. Many of those to whom the premium has been sent have acknowledged its receipt, and from a heap of several hundred letters we select the following at random:

Mr. E. S. Barney writes from Drytown, Cal.: "The Neely Historical Chart sent me came duly to hand. The more I examine it, the better I like it. Think it very fine."

Mr. Chas. E. Bapp writes from San Jose: "I am surprised to find your map such a complete one. I thought it might be a map of general outlines, but such an instructive map I did not expect you could give away. I have read your paper, the Rural Press, for 18 years or more, and have many times found the price of it by reading one copy. I would not do without it as long as I could raise the money, and I do not see how any one who is interested in agriculture can get along without such a paper as the Rural Press."

Mr. M. W. Woodard, 914 Sixteenth St., Oakland, writes: "Your premium map proves a family delight, relieving the mind of the burden of dates, and thus divesting historical study of its terror. As a bird in its flight sees all beneath clearly, so on this map one sweep of the eye gives all the prominent facts of American politics and history in their correct relations and order of sequence. My children make daily use of it."

Mr. W. W. Smith, of Vacaville, Cal., writes: "The map came to hand all right. I like it very much. I cannot understand how such a map can be sold so cheaply."

Mr. H. Bish, of Lompoc, Cal., writes: "The map is a good one—a valuable map for the household or office. It should be in every family, as it is a valuable compendium. I regard it, all in all, as one of the most useful maps extant."

D. V. Thompson, of Upper Lake, writes: "The map received and far exceeds expectations."

L. A. Finney, of Modesto, writes: "I have received your premium map, and am very much pleased with it. We think it a very valuable map."

John Gibson, of Glen Ellen, writes: "The premium map received. It is just what I have wanted in my house for several years past."

G. W. Elkins, at Palermo, writes: "The map received, and must say that I am pleased with it. I consider it a very valuable addition to my library, worth much more than the price of the map and the newspaper together."

J. K. Hale, of Lodi, writes: "I cannot see how so good a map can be sold so cheap. I think it the most perfect I have ever seen. It has more than paid the cost already for the use of my children. I thank you for sending them out so cheaply."

D. W. Power writes from Chico: "The map is fine indeed. I have been wondering how it could be sold for the price."

J. A. Wilcox writes from Santa Clara: "Your map received. So far as I have had time to examine the political chart, I regard it as perfectly reliable and valuable to any one who cares to study the political history of the country. The origin of parties and their history during the last 60 years was given more reliably and specifically than in any standard history I have seen during my remembrance through this period of personal observation. It is unique in design, and especially valuable for reference. The map complete is a superior production.'

E. H. Freeman writes from Santa Clara: "The Neely map came safely to hand, and I am well pleased with it."

W. C. D. Body writes from Grass Valley: "The premium map received, and I am highly pleased with it."

P. H. Atkinson writes from Sebastopol: "I have received Neely's map, and am very pleased with it."

M. Fallon writes from Forestville: "The map you sent has been received, and I think it a very fine one."

C. F. Agee writes from Dixon: "We are highly pleased with the map."

G. M. Coulter writes from Batavia, Solano Co.: "I am much pleased with the map, and as ever with the Rural Press."

E. F. Ward writes from Escondido: "I have received the map and chart. The children say that it is of great value in studying history, and I am of the same opinion. Besides, it is a very fine ornament for a room, and I would not want to part with it for four times its cost. How it can be furnished so cheap is more than I know."

A. M. De Spain of Hot Lake, Oregon, writes: "Received the map in good shape. Will say that I am very much pleased with it, and consider it one of the most complete I have ever seen."

Wm. Schuld of La Porte, Cal., writes: "I received Neely's map to-day, and am greatly pleased with the same."

J. L. Robertson of Newcastle, Cal., writes: "Map received and I am *well* pleased with it. It is a history in itself."

James Dougherty, Tuscarora, Nev., writes: "Your Neely's historical chart and map was received in good condition. It is magnificent."

We might give hundreds more all joining in the chorus of compliment. No, not all—there is one, but only one, exception to the rule. In acknowledging the receipt of the map, Mr. N. H. Thomasson of Chico: "We received the map all right. We do not like it very well, but it will do." We feel that it would be unfair to give only one side of the picture, and so print this one note of dissatisfaction along with the others.

The premium map is supplied *to subscribers only* for one dollar, in addition to the regular price of the paper. The rates are as follows: One year, $2.40; six months, $1.20. Those who are already subscribers, and who stand credited upon our books with an advance payment, will be supplied with the map for $1.

The China Trade and the California Farmer.

The United Stater Senate has very wisely refused to pass the Geary bill which provides for total exclusion of the Chinese, and will extend the present restriction law for another period of ten years, and will recommend changes in the regulations, designed to make it more effective. This is really all that was required. The purpose of the restriction law was to prevent the incoming to the United States of hordes of Chinese laborers to compete with our own people at cheaper rates of wages, but it did not propose to prevent the residence here of merchants, through whom much of our Chinese trade is carried on. It has been argued by the political press, and by those members of Congress who are anxious to tickle race prejudice and so gain votes, that the Chinese trade was of small value. But they have not been able to impress this view upon the Senate, which chose rather to study the facts, from which they find that, in one way or another, we gain immense advantages through this important branch of our commerce. Another influence, possibly a paramount influence, with the Senate, was the consideration of the question in its relation to national good faith, a view to which mere politicians are never inclined to attach much weight.

The value of the China trade to California is very much greater than to any other part of the country, since pretty much all of the exports to China are products of California labor. The list of these exports for the year 1891 is at hand, and includes a great many products. We cannot print the whole list, but a few items will show the California farmer how important a factor this trade is in his prosperity. It includes beans, bread, flour, wheat, canned fruits, canned meats, oranges, drugs, fish in various forms, hay, hops, meal, iron pipe, copper, butter, cheese, hams, bacon, lard, beef, potatoes, seeds, salmon, not to mention manufactured goods, liquors, etc. The total aggregates $3,172,497, and when it is remembered that most of these things are produced in California, it will be seen that the China trode is a large factor in our general market.

Furthermore, the China trade assists in maintaining the lines of traffic which extend not only to China but to Japan, the Sandwich Islands and the South Sea Islands. To shut off the China trade would greatly limit our Pacific Ocean commerce, because the steamships require for their support the whole of the ocean business, and could not be operated as they are now with an important part of it left out. To shut off this trade—the inevitable result of the Geary proposition—would simply transfer it to British Columbia in connection with the Canadian Pacific railroad; and with the China trade would go in part or in whole the trade with Japan and the Southern Islands.

We say the Senate has acted wisely, because it has refused in response to mere prejudice to enact a law whose inevitable consequence would be the limitation of our ocean commerce. The Senate was right also in its recommendation with reference to the enforcement of the present law. There have unquestionably been serious evasions of this regulation, but they have been only such as may be prevented by more thorough police surveillance along the northern border. It is absurd to say that no method can be devised to make the law effective, and nobody assumes to say this excepting those who have some cheap political motive for misrepresentation.

Land Holdings and Grain Prices.

Dixon, April 22, 1892.

To the Editor:—I notice in your paper that a resolution has been passed by the Napa County Alliance endorsing the opinions expressed by Mr. W. H. Mills of San Francisco in opposition to land monopoly. Mr. Mills advises the breaking up of the vast landed estates in California, that happy homes and thousands of citizens may occupy the land which is now the abode of coyotes and jackrabbits, and so husbanded as to be of small benefit to the State and in fact a disgrace to it.

Now, I am not one of those who can be classed under the head of land monopolists, but I cannot endorse Mr. Mills' argument. He gives a long array of figures going to show that our lands are falling into the hands of a few, but he does not show the cause, and he offers no radical remedy or preventive. Now it seems to me that the cause is reasonably plain. The lands that have been massed in large estates are mostly grain lands. Ten or twelve years back, our grain merchants were satisfied with one dollar per ton for purchasing and turning our grain over to shippers; but a change took place when the Call Board system was inaugurated. Before this system came into practice, the average price of wheat was at least $1.65 per hundred. Since the system spoken of, the price is hardly one and one-quarter cents per pound, which involves a loss of 40 cents on the hundred, which amounts to $8 per ton less to the producer. A man with 160 acres loses under this system about $8 on the ton, or about $1280 per year. So much of a profit taken off makes it impossible for him to support a family by raising grain. Consequently, he sells to a neighbor who has teams and machinery to cultivate large tracts at small expense, and who, therefore, can make a profit by cultivating to the capacity of his teams and machinery.

Now, why abuse men who are the bone and sinew of the country? Why not abuse the system that unjustly deprives the smaller producers of their hard earnings?

Solano County Farmer.

Our correspondent views the matter in a wrong light. While it is true that the Call system has worked to the disadvantage of the producer and the advantage of the speculator, it has by no means been the controlling fact in regulating the price of wheat. All the world over, of late years,

wheat has been less valuable than formerly, because the cheap lands and cheap labor of India and of other countries have been brought into competition with our own. The Call Board system is responsible for some of the damage, but it is the smaller part of it. The chief loss is due to conditions in no way related to anything originating or under the control of dealers or producers either in California or the United States.

Surely a Solano county farmer, who has abundant opportunity of witnessing near at home the demoralizing influence of large land holdings, cannot wish to see the extension of the monopoly system, with still wider fields depopulated and turned over to the monopolist land holders.

While it is possibly true that the large holdings are for the greater part grain lands, is it not true that under a system of diversified farming many of these lands could be made fruitful in a multitude of ways, and be made to yield much richer returns than under the present looser system of grain cultivation?

A New System of Handling Alfalfa Hay.

There has come into use in the San Joaquin valley a method of cutting alfalfa hay, and stacking the cut hay ready for feeding out, which is in marked contrast to the old system of stacking just as it leaves the mower, and running it through the feed-cutter just before feeding. This new practice has become possible through the introduction of mammoth feed-cutters with elevating attachments, and it appears that the new plan has decided advantages for large scale work. The following are extracts from a letter from S. L. Akins, superintendent of the Paige West Side Stock Ranch, Newman, Stanislaus county:

I will give you, as requested, our experience with the new process of cutting up and stacking our hay crop at one operation, using a 26-inch Ross Giant hay-cutter with self-feeder and stacking elevator.

After receiving the machine, we at once put it into operation, and although we were very doubtful as to the success of the undertaking, a few hours practical work demonstrated to the entire satisfaction of all that success was assured. This first season we handled our three last crops of alfalfa amounting to 3000 tons of hay, hauling from the field right to the machine and pitching the loads from the wagons to the self-feeder, and the machine delivered the hay all cut the desired length up the 35-foot elevator to top of stack. With the Ross machine and six wagons, we gathered, cut up and stacked from 75 to 100 tons of alfalfa hay each day; but six wagons were not able to keep the machine busy, as some of them traveled a mile, part of the time, and the machine easily cuts and stacks 150 tons a day when kept supplied with hay.

The cost of cutting and stacking our hay with the Ross machine this season was less than it has always cost us simply to stack it without cutting with a derrick, and in order to account for the saving, will give you the account of help we employ in each process:

To operate Ross self-feeding cutter with elevator:	
Fireman and engineer for engine	2
Men on stack	2
Extra pitcher to help drivers unload wagons	1
"Roustabout" to help drivers unload wagons	1
Pitcher to assist self-feeder when necessary	1
Total	7
To operate derrick when stacking whole hay:	
Men on stack	8
Man to drive derrick team	1
Total	9

Showing a saving of two men and the hay all cut ready to feed in the bargain.

As to the advantage of this process over stacking the hay whole, and hauling it at feeding time to the cutter, will say that it not only saves all the expense of winter cutting, but in our past experience we often had to haul hay in very wet weather to the cutter, and when wet, it cut so hard that we could not handle it fast enough to feed 2000 head, and our stock sometimes suffered for feed, while now we can supply it all cut and in any quantity as fast as desired, no matter how bad the weather may be. Feeding by this process, six men can now feed our stock where before it took 18 men to feed the same stock with whole hay, and this is a great saving of help in winter.

As to the condition of feed handled by this process, after being kept in the stack for several months we find that we never fed better feed to our stock. This season of 1890 was one of the most severe on record, and the condition of our stacks after all the wet weather proves that the process is a great success, and we can depend upon stacked cut feed serving our purpose at all times. One stack we covered over with whole hay, but those not covered at all, being simply ridged high in the middle, did just as well. The moisture only wet down from two to four inches, and the whole stacks were perfectly sweet and fresh. We mounted the Ross machine on a truck, and as fast as the stack reached it, drew the machine away so that we could make the stacks as long as we wished.

We also used the machine and a horse power to cut and store away 200 tons into our horse barn, running the elevator into a loft door and the feed being stored as fast as cut. This feed we fed to our horses, and found they did better on it than whole hay.

The cutting reduces the bulk of our hay as from five to one, and this is a great saving of space. We used no salt in putting down the crop, but it would be very easy to salt in the stack if desired.

Of all our crops handled this season with the Ross machine, both in stacking and feeding, we do not think there was a ton wasted, while heretofore there has always been much wasted, especially in feeding, no matter how careful we may have been.

We used our 20 horse power thrashing engine to drive the Ross machine, but it ran it easily with only 45 pounds of steam, and feel satisfied that 12 horse power engine would do the work as well. On the whole, we find the process a great saving of labor and expense and a splendid investment.

The Canal Question.

Menlo Park, April 26, 1892.

To the Editor:—The course of Mr. Cannon, in the Canal Convention, and the letter of Mr. Pool, in your issue of April 16th, shows that there is among the farming community serious misapprehension on the subject of the Nicaragua canal project. I request space in your columns for an explanation. To the farmers, fruit raisers, wine growers—in a word, to the producers of this coast, an interoceanic canal is the most interesting and important project before the public. Great as would be the benefit of such a work to the rest of the country, to the whole west coast it signifies the progress of a century compressed into a space of five years. We ought to be on all questions affecting it a unit.

Mr. Pool, Mr. Cannon and others who concur with them lose sight, I think, when they express fear of a monopoly, of the essential difference between a railroad and a canal. On the former a special form of carriage and motive power are required for transportation. These are expensive and useless for any other purpose, so that their ownership is confined to the corporation which owns and operates the road; hence transportation over railroads, as at present operated, is essentially a monopoly in the hands of the company. A canal, on the other hand, is an open waterway, through which all sorts of vessels are capable of passing, and are entitled to pass on paying the tolls, which are equal on all—*so many tons burden, so many dollars toll.* Such a channel of commerce never can become a monopoly any more than an arm of the sea, a navigable river or a turnpike road. We may safely defy Mr. Huntington himself to make it such. Perhaps that is one reason why Mr. Huntington and his adherents are so much opposed to the undertaking in question.

As to a canal across Nicaragua, built and owned by the United States Government, I, too, was in favor of that plan, so long as it was a possible thing. I favored Government construction, however, not because I feared any monopoly arising out of it if owned by a corporation, but because the Government, having the highest credit and unlimited means, could secure its completion at the earliest date and the least cost possible, thus securing the maximum of benefit to the public. But there proved to be difficulties in the way of this plan which were unsurmountable. Let me explain a little in detail.

This interoceanic canal question is by no means a new one, and it is affected by a variety of things over which we, of the Pacific coast, have and can have no control. It is really a part of the general continental policy of our Government which does not change with changing administrations, but is steadily adhered to, being founded on traditions coming down from the time of Washington. The improvement of communication between the Atlantic and Pacific coasts occupied the attention of our Government as early as Jefferson's administration, and led to the dispatch of Lewis and Clarke's expedition, that of Major Long, and others now almost forgotten, to explore the passes across the continent. With the acquisition of California came the more urgent need of it, and the project of a canal across the isthmus came prominently forward. British statesmen had long before perceived the importance, in view of the introduction of ocean steam navigation, of possessing such pivotal commercial points as Aden, Singapore, etc., and from 1847 on, British agents became especially active on the coast of Central America. A mosquito Indian chief was dubbed with the title of king, fitted out with a post captain's uniform, and taken under British protection. His majesty was supplied with whiskey *ad libitum*, and his government run for him by a British consul. The port of San Juan de Nicaragua, then the finest harbor on the Atlantic coast from Porto Bello up to Hampton Roads, was seized under a claim trumped up for the Mosquito King, and wrested from the control of the Nicaragua government. American statesmen looked with apprehension upon these high-handed proceedings, which seemed to many to portend an English lodgment on the Nicaragua shore, analagous to that of a century and a half previous, which had since matured into what is called British Honduras. Such was the alarm among the Central American States that a cession of Tigre island in the Gulf of Fonseca was offered by treaty to the United States, to induce them to interpose for the protection of the menaced sovereignty of Nicaragua. Our Government declined to accept the grant, but communications were made to the British government which resulted in a convention of April, 1850, commonly called the Clayton-Bulwer treaty. By it the two governments agreed to give their protection to any ship canal across the American isthmus, both during its construction and after its completion; each also agreed not to colonize, occupy, fortify or exercise dominion over any part of the isthmus, nor to make use of its alliance with, or protection over, any Isthmian State, or in any other way to secure or exercise any exclusive control of the canal, nor to erect fortifications commanding it or in its vicinity, with other similar provisions. The treaty is to be found in Vol. IX of the U. S. Statutes at Large, at page 995, and I recommend Mr. Pool and all who think with him to read it carefully, for it distinctly enunciates and contracts for a policy wholly at variance with the ownership of the proposed canal by the United States Government.

From that time forward, then, the policy of the United States, clearly declared, was to procure the construction of a ship canal across some part of the American isthmus. The quarrel over slavery in the Territories, the Civil war, interrupted the efforts toward the realization of this policy for some years, but, after the close of the war, the question was again taken up, and careful, elaborate and thorough surveys and explorations were made of the five possible routes, which resulted in demonstrating that the only point at which a canal was practicable, without an outlay entirely forbidding, was by the river San Juan and the lake of Nicaragua, and that route was decided on. Hence, from the time of General Grant's administration, when that conclusion was reached, the policy of the United States has been "*A Ship Canal across Nicaragua.*" Our Government looked with perfect composure on the French attempt, under De Lesseps, to cut a canal at Panama, simply because it was well advised that the undertaking was predestined to failure. A canal across Nicaragua, however, continued to occupy its attention under the administration of Mr. Hayes, who recommended it most earnestly to Congress, and under that of Mr. Arthur, who negotiated a treaty with Nicaragua by which the U. S. Government was to build and own the canal and a strip of land three miles wide on each side of it. This treaty was sent to the Senate in the winter of 1884–85. The British Government made representations to ours against its adoption, deeming it a violation of the Clayton-Bulwer treaty—a view which appears to have at first escaped the notice of our negotiators. If the Senate had ratified that convention, we should have had the canal built by the United States, but it would probably have been at the expense of a rupture with Great Britain. The Senate, however, did not ratify the treaty. In deference to the claim of Great Britain, they postponed consideration of it till after the 4th of March, 1885. Perhaps it was thought best by the Senate (which was Republican) before adopting so radical a change in our foreigh policy, and one involving such grave consequences, to make sure of the consent and cooperation of both the great political parties. However this may be, action on the treaty was postponed by the Republican Senate until after March 4th, and within a few days or hours after his inauguration, Mr. Cleveland, the newly elected Democratic President, withdrew it from their consideration and pigeon-holed it forever. That was seven years ago. If Mr. Pool and Mr. Cannon then paid as close attention to this enterprise as I did, they were probably as indignant as I was at the course of Mr. Cleveland in reference to it. I denounced him for it publicly, because I perceived clearly that it threw away the last chance of having the canal built and owned by our own Government. The leaders of the Republican party, however, acquiesced in Mr. Cleveland's policy, and the chance of a canal owned by the United States was gone forever. Thereafter, on the suggestion of men high in our Government, and belonging to both parties, a grant of the right to build the canal was sought and obtained by a party of American citizens, to whom Congress has since granted a charter of incorporation. They are the present Maritime Canal Company. They have a grant, from the Governments of Nicaragua and Costa Rica, of the exclusive right to build the canal, and a lease of it for 198 years. They are forbidden expressly to assign their lease to any foreign Government. The United States has incorporated them with this distinct condition in their grant. This is a declaration by Congress, explicit and emphatic, that henceforth the policy of our Government on that question is settled; it is *the construction of a ship canal across Nicaragua by the Maritime Canal Company, an American corporation.* This state of things is a matter of public history and public law, and we must acquiesce in because we cannot change them. The day when a canal built and owned by our Government was possible passed forever when Mr. Cleveland withdrew the Nicaragua treaty from the Senate, never to return it again. We might at this time just as well wish for the moon as ask for a canal so built. If we seriously desire to see the canal built at all, we must help the present company to build it, for they alone have the right to do so. To say we want it built and owned by our Government is simply another way of saying we prefer to go without it. I would therefore respectfully urge upon Mr. Pool, Mr. Cannon, and all who represent any of the producing interests of California, Oregon or Washington, to come forward and give their powerful aid toward the building of a work so pregnant with benefit to all sections of our country, but especially to the west coast; and to us California producers beyond all others. At a future day I shall, with the permission of the editor of the Rural Press, discuss briefly the legislation pending before Congress.

John T. Doyle.

Other Benefits From the Coyote Bounty.

Merced, April 25.

To the Editor:—Since you invited comment on the coyote scalp law I have only noticed two articles in reply to your request. Those that are opposing the law, claim that only the sheep industry will be benefited by destroying the coyotes, when the real facts are, that where one sheepman suffers there are hundreds of familes suffer from the loss of poultry of all kinds and young pigs, and though the individual loss might seem small, to some, in the aggregate, it would be large. I can assure you the loss is really serious to many familes that are depending in a great measure on their poultry as a source of income.

Before the enactment of the State Bounty Law it was no uncommon sight to see the coyotes in droves of five and six about my ranch, often two and three times that number, and by using every precaution we could, our loss in poultry, pigs and calves for the past six or eight years would amount to a pretty big bill. For the past six weeks or two months I have heard of but one coyote being seen and the nights are no more made hideous by his unearthly yells. I do not believe the tax on the State Treasury would be one-fourth for the ensuing year that it has been the past, and now to talk of repealing the law, would, in my estimation, be an unwise and unbusiness like act.

All this talk about the coyote being any greater help about exterminating the jack rabbit is too ridiculous to talk about. I for one believe in giving his satanic majesty his due, and of all the hatred I have for the meanest of all mean animals that ever had an existence, I certainly would not do him the injustice of showing such inferior taste or judgment of wearing himself out in the unequal contest with the fleet jack rabbit while by a little adroitness (which is an inbred quality to the last degree in this sly beast) and in the early dawn before the Granger has come on deck, he can slip up and help himself to a fat duck, chicken, turkey, pig or lamb as his taste for the occasion might dictate.

One word about the ability of this so-called exterminator of the jack rabbit to propagate his species, and for this time I am done. A year ago, and before the law took effect, we caught two of the female persuasion that were about to replenish their kind to the round number of twenty-two.—M. D. Atwater.

Progress in Santa Clara County.

At a meeting held at Doyle, Santa Clara county, the subject of wider cooperation among fruit growers was under discussion. At the close, a committee was appointed to consider ways and means—Col. Hersey, S. P. Sanders and D. W. Miller.

Col. Hersey explained the working of the West Side Association, and it was evident that it had been a success and benefit. He suggested that associations be formed at Campbell, Los Gatos, the Willows and other points in the county, and all work under one agent, and eventually under one brand. He also suggested the idea of a Congress or Convention of Fruit Growers to be held in San Jose at an early date, for the purpose of organizing. He would select five or more representative growers from each school district and let them invite all their neighbors to meet and see if they cannot present a feasible plan of organization that will be beneficial to all growers. He stated that all the telegrams and letters relating to the condition of the market, received by the West Side Association, were at all times open to inspection of the members, of which there are 75, so that they could be as well posted as any one. Nothing of that nature was kept secret.

President Glendening called upon Mrs. McGlincy for her views, and she responded by saying that she liked the idea of the Congress of Fruit Growers spoken of by Col. Hersey and others, and said if they can have one like it at Campbell, and four or five more scattered over the valley, and will act in harmony, she was sure it would be of great benefit.

CALIFORNIA HAY-MAKERS.

The Lessons of Thirty Year's Experience in the Field.

A SERIES OF LETTERS FROM PRACTICAL MEN.

NOTES ON THE HAY CROP OF THE CURRENT YEAR 1892.

Points on Preparing the Soil and on Growing and Curing the Crop From Men Engaged in Hay Production—The Experience of Many Practical Farmers Set Forth in Plain Terms.

To obtain the best crop of hay possible, both in quantity and quality, in an economical manner, and to house it in excellent condition, should be the aim of every farmer who raises this staple crop.

When, in the rotation of crops as generally practiced by our farmers, any certain field is set apart for a crop of hay, there is to be taken into consideration whether it will be best to "volunteer" it, to sow seed and cultivate it in, to dry plow, sowing before or after the operation, or to wait until the early rains have moistened the ground sufficiently for good plowing and, on the fresh upturned soil, to broadcast the seed. Whatever course is taken, all hay raisers will be in favor of the earliest possible seeding.

VOLUNTEER.—Unless the ground be very well seeded from last year's crop, it is not worth while to volunteer land. Sowing seed on the surface before the rains, and either plowing or cultivating it in, or using the disc or cutaway harrow, is not to be considered the best method. There is often a strong temptation to do either one or the other if the fall rains are late, for work on the farm in the advanced autumn is generally slack. But one should endeavor to get as clean hay as possible, and this will not be the case if the land is dry seeded. The seeds of thistles and other obnoxious plants often live in our soil for several years before sprouting, those near the surface only waiting for the first rains in order to germinate and rapidly grow. A considerable quantity of the seed sown previous to the rains is thus crowded out by weeds, and, in any event, "foul stuff" will appear in the crop when harvested, the result being hay of deteriorated quality and, if sold, will bring but a small figure.

PLOWING.—Our opinion is that the best way of seeding for hay is to plow after the early rains, allowing sufficient time to elapse to let the weeds start and then turn them under. The hay will be much cleaner for this, and one will be well repaid for waiting. Turn the soil to a depth of from four to six inches; then, if the surface be very rough, harrow before sowing. But this is not always necessary. It is always best, though, to have a good level bed on which to sow the seed, as, if the ground be cloddy or the furrows have but partially broken as they left the mold board, quite a quantity of seed will be covered so deep as to be lost.

SEED.—As regards the best grain to sow for hay, our farmers differ. While some prefer wheat, others are in favor of oats. Barley is not generally considered very good except, possibly, ba'd barley, which makes a fair quality of hay and yields well, as a rule. Clear wheat makes a very sweet, nutritious hay, though the plant has a tendency to grow too coarse on rich soils. Oat hay, both wild and tame, is in general favor, notwithstanding market reports generally show that wheat hay rules higher. Black oats are preferable to white for this crop, and are yearly growing in favor. Wheat and oats mixed makes a good, rich substantial quality of hay that cannot be excelled, and will give satisfaction anywhere. The objection to our common barley is the stiff beards, which often irritate the mouths of stock and prove in other ways objectionable.

If it is deemed best to sow wheat for hay, Chile wheat will be found preferable to other varieties. The stalks are more tender, there are more and larger blades, and stock eat it better. It is the only A 1 variety of wheat for hay. Australia makes too coarse hay, and club wheat is too stiff and wiry.

SOWING.—How much seed to the acre? Sow liberally always. Never stint! To be of the best quality, grain destined for hay should not grow too coarse. If it does, there is, unavoidably, considerable waste, stock refusing the large, woody stalks if fed whole, and even if put through the hay-cutter, a good deal will be left in the manger. Therefore, it is well to sow at least 140 pounds of wheat or 150 pounds of oats per acre. Of course, there is a possibility, if too large a quantity of seed is sown, of having the hay too fine. But this is seldom the case. Seek the golden mean.

Even if the hay is very fine from too heavy seeding, or from other causes, it often commands a better price in the San Francisco market than medium coarse, as there is a demand for this very fine hay for packing. Thus, hay that has been thought very poor for feeding by the farmer, has brought two or three dollars more per ton than that usually marketed. A friend of the writer sold some of this fine hay here last fall for ten dollars per ton, and thought he was doing well. All he had left he sent to San Francisco a month ago, where it brought $15 per ton.

HARROWING AND ROLLING.—Cover the seed well, using a light harrow if on light soil, a heavier one if the soil be of a stiff nature, and roll well, going over the ground with the clodmasher previously if you choose. Rolling is very necessary in order that all unevenness of the field may be leveled, as this enables the mower to do better work and prevents clods from being raked up with the hay—a serious objection. Avoid dirty hay! Rolling hay land is deferred by some until the grain is three or four inches high. This will not damage the plants in the least, neither will a light harrowing just before rolling. Both practices will be found beneficial.

Before leaving the field, see that all surface water can readily drain off. Otherwise, if the land is low, there may be spots that will be drowned out.

The grain is now growing, and if one has done his work well, if rains be timely and the ground be in fair tilth, the plants will make good headway, will rapidly forge ahead, and will be ready to cut in May or June, according to the locality.

HAYING.—The proper time for cutting hay is a matter about which there is some difference of opinion. It is an item of importance, for upon this depends greatly the quality of hay as harvested. If cut too early, the hay lacks much of the nutritive quality it should possess; if too late, it is too stiff and woody, and in feeding there is much waste. These are points to bear in mind. We opine the best time for cutting is when the berry of the grain is in a moderately stiff dough. In this condition the berry dries and the hay is heartier than if mowed earlier. The stalks are not as woody as when cut later. Stock thrive better on it. Of course, if one has a large acreage to cut and only a limited force to do the work, either of teams or of men, one must cut some portion of his crop when it is not just in prime condition. One must be governed by circumstances. It is also best to defer cutting a few days, even if the grass seems in just the right condition for mowing, if rain is in prospect, as less damage will accrue to standing grass if the weather be lowery than to have it drenched by a soaking rain when in the swath, windrow or cock. Some of us have learned this by experience.

If the weather be propitious, put the mower in the field and push things. The machine should be one having a rapid motion, easy draft and strongly put together. Be sure to keep all bearings well oiled and the knives sharp. Have a few extra sections and rivets in the tool box, as also some bolts. You may need them in the field.

The team should be fast walkers. In good drying weather, grass cut in the morning ought to be raked in the afternoon into good-sized windrows with a horse hay rake. As soon as it will do, put the hay into large cocks that the sun may not bleach the fast curing crop. One secret in making good hay in our State is to cure the crop in bulk, not leaving the grass in swath or windrow long enough to become bleached. When well cured, hay should be of a bright, greenish color, devoid of any musty odor. There is less danger in curing hay too slow, if we have bright, sunshiny weather, than too fast.

A BUNCHING RAKE.—In putting hay in cocks or bunches, use a bunching rake of 4x4 scantling, 12 feet long, having six teeth of good size placed on the under side, flush with the surface, the two outer teeth on either side a trifle shorter than the two middle ones, all well bolted in position. Put in two handles, firmly braced. Use no nails in the construction of this rake, only bolts. The rake is to be drawn by two horses hitched wide apart. To the eye of each whiffletree attach strong ropes, long enough to allow a large quantity of hay to be gathered, the other end of the ropes to be fastened to swivels on either end of the 4x4 piece. The horses straddle the windrow. When the driver has as large an amount of hay gathered as can be well hauled, he turns his rake over by allowing the longer teeth to catch in the ground. Then, pulling it to one side of the windrow, he skips a distance equal to that he has raked, when he again commences raking. Returning on the same windrow, the operation is reversed. In this way, bunches as large as are deemed best are put up. Trim up with fork afterward. In these bunches the hay should remain until well cured. Don't run any risk of having a moldy article by stacking or putting in the mow too quickly.

STACKING AND STOWING AWAY.—If the hay is intended for market, or if one has limited storeroom for that destined for his stock, we think the preferable way is to put it in as large stacks as convenient, there to remain until it is baled; but if one has plenty of room in the barn, the hay to be used on the farm can readily be hauled from the cock. If so hauled, use horse fork and carrier in unloading from the wagon. After all, the question as to whether hay destined for market shall be baled from the cock or from the stack must depend on circumstances. Other things being equal, stacking is preferable, especially if one has to wait a considerable length of time for the press. Thus, the crop becomes of a better quality, is thoroughly cured, and is of a more even color. If left any great length of time in the cock, the outside is bleached by sun and dew to a considerable extent, and, in the aggregate, this amounts to a good deal, materially lessening the value of the hay.

Avoid as much hand labor as possible in gathering, curing and storing the hay. Make use of labor saving appliances as much as possible. Here, as elsewhere in farming, wise economy should be used in every stage of proceeding, from commencement to close.

DERRICK FOR STACKING.—Haul the hay to the spot chosen for the stack with the bunching rake above mentioned. To put up the hay with the least labor possible, use a derrick made as follows: The upright to be of 4x6 Oregon pine, 30 feet long. Four feet from the top fix an arm 14 feet long, in the upper end of which place a ring bolt for block and tackle, this arm to be well braced. On top of the standard, place a flat piece of iron with holes therein, to which are fastened the three rope guys when the derrick is in use. This flat piece of iron is attached to the standard so that it may revolve. In the lower end of the upright is a piece of one-inch iron, ten inches long, on which the derrick swings. With this derrick, a force of five men—one to haul hay in cock to the stack, one man to manage the horse fork, one to handle the team and two to stack—can put up in good shape 40 tons per day, or even more if the hay be very heavy. Stacks thus put up can be made 25 feet high and 20 feet broad. They can be made as long as one desires by moving the derrick.

BALING.—If the crop is to be baled from the cock, set the press in convenient positions in the field, hauling the cocks thereto with the bunching rake. If baled from the stacks, have them as high as possible, rather than low and long, as thus the press will have to be moved less frequently. Those machines which have horse forks and other labor-saving appliances are preferable. Some farmers object to the "beater press," but we see no very serious objection to their use. The hay will sell as well, and certainly it is less laborious to bale with them than with the old-fashioned tread presses. "Let every one be fully persuaded in his own mind."

What material—rope or wire—is preferable to use in baling, is a debatable question. We are quite sure that the farmer who has once used wire, and fed the hay so baled on his premises, will forever after discard it. It becomes a perfect nuisance; gets into the hay cutter, finds its way into the stockyard, turns up in unlooked-for places. We much prefer rope. If rope is used, it may be wound from the coil upon a reel whose circumference is equal to the length of the piece required. Wire ties can be purchased already for use, or can be easily and cheaply made with a small, portable machine. On an average, rope will cost from 70 to 75 cents per ton; wire about half that amount. But as an offset, hay baled with rope commands a better price in the San Francisco market—more than enough to pay the difference of cost between the two materials.

When baled, weigh, tag and pile as compactly as possible, especially if the hay is to remain in the field any length of time. We prefer to haul the crop from the field, soon after baling, either to market or to storehouse rather than let it remain for weeks in the field.

MARKETING.—If it be deemed advisable to hold for higher prices than rule when the hay is baled, it is best to store in warehouses near the railroad or boat landing, as thereby, if the hay be kept till into winter, immediate advantage may be taken of any rise in the market, which would not be the case if the hay had to be stored any great distance from shipping points, the roads being muddy. But if one is located only a short distance from any good station or landing, the hay may be stored in barns on the premises. Hay should sell for $14 to $15 per ton to pay the farmer reasonably well in this valley. There is little encouragement to raise hay when only $9 or $10 can be obtained. Prices vary from year to year, and one must be his own judge as to the best time to sell. Generally speaking, this is when a fair price is offered. With us, hay sells from $10 to $15 per ton, according to the season. We reckon the cost of plowing, seeding and harrowing per acre $5; cutting and putting in cock, $1.25 per acre; stacking, per ton, 25 cents; baling (rope per ton, 75 cents; board of men, 25 cents per ton; press, $1.15 per ton). $2.15 per ton. If wire is used instead of rope, deduct 30 cents per ton.

We have reckoned on two tons per acre, which is a fair average. If the yield be larger, the expenses will be less in proportion. The above figures apply to the bay counties. On the large, sandy plains of the San Joaquin and other valleys, where the expense of plowing is reduced to a minimum, and a large acreage is harvested, the expense would be less.

ALFALFA HAY.—Alfalfa, if intended for hay, should be cut when the plant is in bloom. Care must be taken that it does not become too dry before raking or putting in the cock, otherwise many of the leaves will fall off, lessening the value of the hay. The quicker it is gotten in the bale or the mow, care being exercised not to have it green enough to become moldy, the better. Handle as little as possible. For alfalfa hay there is little demand in this valley, and not much is raised for the market. It sells for $9 to $10 per ton. R.

Suggestions on Hay-Making in California.

WHEATLAND, YUBA CO.

TO THE EDITOR.—In speaking of the subject of hay-making I shall discuss it in the order the farmer is called upon to deal with it in its actual production, *i. e.*; planting, cutting, curing and marketing.

The three hay crops most commonly grown in this State and which may be taken as representatives of the whole are, 1st, the volunteer crop, 2d, the plowed and sowed crop, 3d, the alfalfa crop.

VOLUNTEER.—The crop generally spoken of as the volunteer hay crop, is the one most common to the grain producers all through the Sacramento and San Joaquin valleys. It is a cheap crop to grow and is generally an excellent hay for the work stock of farms.

To produce this crop, the farmer will select some piece of land that grain had been harvested from the preceding summer, generally land that had been plowed and sowed late. It is usually of rough surface and but little stubble on it, and in such cases much seed has been scattered over the ground in the act of harvesting. The farmer examines his ground and determines how much more seed will be needed, if any, to insure him a good stand. Forty to sixty pounds of seed to the acre is an average of what is sown

If the previous crop has been wheat, he usually sows barley or *vice versa*. Sometimes the farmer sows mixed seed, *i. e.*, wheat, barley and oats. He seldom sows oats for volunteer hay as he generally finds he will have his proportion of them without it.

SOWING.—The seeding is usually done in the months of September and October.

The seed is sown broadcast with our common seeders mounted on wagons. One can sow from 60 to 80 acres per day with such machines. To insure having clean hay some farmers rake the ground to free it of stubble and

trash, then follow with a pulverizer sufficiently weighted to work up the ground to the depth of three or four inches. The ground should be worked both ways, *i. e.*, pulverizing crossed. If not smooth enough it can then be harrowed or rolled. Thus far the farmer has striven to accomplish the following results:

1. His land is free from stubble or trash that would be raked up in the haying process, and condemn the quality of the hay.

2. His seed is all in at a shallow depth which insures it all starting to grow at the first rains, which means a thick stand.

3. The ground smooth, so that when he mows, his mower will cut close to the ground, getting the most hay possible and so there will be little waste in raking. These two points are often overlooked by farmers and the loss of hay, even after it is grown, is considerable. He has a thick stand which will yield a heavy crop and fine quality, the heavy stand preventing it from growing too rank and coarse. He has a mixed hay—wheat, barley and oats—a hay much prized by the majority of grain raisers, and one that sells well in the market.

Haying.—As the time for harvest arrives, the farmer must have all his machinery and help in readiness to commence work at once, as much depends upon the time and manner in which it is harvested. With his machinery and help in readiness, the farmer has but two things to consider—the ripeness of his crop and the state of the weather. With the weather fair he means to cut the wheat when it is in the bloom or early dough. The barley, just before it begins to turn yellow, while the berry is still soft, and the oats while they are in the dough. When he has a mixed crop, which is the case in volunteer, they will not all be in prime condition for cutting at the same time, and the farmer will have to exercise good judgment to get the best results.

Another way of determining the time for cutting is to examine the straw. Take some of the straw, chew and taste it and test it as to its sweetness. If it is sweet and juicy, the materials which are going to concentrate in and form the seeds are then scattered through the straw and this is the time that it will make the best hay. If you cut too early, the juices of the straw are too much water, and in the curing process will evaporate and you will have a light hay, which is not relished by stock, as it lacks sweetness and also heating and strength ingredients. If hay ripens too much before it is cut, in wheat you have grain in the head, straw that is hard, tasteless and without strength ingredients. In barley, you have grain in the head, with beards that are hardened, which are ruinous to the mouths of stock, straw similar to wheat. In the case of oats, the seeds shatter out and are lost, in other words, this is the important period of your crop. It is at a stage in its growth when the changes in it are most rapid, the starches, sugars, etc., going to form the berries while the silicate compounds are forming the straw, beards, chaff, etc.

The right time will give good results—too early or too late, bad results.

There are many kinds of mowers to be found in the market, all of which will do good work in this kind of hay if kept in order and properly run. Sharp knives are the secret of good cutting; without them one cannot do good work. The average work for a mower, 4-foot cut, is about eight to ten acres per day. In mowing, one should make no skips, and if the knife is sharp it will cut clean; this will enable one to do good work raking.

Curing.—The curing process commences from the time the hay falls behind the knife and lasts until it goes through the sweat in the cock or in the stack. When it should be raked after mowing will depend upon the weather, thickness of the crop and ripeness of hay when cut. Under ordinary conditions one to two days is ample time. If it dries too much, it becomes bleached and burnt; in the first case it presents a bad appearance, and although it may possess good qualities, it will not sell to an advantage. In the second case it becomes brittle and breaks easily in handling, and much of the best of the hay is lost. It is best to rake in the windrow and let most of the curing be done there. After being in the windrow two or three days it is then put into shocks by hand, *i. e.*, by men with forks, in shocks that will average about 100 pounds, or as is common among farmers and a saving of time and expense, it is taken from the windrow and bunched with a hay buck in piles from 200 to 400 pounds.

A Hay Buck.—Any farmer can make a hay buck at little cost. Take a good piece of timber 6 inches by 6 inches by 12 feet. Bore auger holes about 18 inches apart, in which put wooden teeth two feet long. Near center put two upright pieces for handles and to prevent hay slipping over, attach to each end rope or chain about 14 feet. Use two horses with one of these bunches, one man and a span of horses will put up as much hay as six men in the ordinary way. You have your hay in larger piles, less subject to damage by showers, less exposed to the sun and to bleaching, and in a shape that it can be stacked faster.

Stacking.—If the hay is to be stacked in the field, much of the hay can be bucked to the stack. The remainder loaded on wagons carrying large flat racks and thus conveyed to the stack. It is usually unloaded on the stacks or in barns by means of derricks worked by horses. Where haying is done on a large scale it can be done cheaper as division of labor comes into play. A crew of three men and two or three wagons will generally take from the shock and put in the stack or barn, 10 to 12 tons per day.

The cost of baling hay is from $1.35 to $1.50 per ton. The cost of marketing depends upon the distance it has to be drawn.

Crops Sown for Hay.—The hay crops that are grown on land that is plowed and sown in the winter are, wheat, oats, rye and timothy. The quality of the soil, the location and the tastes of the consumers in that section, will govern one in decision as to which of the above crops to grow.

The ground is plowed and harrowed and usually more seed sown than one would sow for grain. This crop is usually heavier than the volunteer crop, and ripens later. On good rich land one can expect from two to three tons yield per acre. What has been said regarding the cutting and curing of the volunteer crop is applicable to this. This hay properly cut and cured, makes the finest quality of hay and commands the highest price. It is mostly used by livery men and on fine stock farms. Going to a class of customers that are particular, one should produce a hay of good color, taste and strength.

ALFALFA HAY.

This crop can be grown successfully only on moist, rich lands. On river bottoms where the roots reach down to water and on lands that can be irrigated, a good stand of alfalfa usually lasts from seven to ten years when it is either replanted or a change of crop made. The annual crops cut from the same piece of land are from three to to six, owing to the soil and season. The average yield per season is from six to ten tons per acre. Near Wheatland, on Bear River bottom land, Mr. Tindal cut from one piece of ground, during the season of 1891, six crops, which yielded nine tons per acre, average price delivered loose, eight dollars per ton. This I consider above the average.

Alfalfa is usually planted as follows. Land plowed twice and harrowed until it is mellow and loose like a garden bed. Twice plowing and harrowing will kill most of the weeds. It should be sowed late in the spring—late enough to avoid heavy frosts, which would kill the young plant, and early enough to get the spring showers. About thirty to forty pounds of seed per acre. The seeds must be covered only a shallow depth and it is usually put in by a brush rake. One to two light crops are often cut the first year; after that more.

Starting with a piece of ground well set to alfalfa, we will speak of the manner of cutting, curing and marketing.

The first crop in the spring is usually foul and rank before the weather is warm and dry enough to permit of curing it. In some cases the first crop has to be cut and moved off before it can be cured. It is either fed green to stock or spread upon other ground and plowed under as a fertilizer. As a rule it is cut early and cured as best one can, and sold as second class hay. The succeeding crops are cut when the alfalfa is in the bloom. It should be cut close to the ground to prevent waste and in order to have as little green hay on the ground as possible while curing the crop. It is usually raked on the following day, the later crops in midsummer can be raked the same day. It is taken from the windrow and put in small cocks. It must be hauled in two or three days. The curing is done in the swath-windrow and cock. Alfalfa hay is easy to bleach and burn. If it is burnt by the sun or overdry, the leaves and tender twigs crumble and fall off and are lost, the stems break up, and you have a dusty, worthless hay. If it remains too long in the windrow or cock, you have in a degree the same results, and besides, the hay next to the ground, which is moist, molds and makes a musty hay. If it remains too long in one place it not only spoils but frequently kills out the alfalfa roots under it. It is often necessary, when the weather is damp and cloudy and the curing is slow, that one will have to turn over and re-turn the cocks to avoid the above dangers.

The points to attain in the curing of alfalfa hay are; a good green color, soft pliable stems with leaves and tender twigs intact, and at the same time not allow it to mold or get musty. It requires experience and great care to obtain the best results.

POINTS OF A GOOD HAY FARMER.

No set of rules can be given to govern the production of any hay crop. More than almost any other crop it is subject to variations—we have a variety of hay crops, variety of soils and variety of climates.

But in the production of the three crops mentioned at the beginning, there are a few things which are absolutely necessary for success.

First—To have good stock and machinery and to have them always in order and readiness.

Second—To have an abundance of help at the time needed

Third—One *head* that understands the capabilities of his soil, the nature and characteristics of his plants, a knowledge of what is to be attained in the quality of his crop and good judgment and industry to conduct his operations to that end.

COST OF PRODUCTION.

As to the cost of production of these different crops, I will make what I consider a fair comparison, based on personal experience and observation, taking in each case an average crop on one acre.

VOLUNTEER CROP.

One acre—yield 1½ tons per acre, price $10 per ton.

COST OF PRODUCTION.

Pulverizing	$ .60
Fifty lbs. seed	.60
Sowing	.10
Mowing and Raking	.50
Cocking	.30
Stacking	1.125
Baling	2.25
Marketing	1.125
Rent	3.00
Total	$9.60
Cost per ton	$6.40

GROSS RECEIPTS.

One and one half tons at $10	$15.00
Profit per acre	5.40

PLOWED AND SOWED HAY CROP.

One acre—yield, two tons per acre, price $12.

COST OF PRODUCTION.

Plowing and Harrowing	$2.00
Seed	1.25
Sowing	.10
Mowing and Raking	.65
Cocking	.40
Stacking	1.50
Baling	3.00
Marketing	1.50
Rent	4.00
Total	$14.40
Cost per ton	$7.20

GROSS RECEIPTS.

Two tons at $12	$24.00
Profit per acre	$9.60

ALFALFA HAY.

One acre—yield per season, 8 tons, 4 crops, price per ton $8.

COST OF PRODUCTION OF EACH CROP.

Mowing and Raking	$ .75
Cocking	.50
Stacking	1.50
Baling	3.00
Marketing	1.50
Rent	3.00
Total	$10.25
Cost per ton	$5.125

Rent $12 per year.

GROSS RECEIPTS.

Two tons at $8	$16.00
Profit per crop	5.75
Four crops, profit per acre	23.00

Farmer.

California Haying.

Monterey, Cal.

To the Editor:—The thing most needful in California hay-making is a good head on a good farmer. The good farmer's first thought is what do I want hay for. To feed stock or for market? If for stock, for what kind of stock? If for market, for what market?

A certain class of hay will serve to save horned stock from starvation, but which well-fed animals would hardly touch. Markets are equally various in demand, as San Francisco price lists testify. California has developed classes of hay peculiar to itself. Barley hay, wheat hay, wild oat hay, alfalfa hay, alfilarila hay, are all Pacific Coast specialties. A treatise would be wanted to fully describe the growth and harvesting of all, and their various virtues.

Another remarkable feature in California haying is that it is prolonged over half the year; from April, when in some seasons and sections early-sown barley, wild oats and first crop alfalfa, are ready for the mower, until October for the last cutting of alfalfa.

Assuming that the hay is for market, the thing of first importance is to know the kind of hay your market wants and pays highest for. The next is to find suitable land as near as possible to that market, or made near by cheap transportation facilities.

Hay, like almost all vegetable products, prefers a rich loam, with enough sand to insure easy tilth, well-drained and with a southern exposure. But it can be, and is, grown on every variety of soil from the stiffest clay to the lightest sand, on exposures east, west, north and south, with every intermediate point of the compass. Plowing cannot, as a rule, be done too early in the southern and central parts of the State, and it is usual to begin as soon as the rains permit. Some even decline to await the mellowing of the soil by the early rains, but plow dry. If summer crops have been thoroughly cultivated and kept free from weeds, the seed may be harrowed in when the crop is harvested, without any plowing, and a good hay crop almost invariably follows. Gang plows are in general use throughout the State and are run at all depths from two to eight inches, according to class of soil, previous crop and farmer's fad.

The sowing is sometimes by drill, sometimes by broadcast machine, drawn and operated by horse-power; sometimes by broadcast hand-machine, and, not infrequently, on small farms, direct from the hand of the sower. The drill, of course, carries the palm as far as regularity is concerned, but the horse-power broad-cast machine takes the cake for speed.

The quantity of seed per acre should be regulated altogether by the class of soil and time of year. The richer the soil and the earlier in the season the less seed is required. Of wheat and barley from 40 to 140 pounds are used. The common six-rowed barley is that preferred, the use of bald barley having been discontinued on account of the hardness of the grain when the hay got at all near ripe before cutting. Of wild oats there is a white variety grown which gives a more saleable hay than the common black. In sowing alfalfa, a few pounds of barley per acre is sometimes sown at the same time; it protects the young plant, draws it up and stiffens the crop for cutting. Harrowing can be done with any one of an infinite variety of toothed, disked, coultered, spading or pulverizing implements, and subsequently rolled or clod-mashed as the condition of the soil indicates. The one thing needful is to leave it as fine and smooth as possible that all the seed may get through and the mower make good running.

The chief enemies of the hay crop are drouth and chinch bugs. The rain-makers have not yet succeeded in overcoming the former, while a well-judged rotation of crops is probably the best remedy for the latter.

Farmers differ as to the best time for cutting hay. Some like it cut very green, others prefer it well in the dough. There is no doubt that stock like it best cut quite green. When so cut, and well-cured, they will eat every spire; but when well-grained they are apt to bite off the heads and leave the straw, especially if fed liberally. Wild oat hay *must* be cut tolerably green or the seed will all fall out and the hay lack nutritive value. It is well to bear in mind that when the strength of the plant is finally concentrated in the grain the straw has but little food value or inviting taste. When the plant's substance is fairly divided between the seed and the straw is probably the best time for haying—most profitable for the farmer, most palatable and healthy for his beast.

As to mowers their name is legion. The columns of the Rural present ample choice. The recent wide cutters commend themselves to those possessed of heavy horses and stiff soils; but a wide cutter on a loose, sandy soil, and

only a medium team, is not desirable. Keep your mower well oiled, the knife sharp, take up all lost motion and go ahead, cut.

The old revolving rake that we prized so highly years ago has given place to the spring-tooth,wheeled rake which has lately been improved by being adapted for two horses.

In California,hay is raked into windrows very soon after cutting. Sometimes, when the crop is light, full ripe and under a hot sun, the rake almost immediately follows the mower. Heavy green crop and foggy weather demand a longer interval, or the hay may mold even in the windrows. Similar conditions rule the time for cocking the crop. When so dry that danger of molding is past, the windrows are sometimes raked into cocks with the horse-rake, but the cocks resist rain better when made by forks in the old way. There is usually no tedding or turning required in our glorious climate. On the coast there is frequently a "hay shower" or two, bnt as a rule only enough to wet the outside of the cocks, and subsequent sunshine soon absorbs the moisture. If these showers prove continuous or heavy it may be needful to open the cocks and remake them when the hay is again dry enough.

With fine weather, two weeks will usually cure the crop fit for storing in stack or barn. This is for coast counties; in the heated interior of course the time is less. When the hay is ready it cannot be housed too quickly, as mice, rats, gophers, the sun and the rest of its natural enemies soon cause deterioration.

Where the crop is heavy and is to be stacked in the field a "go-devil" is sometimes used to haul to the stack instead of a wagon, and a horse fork and derrick supplant the old-time gang of pitchers with hand forks. Most modern barns are fitted with hay railroads overhead and these are used in connection with the horse fork to unload the hay wagons and store the hay. Almost all the heavy work of haying is now relegated to horses on all well-equipped California farms.

Baling for market is usually done by contract, gangs of men with presses going from farm to farm just as the thresher and his outfit travel round for threshing. The charge is usually about $1.25 per ton, the farmer finding his own rope or wire.

In our local market baled hay ranges in price from $10 at midsummer, in seasons of abundance, to $20 at Christmas in seasons of scarcity. The cost of production also varies greatly, as rent and quality of land, price of seed and conditions of labor vary. As a whole, the crop is not very lucrative here, and the bulk of the hay used is brought by car from Salinas City, Hollister and adjacent districts.

But, I care not how large a temporary profit any balance sheet shows, the California hay-ranch system (where the hay is all sold off the farm) is essentially a vicious system. You may call it farming; it is certainly *not husbandry*. There lacks every feature of that wise management of the soil which alone is the crowning glory of the real husbandman. The true farmer's plot of land should increase in productiveness year by year. It is a prime curse of our one-year renter plan that the soil is skinned for all it is worth, and it not unnaturally resents the outrage by annually yielding less, and decreasing in intrinsic value. The hay grown on a farm should be fed on the same farm, or, if sold, there should be an ample replacement of its fertilizing value by manure, artificial or barnyard, produced elsewhere.

EDW. BERWICK.

Deductions from Thirty Years' Experience in Hay-Making.

ORINDA PARK, CONTRA COSTA CO., April 11, 1892.

TO THE EDITOR:—Having had 30 years or more experience of raising hay, and having for the last eight or nine years made it my sole business and am making a success of it, I feel somewhat prepared to discuss the subject and give it justice.

CHOICE OF SEED.—In selecting seed for hay, I want the best and cleanest I can get, whether wheat, oats or barley, but I do not take the plumpest grain but a medium sized grain. All seed should be run through a fanning mill to take all the small and foul seed out of it.

I raise wheat, oat and barley hay, but I raise oat hay for my principal crop, for it produces the most crop to the acre. I take the white California or the Oregon oats. I prefer the white oats because they will stand the wet and cold the best. I have tried the gray or brown oats, but they don't stand the cold or wet as well, and the hay is not as good in color as the white oat hay, and will shell out much easier; but if you are late in the season, it will come in much sooner than the white oat. The black oats are good but I prefer the white oats for all purposes.

I prefer the medium-sized white Australian wheat, as it will make heavy crops and good hay. I take the common medium-sized barley, and if it is sown thick will make good hay.

SOIL AND LOCATION.—I take my wettest land for oats and my driest land for barley, and the medium driest land for wheat.

A cool climate will make the heaviest crops, but a warm sunny climate will produce the best and brightest hay.

METHOD OF PUTTING IN MY CROP.—I plow deep, but do not plow all or nearly all my ranch before I sow, as many people do, for in that case the land gets foul and the crop will be weedy and stunted, but I plow a part and sow it. I like to have one rain on the land after it is plowed, before it is sown, but if the rain should lie too long it will get packed hard and weedy. In that case, it should be cultivated, and here let me say that instead of sowing grain just before a big rain, I wait until the ground is dry enough after the rain, and then I sow so that it will be up before another rain. I always try to avoid as much as I can having rain come just after the grain is sown, for that is the worst time to have the rain when the grain is just coming up, and more so if the land is wet or if it is a wet season. After the grain is up, it will stand more rain.

Before I sow my seed, I soak the wheat in bluestone water. Do not take more than one pound of bluestone to a ton of wheat, for if it is too strong it will injure the wheat. Oats and barley I soak in copperas water, about the same quantity of copperas to a ton of grain.

QUANTITY OF SEED TO SOW.—I sow plenty of seed to the acre. I sow from 100 pounds to 200 pounds, or usually from 120 to 150 pounds, but if it is good rich bottom land, I would sow 200 pounds to the acre, for if there is not enough seed there will be weeds instead.

HARROWING.—Where it can be, the land should be harrowed the same way that it is plowed for the first time, and the second time it should be cross-harrowed, and if the land is not in good order it should be harrowed the third time, but it should not be harrowed when the land is too wet.

DRAINING THE LAND.—If there are some low places in the land, I take a one-horse plow and run shallow furrows in the low places; they should not be run deep, for that will endanger the machine in cutting the hay.

ROLLING THE GRAIN.—The grain should be rolled, but care should be taken when the land is too wet, for if it is too wet it will bake or pack the land; and it should not be rolled when it is too dry, for it will tread the land without doing much good.

CONDITION OF HAY AT TIME FOR CUTTING.—Barley hay should be cut in good time, as soon as it is well in the dough, and should be handled quick, for if it gets too dry it makes poor hay on account of the beards. Wheat and oat hay will stand a little longer than barley hay before it is cut, but when it has got its full growth and is well in the dough, it is ready to cut. Hay should never be cut in bad weather if it can be helped.

MOWING HAY.—My way in fine weather is to cut one day and rake the next day, and bunch or shock the following day. I usually shock with one horse and a rake. I put about one bale in a shock, or about 250 pounds, and have a man with a fork the same day to trim them up. I leave the hay in the shock from 6 to 10 days, according to the weather, but it should not be left longer.

STACKING.—I haul the hay to the stack with a bunching rake. Three men will stack about 20 tons in one day. We leave the hay in the stack not less than one month, and then have it baled with a good Petaluma press. We put five bands of new rope on the bales. The bales should not weigh more than 250 pounds. I raise most of my hay for sale, and it gives better satisfaction if the bales are not too heavy.

After the hay is baled, it should not be left in the field longer than two weeks. The best way is to fill the barns before commencing to haul to market. It is a big mistake to leave the hay in the field for two or three months, as some do, for it not only loses a great deal in weight, but spoils the looks of it for market. We haul most of our hay to market with our own teams. We raise the best hay going to market and we get good prices. (I say *we* because two of my sons are with me.) We have good demand for our hay. I am careful in taking the hay to market, and if a bale is in bad shape or any of the bands off, we use those at home. I always try to give satisfaction to the buyers, and nearly always take a load for a sample before I sell much, and then haul the same as the sample. By so doing I can sell where I have sold before.

COST OF HAY PER TON.—We get from two to five tons of hay to the acre, or about three tons on an average. Cost of plowing is $1.50 per acre, seed $2, sowing and harrowing 60 cents; rolling is 25 cents, cutting and trimming 75 cents, shocking and trimming 50 cents an acre, or $5.60 an acre at three tons to the acre would be $1.86 a ton; added to this, stacking, bale rope and baling, $1.75 a ton. We haul our hay about 16 miles, and for hauling $2 a ton, or in all $5.60 a ton.

I have put this at full figures for first-class work, and where we do our own work we would save a good deal of this money. I have figured on good work and good hay. For good hay we get from $10 to $16 a ton. I have figured nothing for the use of the land.

As I have had but litttle experience with other kinds of hay, I leave that for some one else to write. I wish to compete for a prize, but that is not my sole object in writing these lines. I write for the good of others.

H. BROCKHURST.

Notes on the Hay Crop.

FILMORE, Ventura Co.

TO THE EDITOR:—In 1875 we had copious rains in October, and I sowed 10 acres to barley near Santa Barbara; about 60 pounds per acre. It was fit to cut for green feed before Christmas. It grew very rank and heavy; made only second-class hay. If sown the latter part of winter, it would have been good. There was mustard in the seed and it is there yet, although I have, for years, gone over the field and pulled out every stock I could see. It always pays to get good clean seed, not only for hay, but for all other crops. Here on the Sespe, last year, my hay was almost perfectly clean; so of many other crops hereabout.

If the winter be wet, hay is best sown late; if dry, the reverse. In any event, it must be cut before the berry fully matures; exposed to the sun as little as possible, put in barn or stack before too dry, or stock will reject much of it. It should be so managed in all these respects that stock will eat almost every particle of it, not only for economy's sake, but for the stock's sake. Where stock is fed more then is eaten clean, the appetite is interfered with, picking and mussing is resorted to and less is eaten.

I have occasionally raised wheat hay near Santa Barbara, but it rusts and makes but indifferent hay. Here at Sespe, last year, I raised a little alfalfa hay, and my stock was all extremely greedy for it, perhaps only because it was a change from the everlasting barley. Still, I would recommend every one, who has suitable land, to have a patch of it; it is excellent for green feed.

The only way to raise good hay, and none other should be raised, is to sprinkle in a generous allowance of brains in all the various manipulations. Then the event is almost certain.

S. P. SNOW.

Haying in the Sacramento Valley.

YUBA CITY, CAL.

TO THE EDITOR:—There are more varieties of hay grown in California, perhaps, than in any other State of the Union. Among them we find oats, wheat, barley, alfalfa, timothy, clover, and the natural grass grown on the bottom lands commonly called tule hay. Oats proper, timothy and clover, are confined mostly to the mountain valleys in different parts of the State, and is seldom seen far from the place where it is raised owing to the immense cost of transportation.

Wheat, barley, alfalfa and the volunteer crops, wheat and oats, barley and oats, and wheat, barley and oats, are more familiar than the others, being raised in all parts of the State. Wheat hay is nothing more than the unripened grain. In many places the wheat farmer cuts from his grain field at the proper time such parts as he thinks will be of the least value as wheat.

Hay should be cut when just out of blossom, but before the kernels begin to form, commonly spoken of as wheat in the dough, because the forming of the head and grain takes from the stem all the nourishment, leaving it rank, tough and woody.

The manner of curing is no less important than the time of cutting. After cutting, if the sun is shining and there are no indications of stormy or damp weather, the hay should be raked into windrows and cocked up as soon as possible; the sooner the better. If exposed to the sun and dried rapidly and thoroughly, hay will be found to be harsh and brittle, the leaves will fall off, the sweet odor will be gone and a great part of the value of the hay lost. The object is not to dry hay so it will keep, but to cure it so that it will be the most nutritious, and be dry enough for storing. Slow drying, with sufficient exposure to the air to prevent heating, causes the juices to become thickened, and when such a degree of inspissation is reached that the hay will not heat or mold when placed in stacks or in the mow—a point not difficult to determine with sufficient accuracy—the process is complete. However, if the weather is threatening or damp, it should be left on the ground until past all danger of heating when in the cocks. The cocks should be conical shape, about four or five feet high and five or six at the base. Hay properly cured should be green, fragrant and tough, the leaves of clover not even breaking off; a greater weight will be obtained, and will prove more nutritious and better relished by the animals.

The process of curing applies to all grasses cut for hay. The time of cutting differs, however. Barley should not be cut till the beards become brittle and break when rubbed in the hands. If cut green, the beards become tough and wiry, causing the mouths of the stock to become raw and sore. The volunteer crops are obtained by sowing wheat or barley, or both, on uncultivated land early in the fall, and covered by shallow, dry plowing, or better still, a revolving disc harrow. Though some may sow oats, yet, as a rule, the ground is thickly strewn with the seed from the previous summer, the wild oats ripening and shelling out before the wheat harvest. In cutting these crops, particular attention should be paid to the oats; they should stand till matured, yet not till the husk or pod turns white, for then they are threshed out by the winds and lost.

Alfalfa, if irrigated or grown on rich, moist bottom land, should produce from three to six crops every year, yet it depends entirely on the nature of the soil and the amount of water. Alfalfa should be cut when from fifteen inches to two feet high, but it should not be allowed to grow too rank, as it becomes coarse and strong, thereby destroying its value.

Tule hay is the long, rank grass cut from the overflowed lands and is used principally for cattle through the winter where a large amount of cheap hay is required.

Hay varies greatly in composition and nutritive value according to the plants from which it is made, the growth and period of cutting, the method of, and the good or ill fortune attending its curing. The money value of the hay crop, in all countries where cattle cannot graze during the winter and spring, is fully equal to any other farm crop, as generally estimated. Its intrinsic value is really greater, for the value of farm crops in money is fixed chiefly by the convenience and expense of marketing, and this places hay at a disadvantage. To be marketed at a distance, it must be pressed into as small a compass as possible by hay presses worked either by hand or power, and even in this form hay is a bulky article and expensive to transport to a market. Ordinary bales measure two feet to two feet six inches across the ends and four to five feet in length and usually weigh from 200 to 350 pounds, while those made by the most powerful presses, though of the same size, weigh 400 to 500 pounds.

J. T. O.

Practical Points on Hay Making.

CHICO, April 15th, 1892.

TO THE EDITOR:—My experience in hay making dates back to 1852, on the same place near Chico. I find the most nutritious and economical hay is made after a grain crop, burning the straw clean, as much depends on a clean burn. The stubble should be burnt in the fall of the year. Then sow 50 lbs. barley following wheat, and 40 lbs. wheat following barley of the previous year. Cultivate thoroughly with a *sharp* harrow or spring tooth cultivator, both ways.

I cut the barley when in the stiff dough or as near as possible. Wheat about the time it drops the bloom. If it is drying weather never more than 24 hours ahead of the rakes. Pile in shocks in 24 to 48 hours, loading the rake one way in the windrow and top out on returning. This makes a handy shock to handle. As soon as the straw on the outside of the shocks will break, I commence to haul. In storing I use five lbs. of salt to each load.

If the above is followed there will be no hay left to bed the horses. My land is principally sandy loam, producing about two tons per acre.—J. H. GUILL.

THE STOCK YARD.

Benefits of the Coyote Bounty.

TULARE, April 20, 1892.

TO THE EDITOR:—I hope your article, "The Coyote Crop," may stir up farmers to tell of the benefit of the bounty. I hope it may continue and be raised as they grow scarce, and when we have them all but the last pair, offer a thousand dollars and stop the increase.

I have suffered a great deal from coyotes and spent a great deal of time trying to poison them, and yet never had the satisfaction of knowing I killed one. I did think some time ago, when told of a new plan, that I would yet have that satisfaction, but I live midway between Visalia and Tulare, where the land is all farmed and thickly settled, and they are getting scarce since the bounty law came.

I want to tell the plan. It is to play you have broke camp. Coyotes delight in picking up the scraps that campers leave, so the idea that struck some one here was the chance to get coyotes. A man named Marrow, living near Tulare lake, said it was very successful. He said the coyotes would reason that if these scraps were scattered carelessly about they were safe from the campers and they became "perfectly reckless."

I wish I could give the figures of returns for poultry, eggs, hogs and sheep from this county. If I could give them, seems to me it would be safe to say it would have been one-third more but for the coyote. It is not alone, or maybe I ought to say so much, what coyotes destroy as what they prevent us doing that hurts. So long as farmers know they must spend a long time each evening seeing that all is safe and out of reach of coyotes, they will engage sparingly and do but little to what they might if so much care was not required.

How nice it is now to raise hogs now that I don't have to bring each little pig up close enough to hear if he grunts. And the saving in time! Hogs, like chickens, to do well in summer should start out at the peep of day, and if they are penned to hold them they cannot do well, or if one rises and goes out with them to keep off coyotes, what a hardship it is to get up so early. It is the same with chickens. What a lot of time it takes to go around each evening and chase chickens a half hour to have all inside and door closed or else high on the roost, and then to get up at the peep of day to protect them, for that is the worst time; as they fly from the roost the coyote stands ready.

All I fear in the destruction of the coyote is overproduction. There will certainly be a tremendous increase in poultry, eggs, hogs and sheep.

The tremendous hardship thousands of poor people drag through when they take up land would be greatly reduced if the coyote did not stand ready to take everything not safely housed every night. How easily could the poultry be made to make the living but for the coyote. Away with him, hunt him down. After awhile raise the bounty (the farmer's friend) and exterminate him.

Coyotes cannot be raised in a corner; make it a crime, and there will be no danger from that source, and if a few should be brought in from other States, let's not do away with the law. People are sometimes killed by the cars, yet we never think of doing away with the railroads.

H. E. DYE.

SWINE YARD.

Poland-China Swine.

An essay by HENRY J. PHILPOTT of Niles, read at the Livermore Farmers' Institute.

I have to thank the committee most cordially for its invitation to address my neighbors on this fascinating subject. If what I have to say gives them as much pleasure in hearing as me in saying it, mine will be the most popular address on the program, which I cannot expect, for when we mortals get on our hobbies, to ride in the public hippodrome, the spectators have some entertainment, but the rider gets the most of it.

The first thing to say about the Poland China hog is that he is grossly misnamed. He is distinctively the American type of swine, a genuine American idea. His name hints that he is a cross between two breeds—the Poland and the Chinese. The historic fact is that he is a cross between all the breeds of swine ever seen within driving distance of Cincinnati, when that city was the porkopolis of the world. The most intelligent and enterprising pork raisers in the world lived and farmed there at that time. They ransacked the United States and Europe for new breeds, and then drew on Asia and Africa. They had the Irish Grazier or Grass hog, the English breeds called Berkshire, Suffolk, Hampshire, Leicester and others, the Spanish Black, the Neapolitan from Italy, the Angus from Scotland, two breeds from Africa, and three from Asia—the Chinese, Siamese and Calcutta. This is only a partial list of the regions from which the ancestors of the Poland-China came. They crossed these with their own native breeds, much improved by intelligent selection and good feeding, which means that our modern American hog has in his veins the blood of those that came over with Columbus on his second voyage, of those that came over with the Pilgrim Fathers, and those that came early to the Virginia settlement. He is thus half American, as truly as any white man is American, and the other half a mixture of all respectable breeds of all foreign countries. Whether among them all there was a Polish, or Poland breed, is a question not settled. Yet this all-conquering type of swine, made of all the types in the world, was named Poland-China by the first national swine-breeders' convention ever held in America.

The type was established, and the crossing stopped, 60 years ago. Then began the improvement of the type itself. This process is still going on. In fact, it seems to be going on more rapidly than ever. The latest improved Poland-China is a curiosity, even to those who have always raised Poland-Chinas. More improvement has been made in the last ten years than in the preceding 50. One of my visitors the other day said he did not see how any further improvement could be made. If the nose were much shorter, the pig could not eat; if his legs were much shorter, his bacon would drag on the ground; if his ears were much smaller, they would stand up; there is no room for any more ham or shoulder; the bone is as small as you want it; the coat is glossy blackness itself and can't be blacker; it is thick enough for this climate; the ribs are sprung wide and the chest six inches between the front legs—room enough surely for lungs, heart and stomach—no room for improvement there; the foot is strong and stands up firmly on the two toes, whether it carry 10 pounds or 800, instead of sprawling over the ground; the gait is regular and straight, not wobbling; all these things have been attended to and apparentiy brought to perfection in the same hog.

How has this perfection been attained? The story reads like magic. Our American hog had been slowly evolving for many years. The national convention which named him at Indianapolis in 1872, appointed a committee to call another convention whenever the time seemed ripe. It waited 11 years, and then called one for Chicago. It met eight short years ago, and brought forth the National Swine Breeders' Association. There was but one journal in America devoted to swine-breeding. There was but one book on the subject, "Harris on the Pig." A dozen years ago there was but one pedigree record—the Berkshire.

What a change! There are now a dozen pedigree records, five of them devoted to Poland-Chinas alone; and these five last year recorded and printed in bulky volumes the pedigrees of more than 20,000 Poland-China swine. Now, we have many State swine associations, even county associations, besides institutes, clubs and so on. Their printed proceedings are widely circulated and diligently studied by breeders, old and young. We still have "Harris on the Pig," but he is not there alone. Later, better, much more complete books there are in plenty, and more coming. We have several prosperous swine journals. A whole swine literature has grown up, of wonderful proportions.

Standards of judging swine have been established, and detailed descriptions of each breed are printed and widely circulated. A score card has been invented, and every feature of the pig, from his nose to his toes and the tip of his tail, is scored, according to its importance—one point for his tail and 15 for his back and loin; altogether, 100 points for the perfect hog. None has yet scored 100 points; 80 is a high scoring.

The score card revealed the fact that no young breeders, and few old ones, knew how to judge a hog. They all scored too high. It revealed also where the weak points were, in the judge as well as in the pig. So, what do they do but organize expert associations and teach men to judge hogs. Six of these, in different States, meet once or twice a year and take classes through a regular course. Expert licenses are issued to those who pass examination. At Muncie, Indiana, last summer, you might have seen 50 men standing around a Poland-China hog, card and pencil in hand, going over him, point by point, and scoring each according to his judgment. This done, you would have seen these men pass in their cards to a committee, which had made its scoring also, for comparison, and every man examined before the whole class as to why he scored this point so high, that one so low.

Now, the inevitable result of all this organizing, writing, reading, teaching themselves and teaching the people, is that the best hog is going to the front, and will get there with lightning rapidity. In 1888 there were 418 swine at the Illinois State Fair, 66 Poland-Chinas and 66 Berkshires. Last year there were 487 Poland-Chinas and 96 Berkshires. In three years the American hog had so far outstripped the English breed, that instead of an equal number of each there were five to one. In the Iowa fair there were 1667 Poland-Chinas to 125 Berkshires, and of all other breeds together only 369; almost four-fifths Poland-Chinas. In Nebraska, 70 per cent were Poland-Chinas; in Illinois over 50 per cent.

In short, the exhibits of swine at State Fairs have, in five years, doubled in some, and more than doubled in other States. The whole increase is in Poland-Chinas alone. In Illinois, for instance, 110 Berkshires in 1887 and only 96 in 1891, a loss of 14; Poland-Chinas, 121 in 1887 and 487 in 1891, an increase of 366—four times as many in the last as in the first of a short period of five years.

Count the herds of swine advertised in the farm papers! Here is one, not a swine journal—120 herds advertised, of which 83 are Poland-Chinas. Here is a swine journal, 293 herds advertised, of which 201 are Poland-Chinas. So this loyal, free born, enterprising American hog is the main guy and prop of the swine journals, which did not exist until he came, and would all perish in a month if he ceased to support them. He has built up for us a literature of books and papers, besides filling our pork barrels and bringing us every year millions on millions of foreign gold to lift the mortgages from Western farms. They call him there the mortgage lifter.

I have given so many figures because the truth of history is so marvelous that I could not ask anybody to believe it unsupported. I have used the Berkshire for comparison because it would be tedious to compare all, and the Berkshire is generally considered the best of the breeds that have been left in the rear, and it is the most widely known. It is the standard of comparison. I never waste any time dilating on its faults. After stating the facts I have here given, it is not necessary to enumerate the merits of the Poland-China. It is enough to record, as I have, the verdict of the American people. It is in favor of the American hog, as was natural, though he marched under a false foreign name.

The crowning merit of any swine is to make much valuable meat out of small, cheap rations, with little care. Innumerable experiments, official and private, have demonstrated that this Poland-China makes more meat, higher priced because so much of it is ham, than any other with the same care and feed. Of old, he was too large a hog for California, but as now improved, not by crossing, he is smaller-boned and much shorter-legged than the Berkshire. The large-boned type still prevails west of the Mississippi, but on his native heath in southwestern Ohio and all that region, he is what my California neighbors all declare to be "just the right size."

One more interesting characteristic of this our true blue American hog, traveling under a false, hyphenated, foreign name, is worthy of notice. I speak of his disposition—his intellectual nature, we might say. Even this is attended to, and is down on the score card for three points. He is quiet, gentle, docile, affectionate. He likes to be caressed, will lie down when stroked. He knows his master's voice and step. Cleaner in his habits than any other domestic animal, he is always found with a clean, dry nest if given an opportunity to keep it clean. He likes to browse on a meadow, and will keep fat there; but he is also eminently adapted to petting about yards. A lady can easily handle him. A Nebraska lady keeps the finest herd in that State. She held an auction sale in January, refreshments duly provided. She thought she might have done better if the days had been longer. But she sold 100 hogs and pigs, at an average price of $53 per head. A good many California ladies with small capital, looking about for something to do, might emulate her example with more profit than they can make out of chickens, and find it cleaner and more lady-like, as well as much easier work. That is, they could do it with the same kind of swine. And why could not the whole State of California, if it had swine that would make double the meat out of the same feed, raise all its own pork instead of shipping trainloads of Poland-China hams and bacon from the East? I say double! Last fall, I kept two hogs on the same rations—a Poland-China and a "blooded" California hog called extra good. The Poland-China gained 57 pounds in 50 days; the other 14 pounds in 110 days. Difference in favor of the Poland-China, exactly one pound a day by actual weight. Is it a difference worth figuring into the account? Or is it likely to increase the profits of swine-growing in a State where feed costs so much? Might it not turn loss into profit on many a mortgaged farm? Iowa's 5,000,000 hogs in 1890 were worth by the Government reports $11,500,000 more than the same number in Missouri. Iowa has about the same number of swine, but 20 times as large a proportion of them are Poland-Chinas; hence the $11,500,000. Her hogs are worth more than those of the adjoining State, which raises practically the same kind and amount of hog feed. Is this worth looking after? Will it pay California, where feed is so dear, to cling to her long-nosed, long-legged, thin-chested, weak-stomached, consumptive-looking tule splitters? That is the question.

THE VETERINARIAN.

Glanders and Farcy.

By DR. A. E. BUZARD, M. R. C. V. S. L.—Read at the Farmers' Institute at Livermore.

The subject I have chosen for this occasion is Glanders and Farcy, diseases especially affecting the horse, at the same time is readily transmissible to man, sheep, goats, felines and rodents. Cattle, pigs and fowls are not affected by this disease.

The word glanders is derived from the Latin root, *glandula*, signifying a fruit kernel. Glanders is described by Aristotle, and we read of it as far back as the time of Constantine the Great. The definition of glanders is, a specific contagious disease of a malignant type; the spontaneous origin, though not clearly understood, is found to arise from debilitating influences, such as bad food, exhausting diseases, old age, overwork, badly ventillated stables. All these causes, essentially exhausting and depressing, favor the development of this or any other disease characterized by vitiated and depraved blood, resulting in serious structural alterations. In the horse, the specific effects of the implanted virus are shown on the mucus membrane of the nose, from which an aqueous, viscid or purulent fluid is discharged. The mucus membrane of the sinuses of the head, the larynx, and windpipe, and also the tissue of the lungs are specifically affected. There may also be a general or local inflamation of the lymphatic vessels, lymphatic glands and skin, with a tendency to form small tumors, called farcy buds or buttons, which develop into pustules.

The poison seems to exist in greatest potency in the discharges from the nose, and in the blood. Inoculation can be effected through the medium of the skin when abraded, or by injecting the virus into blood vessels. It can also be developed if infected material is given in the water or food.

THE CAUSE OF GLANDERS

May be considered under two heads—predisposing and exciting. Predisposition may lurk in breed, in constitution. It is evident there exists in the animal economy of some subjects, peculiarities of constitution termed idiosyncracies, which, under certain circumstances, and on application of the cause (indirect), develop the latent fire. Horses inherit constitutions; they also become predisposed to certain diseases, particularly affecting the organs of respiration, and with these to glanders. As I have before stated, horses that are kept in badly ventilated stables, or are overworked, badly fed, exposed to wet or cold, are more susceptible to any disease; so constitutional predisposition may be natural or acquired. It is universally admitted that glanders is a contagious malady, yet it is certain that some horses are more disposed to the disease than others. Neither from experimenting nor from observation in practice can we come to positive conclusions as to the exact method by which the poison finds an entrance into the system. The general opinion is that the virus of glanders becomes attached to some exposed or external surface of the body,

where, by some wound, however small, it finds its way into the general circulation. It is a well-known fact that glanders may be propagated by horses which have not shown any unmistakable symptoms of the malady, and where, on post mortem examination, the lesions were confined wholly to the lungs. So we must not overlook the fact of the long period of incubation in certain developments of the disease, and not depend too much upon the first symptoms noticeable being the characteristic ulcers on the membrane of the nose, as we well know that in many cases the primary lesions are met with in the lungs. In some cases no ulcers have been discovered in the nose.

GLANDERS MAY OCCUR IN FOUR FORMS,

Namely, acute and chronic glanders, and acute farcy, commonly called bud farcy, and chronic farcy, called by some button farcy.

The symptoms of acute glanders (which form of the disease is generally a sequel of the chronic form) are as follows: It is generally ushered in like a common cold. First, there is a slight discharge from the nose, at the commencement it is scanty and limpid, amounting to nothing beyond a little aqueous fluid. In the course of a day or two this watery discharge appears streaked with ropes of mucus, and in a day or two after that it will most likely have become altogether mucus in its character and glairy in appearance, after which it gradually assumes a yellow tinge. There is great febrile disturbance, shivering fits, a dry, staring coat, the pulse is quick and weak, the breathing becomes frequent, and the temperature rapidly rises—I have known it to reach as high as 107° Fahrenheit—mouth hot and dry. There is much exhaustion and great emaciation. The membrane of the nose is congested, at first of a yellowish color, shortly becoming darker. In the course of a few days, from three to five, there is a diminution of these symptoms, and a development of the specific local lesions. We have now the membrane of the nose studded with small irregular-shaped tubercles, either in groups or scattered less thickly. These tubercles vary in size from a pin's head to a hemp seed. In a few days the covering of the tubercles becomes removed and results in the production of a chancrous ulcer. These ulcers are not disposed to heal, but extend, and if the animal should live long enough, will penetrate to the bone, producing a disgustingly offensive smell. The discharge from the nose is now thick and mingled with puriform matter. The lymphatic glands under the jaw become swollen, sometimes only on one side, occasionally on both, depending upon the fact whether both or only one nasal cavity is involved. At first the swollen glands feel soft and slightly painful, as if they might suppurate, which they very rarely do; shortly they become hard and more defined, and less painful. In case of inoculation the glands are generally swollen on the third day. The pneumonia and bronchitis attendant on acute glanders are often overlooked; they may be easily made out by a careful physical examination of the chest. When the lungs become involved, exhaustion is rapid, blood poisoning sets in, and the animal generally dies in 20 to 30 days.

Chronic glanders (the form of the disease most frequently met with in this country), attacks the horse in a mild form, the animal appears in good health and spirits and his appetite remains good. In this form the disease may continue for many months without apparently affecting the animal's constitution.

SYMPTOMS OF CHRONIC GLANDERS.

In chronic glanders the local symptoms are the most prominent, and, unlike the acute form, the chronic is more liable to develop constitutional disturbances at the latter than in the early stage of the disease. In the early stages, the discharge from the nose is similar to what we observe in common cold, only it may be discharged from one nostril, the left, and when from both, it is evidence that the disease has attacked both nostrils; gradually it becomes thicker, and mingled with purulent matter, greenish in color and adheres around the margin of the nostril. The peculiar character of the discharge must never of itself, be depended upon as furnishing undoubted evidence of the existence of glanders; its physiological character being alone diagnostic. The popular idea, that matter from a glandered horse when placed in water always sinks, is simply bosh. If you now carefully examine inside the nostril, in all probability you will find chancres, but their discovery is not always attended with success. It is often necessary to aid exploration by means of a reflector, or by introducing the finger along the septum nasi, when the ulcers can be detected by the touch. There is also a marked change taken place in the lymphatic glands between the lower jaw bones; they are enlarged and indurated and generally, as it were, hug the bone. When both nostrils are affected, the glands on either side are enlarged.

Without telling you in a positive manner the great danger there is in attending to animals affected with glanders, or, in fact, coming in contact with them in any way, I would be doing you a great injustice, as this is a fell, dreadful, baneful, horrible and fatal disease, when man happens to be the victim. It is no less so in the case of the noble horse, but though a noble, useful and admirable animal, he is still of less importance than man, his quasi master. Any of you who may have seen a man die from this disease do not need to be spoken to on this subject, and to those who have not I will only say, that I heartily and sincerely hope that they never will see such a sight.

SYMPTOMS MISTAKEN FOR GLANDERS.

Glanders is liable, and I am sure often is mistaken for catarrh, nasal gleet and distemper. The late Dr. Percivall, Principal Veterinary surgeon of the British Army, says that "our diagnosis must be grounded first on the circumstances of the discharge coming from one or both sides of the head; secondly, on the nature of the discharges; thirdly, on the presence of ulceration, and the character of it; fourthly, on the presence and character of glandular tumefaction; fifthly, on the state of the animal's health; sixthly, on the presence of farcy; seventhly, on the absence of symptoms proper to other diseases."

A decayed molar tooth has, no doubt, in some instances, led to a fatal diagnosis. So, you see, we must not think that every horse that has a discharge from the nose for a length of time is suffering from glanders, for he may be suffering from nasal gleet, or some other chronic disease of the air passages. On my tours of investigation in different parts of the State, I have been frequently sent for, miles away, to reported cases of glanders, and when I arrived there found no glanders, but cases of nasal gleet.

I may here state that nasal gleet and colds never terminate into glanders. Glanders and farcy is a specific disease, and distinct from others, and no other disease will run into glanders or farcy. Aged horses seem to suffer most from glanders, but at no period are horses regarded as exempt from taking the malady. In the treatment of glanders I regret to say that all the experiments on this disease have proved useless. Confirmed glanders has baffled all skill.

FARCY

Is a form of glanders in which the lymphatic glands of the skin are especially involved. Farcy may occur as the result of inoculation with the discharges of farcy or glanders. In the acute form there is the usual febrile symptoms. There is local swellings, generally of the legs. The whole limb becomes engorged, and resembles the swellings in acute lymphangitis. The leg is hot and painful, and the animal is very lame. As the swelling subsides, specific nodules, *i. e.*, "farcy buds," and an enlarged condition of the veins and lymphatics become more manifest. These "buds" vary in size from a pea to a marble. In a few days these buds develop into sores. These farcy ulcers have ragged edges, and discharge a creamy fluid tinged with blood. The swollen lymphatic glands, as in glanders, very rarely form matter. Chronic farcy differs only from the acute in intensity and duration. It is a common form of equinia, and is more easily treated successfully than the other manifestations. The special features are local. Correctly to diagnose the existence of equinia in any of its varied forms, or as a general diseased specific condition, is for us, as experts and scientific veterinary surgeons, of infinite importance. In chronic farcy, nodules, which vary in size, are developed in connection with the skin, they afterwards ulcerate and discharge a purulent fluid, and the ulcers have little tendency to heal. These ulcers invade the skin where it is thin and vascular, as over the face, inside the thigh and forearm and flank. The lymphatic glands are also affected, as in acute farcy. In the treatment of chronic farcy, recoveries may appear to result from the judicious employment of medicines and sanitary measures, but it is probably better, considering the risks incurred, that farcy should be classed with glanders, that all should be prevented from doing further mischief by ensuring their destruction.

VALUE OF PREVENTIVE MEASURES.

When we consider the fatal nature of this disease, and its acknowledged contagiousness in every form of its development, the great pecuniary loss entailed upon the community by its existence and distribution, not to mention the more serious danger to human life, the importance of well considered and energetically carried out preventive and suppressive measures becomes obvious to all but the most thoughtless and ignorant. Until, however, veterinary medicine is duly recognized and takes its proper place (as in Europe) in that considerable section of "social science," public health, we can scarcely expect that executive measures suffiently comprehensive to satisfy even our present knowledge will be adopted and carried out. So far some of the officials of different counties of this State have taken a proper step in this direction, and have employed competent veterinary surgeons to inspect the horses of their county to see whether glanders existed, and when found, the surgeon has had power to have the diseased animals shot and burned. It is also very necessary that the inspector should be able to advise as to its prevention. We should be able to give directions to owners of animals, which, if carried out faithfully, are calculated to give as large a measure of protection as our present knowledge will admit of. All animals affected with the various forms of glanders or farcy, in the interests of the community should be destroyed, in order to prevent further spread. Other rules must be carefully observed.

The stables should be thoroughly disinfected with sulphurous oxide gas, or by means of chlorine generated by the action of sulphuric acid on common salt. The walls of the stables should be thoroughly washed, and may be cleansed with lime-wash containing one pint of carbolic acid to each bucketful of water. The harness and other articles which have been in contact with the animal should also be thoroughly cleaned with carbolized water. The remedies which have been used in equinia are arsenic, iodine, biniodide of copper, iodide of potassium, sulphite of soda, and many other. Of all internal medicines, iodine is, in all probability, the most potent in the various forms of glanders and farcy. It has been given in acute glanders in man with success.

GLANDERS IN SAN FRANCISCO.

The article which appeared in the *Examiner* last week, stating that glanders was epidemic in San Francisco, was false in every particular. Certainly, several cases are found every year, but very few indeed, and I may say that, from five years experience as a practicing veterinary surgeon in San Francisco, that that city is singularly free from all contagious diseases of the horse. There has, however, been a great deal of glanders in different parts of this State, particularly in the counties of Monterey, Humboldt, Contra Costa, Santa Barbara, San Diego and Ventura; but I believe that those counties are now almost free from the disease. I felt that it was my duty to the people of San Francisco, especially to the keepers of livery and boarding stables, to comment before the members of the Farmers' Institute upon the unjustifiable statements made by a young and inexperienced veterinary surgeon. I again repeat the glanders scare in San Francisco is entirely without foundation.

The Vineyard.

Vine Statistics and Their Teachings.

An essay by C. J. Wetmore, Executive Officer of the Viticultural Commission, at the Livermore Farmers' Institute.

The subject of "Statistical Information," that has been given me to say a few words about, is an important one both to producers and merchants. The producer is not in as good a position to obtain statistics as the merchant is, and unless he can obtain them from a reliable source, he remains ignorant of what the State produces and of what the markets are for our products. He can find out from his neighbors and local paper what the prospects of a crop are in his vicinity, but unless he takes all the papers in the State he cannot learn what the whole State will produce. What the producers need is some State officer to furnish them accurate statistics free of charge. The State Viticultural Commission has undertaken to do this, and has furnished to the viticulturists of the State as accurate statistics as they have been able to obtain. Each year a considerable portion of its appropriation has been spent in obtaining statistics, and if the producers would respond more readily to the requests of the Commission, more accurate statistics could be given. If in every county a society was formed having for one of its purposes the gathering of statistics, and if each society would send such statistics to the Viticultural Commission, it would make it an easy matter for that Commission to furnish accurate statistics from the whole State to each and every viticulturist. The State is too large for the Commission to do more in this matter than it is now doing with its present appropriation. Let the producers do their share and the work will be an easy one.

The actual progress of the viticultural industry is best shown by giving figures, and the importance of the industry becomes evident as we look at them. In 1880 the number of acres planted to vines was only 35,000. In 1881 the planting of vines began in good earnest, and has been kept up ever since. From 1881 to 1887 most of the vines planted were for wine-making purposes. From that time to the present year but few wine grapes have been planted. In 1888 there was a sudden rise in the value of raisins, and from that year to this one there have been large plantings of Muscat grapes. The low prices of raisins this year has given a check to the boom, and the area of raisin grapes will not increase much for some years to come. At the present time the area in vines in this State is estimated to be 175,000 acres, of which 90,000 acres are in wine grapes and the balance in raisin and table grapes. It will be seen that we have in 12 years increased the acreage from 35,000 to 175,000, or 500 per cent. The value of the 35,000 acres in 1880 was estimated at $300 per acre, or $10,500,000. Taking the same estimate of $300 as the value of an acre of vines, the total value at the present time of all the vineyards of the State is $52,500,000, or, in other words, the taxable property of the State has been increased $40,000,000. This amount does not include the money invested in wineries, distilleries, warehouses, cooper shops, etc., that are not connected directly with vineyards—$20,000,000 more could easily be added for such improvements, and which would not exist were there no vines in the State. The benefit derived from this industry is well demonstrated in the Livermore Valley. In 1880 there were but five acres of vines planted; now there are over 4000 acres. The value of the property in the valley has been increased over $1,000,000. It costs the owners of the vineyards at least $20 an acre per year to cultivate them and pick the grapes. Eighty thousand dollars yearly is therefore paid to the workingmen and tradesmen of the valley. Upon the success of the vineyards depends the success of the town of Livermore. It is so of many other places in the State.

As I said before, there was a rapid increase in acreage of vines from 1881 to 1887, and when those vines came into bearing the amount of wine produced increased rapidly. In 1881 the amount of wine made was 8,000,000 gallons. Of this amount 3,000,000 gallons were exported to foreign countries or shipped to Eastern States, 4,000,000 gallons were consumed on this coast, and 1,000,000 gallons used for brandy and other purposes. At that time there was a market for all the wine made and prices for wine and grapes were high. This condition of affairs kept up until 1886, and there was great prosperity in the viticultural industry. In 1886 the effect of the heavy plantings showed itself in the amount of wine made that year, which jumped from 11,000,000 gallons in 1885 to 18,000,000 gallons. This was too large an increase for the trade to handle, and prices of grapes and wine fell rapidly. From that time to 1891 there was more wine made than we had a market for and prices fell to ridiculously low figures and there was no profit left to the producers. From 1887 to the present time the acreage in wine grapes has decreased from various causes. The vine disease in Southern California has destroyed 20,000 acres of vines, and the phylloxera in Napa and Sonoma counties from 10,000 to 15,000 acres more. The consumption of wine has increased from 9,000,000 in 1881 to 18,000,000 gallons in 1891. Our production now is not over 18,000,000 gallons (in 1891 it was not over 15,000,000 gallons), so that the industry is in a good condition as regards supply and demand. As soon as some of the surplus stocks are cleaned up, the prices for grapes and wine must advance, and there will be great prosperity again in the industry. The vine growers should not remain discouraged, even though prices still remain low. The time is close at hand when a change will occur for the better. We are making better wines now than we did in 1881, and as the conditions will soon be similar to what they were then (that is, supply and demand equal), prices for grapes and wine will go higher than they did then.

I have made these remarks to show you the value of statistics. The producer who does not know what the production or consumption is cannot tell what the condition of the market is going to be.

The Home Circle.

The Singing in God's-Acre.

Out yonder in the moonlight, wherein God's-Acre lies,
Go angels walking to and fro, singing their lullabies;
Their radiant wings are folded and their eyes are bended low,
As they sing among the beds whereon the flowers delight to grow:

"Sleep, oh, sleep!
The Shepherd guardeth his sheep!
Fast speedeth the night away,
Soon cometh the glorious day,
Sleep weary ones while ye may—
Sleep, oh, sleep!"

The flowers within God's-Acre see that fair and wondrous sight,
And hear the angels singing to the sleepers through the night;
And, lo! throughout the hours of day those gentle flowers prolong
The music of the angels in that tender slumber song.

"Sleep, oh, sleep!
The Shepherd loveth his sheep!
He that guardeth his flock the best
Hath folded them to his loving breast—
So, sleep ye now and take your rest—
Sleep, oh, sleep!"

From angel and from flower the years have learned that soothing song,
And with its heavenly music speed the days and nights along;
So, through all time, whose flight the Shepherd's vigils glorify,
God's-Acre slumbereth in the grace of that sweet lullaby:

"Sleep, oh, sleep!
The Shepherd loveth his sheep!
Fast speedeth the night away,
Soon cometh the glorious day;
Sleep weary ones, while ye may—
Sleep, oh, sleep!" —*Eugene Field.*

Mattie's Soupbone Week.

In Two Parts--Part I.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

"I can't help it, Mattie. One fifty'll have to do. I just can't spare any more with all I've planned. It isn't my fault, and you know you promised."

"Yes; but, Tom, one fifty can't possibly do. Why, you alone ——"

"But you must make it do."

Mattie flushed angrily. "Oh, as to that, Tom, if you say must, I can say shan't;" and she turned and went into her pantry.

Tom, standing near the outside kitchen door, turned to go about his business, also. Then he hesitated a second as though a sudden thought had come to him. Then, with two or three vigorous steps, he was in the pantry, where his little wife appeared to be all absorbed in tidying up the shelves. What a clouded brow and a hard-set little mouth! Tom's mustache didn't hide a queer little smile at the corners of his mouth. Before she knew it, Mattie was caught up in a pair of strong arms, almost smothered with kisses, a "Good-by, dear," whispered in her ear, and Tom was off like a shot.

Ah! Tom's mother was a wise woman. She had said to him: "Kiss your wife, my boy, and kiss her often. Never forget the tender things to say or do."

Mattie stood where Tom had set her down, looking out of the pantry window. A wistful, perplexed look had replaced that of anger on her face.

"Let me see," she murmured, "I might possibly get along to-night with what there is on hand; but to-morrow! How shall I manage? Tom's so fastidious and has such an appetite. It'll be like the Israelite making bricks without straw. I just love, though to please him at his meals." Here she looked sharply around her tiny pantry. Then, with a decisive nod of the head, "I'll do up my work and go and see Miss Hetty. She'll tell me, if anybody can, what to order, and how to get along and not starve."

By nine everything was neat about the house, and Mattie, putting her pretty silver-gray dust-cloak over her morning gown, and donning her jaunty gray walking-hat, started on her short walk to Miss Hetty's. In the work-bag hanging on her arm was the necktie she was crocheting for Tom. No such thing as Mattie wasting her time.

Mattie found Miss Hetty in her sitting-room, placidly knitting by an open window which overlooked her adored rose garden. The first thing she said when Mattie came tripping in was:

"Did you notice my 'Gold of Ophir' rose? And did you see how double that 'Isabella Sprunt' is I budded on the Archduke Charles?"

"Now, Miss Hetty, I cannot talk roses this morning. They are all just lovely, and I'm coming over for a regular rose chat one of these days. I've business on hand this morning; I wish your financial acumen brought to bear on my commissariat department.

"Mercy on us, child! What are you driving at?"

"Do you see that?" And Mattie held up three silver half dollars. "That's my week's allowance. Liberal, isn't it."

Miss Hetty looked at Mattie sharply. "I don't know but it is. What does it include?"

"Why, it's to go for meat, milk, bread, Chinee vegetables, anything to eat I don't get at the grocery."

"Yes?"

"You see, Tom and I resolved to regulate our expenses so as to pay for our place within a certain length of time, and have a little ready cash on hand, too, for emergencies. I've done real well so far, for my part, but somehow I've missed it this month. I guess," and Mattie flushed a little, "I've been a little foolish about some expenditures. I got ahead the fore part of the month, and as there were some bargain sales in town, I invested. And Tom's that obstinate he will not—indeed, he says he cannot—give me any more money. It's the last week of the month. He will not run up any bills but at the grocery, and I only get certain things there. He abhors canned things, and will hardly eat bacon, unless it's with 'pigs in a blanket,' or some such way, and I cannot do that. But he has an appetite as big as he is, and he's mighty particular, too. And O dear, however can I set a decent table on a dollar fifty? I've most a mind to starve him a little." Here Mattie, with a thrill, thought of her hug and kiss, and, with a regretful qualm, of her bargains reposing in the bottom drawer of her dresser. Her tone changed. "O Miss Hetty, you just must say something to help me out. Wave your wand, like a fairy godmother, and evolve innumerable roasts and steaks out of what will be left to spend after the baker and milkman have had their share."

"Roasts and steaks!" remarked Miss Hetty incisively; "I thought as much. And you probably get porterhouse and tenderloin?"

"Why, of course."

"And the scraps?"

"Oh," answered Mattie triumphantly, "you don't know how economical I am. I save my remnants and put them into the soupkettle, and when I strain the soup, the scraps go to the hens. Tom is so particular about eggs. He wants to know that they are fresh, so he has just a dozen chickens in a pen. He sees to them mostly. They do like all my table scraps."

"Probably," said Miss Hetty dryly. "What sort of a soup-bone do you usually order?"

"Oh, I don't know. I get ten or fifteen cents worth of soup meat or bone nearly every day [Miss Hetty started], and then ——"

"How often does your butcher come?"

"Oh, every day, nearly. He generally comes in the afternoon for me, as Tom likes his heartiest meal at night. I get a sort of dinner-tea. Meat'll keep all right, you know, these cool nights, and I order meat for breakfast, too, so Tom needn't bring it home. Tom comes home to luncheon usually. He likes to get out of the store when he can. If there happens to be a difficult customer about noon, he sometimes stays, and gets something from that Mexican restaurant next door. They do cook a steak smothered in chilies and onions makes him hungry to smell of. *I* can't do it. But he hates to eat down town anywhere if he *can* come home. Likes to eat in his own home. He's just proud of the dainty appointments in our dining-room, if they're not so very expensive. But O dear, Miss Hetty, what shall I order of the butcher to-day?"

"How much do you want for your baker?"

"Four bits. I get seven big loaves for that. Tom doesn't eat much, nor he isn't such a great hand for potatoes, so we use a loaf a day, besides the quick biscuits I make now and then."

"How much do you need for your milkman?"

"Two bits. Gets us a pint a day. All we need. Tom doesn't take it in his coffee; isn't fond of milk."

"How much for your Chinaman?"

"Well, I don't have one come but twice a week now; got so tired of fussing with them. It's that awful big-mouthed one, you know, that's been here so long. Guess I spend twenty cents a week or more; when he has strawberries, lots more. If I don't use my vegetables, I throw them into Tom's chicken yard."

"Call it ten cents for the Chinaman. That ought to do for one week if you take care of your vegetables as you should. I'll tell you how. That leaves sixty-five cents for the butcher."

"Yes, so it does. Sixty-five cents! Why I've seen Tom eat—I'm ashamed to say how much of a sixty-cent tenderloin roast. Oh, he's ——"

"I know," said Miss Hetty; then she went on decidedly, "Now, Mattie, listen. You say you use all the remnants of your porterhouse steaks and nice cuts of roasts in your soup pot. That shows you don't know anything about cold meat cookery, and yet you want to economize; and you think Tom ought to give you some more money, when you know how much your bargains are responsible for your shortage. Now let me tell you, if a man proposes economy as to food, and such a man as Tom, don't say anything—act. He'll suffer more than you. In this case, it's your special duty to make it as easy for Tom as possible. Usually its the best way to straiten out a "near" man, to give him all he wants of economy—straight, unembellished—at his dinner-table. Men care ever so much more what they have to eat than women do. That's why women who start out as home makers—happy home makers—should know more about cooking, in all its aspects, than about music, or art, or fancy work. But, dear me, they seldom do, even now, when cooking-schools have been a fad in so many parts of the country. Why, my child," and Miss Hetty laid down the shoulder cape she was knitting and spoke very emphatically, "if half the reforms of the day would begin in our kitchens, there would not be so much to reform. Man's salvation, even, might be almost managed through his stomach. Humanity, rightly nurtured in childhood, rightly fed when wed, would be so much better morally and spiritually, as well as intellectually and physically, that—that—that the world would hardly know itself." With which climax, Miss Hetty settled back in her chair, her cheeks quite red; while Mattie laughingly cried:

"O Miss Hetty! you are such an original I really must cultivate you more—or rather, let you cultivate me. Come, I'm your docile pupil from this minute, in things culinary and economical. Tell me now just what to order from my butcher, and I'll obey, even if it's liver and shoulder steak."

For awhile Mattie and Miss Hetty sat "in secret conclave." Then Mattie went home to carry out Miss Hetty's orders. There were many such conclaves during the six days following, many of them in Mattie's own home. Once Miss Hetty took tea with Tom and Mattie; and a nice tea it was, with meat in some shape on the bill of fare, and some dainty dishes that had not before appeared. It was altogether an interesting week for Tom and Mattie. Tom felt very proud of his wife's ability before the week was over. As for Mattie, she now avers that she is just as much of a "crank" as Miss Hetty on the cooking question. She says, besides, that what she learned or began to learn, during this week, was worth dollars and dollars to her in her after life with regard to more things than cooking, in that she began to sense what were the wiser economies. But I am anticipating.

That day Mattie called on Miss Hetty, that I have told you of, she ordered a very fresh foreleg soup-bone of her butcher, for which she paid twenty-five cents. Happily she knew more than the young wife, who, when her butcher asked her if she would have a *fore*leg soup-bone, answered, no, she thought *one* would do, as her family was quite small yet.

As Miss Hetty had advised, Mattie had her butcher saw the leg in short pieces, cracking open each bone so as to expose the marrow, and cracking the big end into several pieces. How large that soupbone looked to Mattie as she unwrapped it. With a sharp knife she cut all the lean meat from the bones that she conveniently could and laid in a dish. The marrow was all scraped out and laid by itself. The lean meat, of which there was over three pounds, she separated into two parts. That from the big end of the bone and nearly free from gristle, about a third of the whole, she ran through Miss Hetty's little "No. 5 Enterprise meat chopper," borrowed for the occasion. This she seasoned with salt, cayenne and a dash of curry. It made six pats of Hamburg steak, which she put in her cool outside cupboard for breakfast. She set the marrow there also. The soup bones she covered with cold water after she had laid them in her big convex pot of agate ware. The rest of the lean meat was put into her "Berlin" stewing-pan, and also covered with cold water. These she set on the back of the stove when she built her evening fire.

There were in the pantry remnants from the morning's steak and yesterday's roast. The last, she having had company the night before, was in an unusual state of "dismantlement," as Mattie phrased it. The "possibilities" of these remnants she run through the meat chopper. There were two cups of this. To it she added one cup of stale bread crumbs, soaked soft in warm milk, and two well-beaten eggs, and seasoned the mixture well. Then she took a piece of stiff, brown paper, about eight inches long by four inches wide, sprinkled some flour on the paper, laid a heaping tablespoonful of her "croquette" mixture near one end of the floured paper, then folded the paper over and rolled the contents back and forth till it was long, round and shapely. The paper was kept well floured, and spoonful by spoonful her croquettes were all rolled and floured ready for the frying pan.

This is what she had for her dinner-tea (so different a meal from that which she usually prepared that she wondered continually, with many internal quakings, what Tom would say of it).

Well, first there was soup. She had on hand some of the "Julienne" soup (the only soup she knew how to make) of the day before. This she heated, strained, added to it half its quantity of strained tomatoes, and a tablespoonful of pearl sago. This, well-seasoned, and served with crackers heated in the oven till very crisp.

After the soup she brought on her big platter. It was "attired" thus: In the center were six slices of toast, over which had been poured the gravy from yesterday's roast, heated very hot and thinned a little. On each slice of toast was a slice of hard-boiled egg—two eggs served for the occasion. The slices of egg were seasoned with a tiny squeeze of lemon juice and a dash of *paprika*. On the sides of the platter, in an appetizing circle, lay the meat croquettes, with sprigs of water cress between, and at the corners of the platter a quarter of a lemon lay on two sardines, nestled between two sprigs of cress. Beside each plate with this course was set a pretty little China plate, on which was laid a lettuce leaf containing some potato salad, made from yesterday's cold potatoes and an egg left from breakfast, seasoned with vinegar, pepper, salt and cream. Of course, there was a bouquet on the table—a particularly choice rosebud laid by Tom's plate. Of course, too, there was a goblet of water by Tom's plate, a slice of bread in his napkin, and a cup of tea ready for him when he wanted it. There were also baked potatoes in a napkin. Tom was very fond of baked potatoes at his evening meal. For dessert there was custard cake and jelly. Mattie wondered if Tom would really get "filled up" with such a meal.

I have forgotten to say that Tom did'nt come home to luncheon, and was late to dinner this day. Miss Hetty, who had been with Mattie that afternoon and evening, but who disappeared as Tom appeared, had said to Mattie:

"You may be sure he has had a hard day's work. Probably a lot of goods came and he had to unpack them and couldn't stop to come home, or a drummer is there. Men, the best of them, are apt to be cranky and cantankerous if tired or worried, specially if hungry; I do believe a hungry man is always snappish. So be sure to be cheerful, forbearing and tactful when Tom comes home."

Mattie resolved to be "just heavenly" to Tom. She had had a reaction of tenderness since her spunky fit of the morning, and felt as though she couldn't do enough for her "hubby."

As for Tom, he had had a reaction the other way. It had been a hard day in the hardware store, where he managed things for that "rich old skinflint Bowers." A big lot of goods from Hibbard, Spencer, Bartlett & Co., had arrived. There was much heavy lifting, sorting, marking and placing. A mistake had been made in the order. "Bowers was nagging around." Tom had to hunt no end in the waste paper basket to find the copy of his order, to convince "old Bowers" that the fault in the order was not his, and so on, and so on.

And then Crissy Bowers, a niece of the old man's, came in, ostensibly to get a pinking iron, and stopped to gossip with handsome Tom. He had kept company with her once on a time, but dropped her because she was "just a little too swift" for the sort of woman he wanted to make his wife. Everybody said Crissy "wanted him bad." Now, in the course of her chat, with a most innocent air, she inquired after his wife, and spoke of having seen her, and what a hand she was to pick up good bargains, and such a lot of them, too, and "was Mattie getting ready to go visiting so soon?" etc., etc.

And Tom thought to himself, "Ho! that's the reason she's so short of money. Gets what she wants before she

wants it, and thinks I'll give in and overrun the expenses we'd agreed on. Hum! when I wear old clothes and hats and shoes, and stay at home evenings, and fairly avoid the fellows so I won't have to stand treat, but can save money to fix up the home, and pay upon it, too. I look like a dandy Jim, I do, for nicely dressed young ladies to see that come into the store. Bargain! I've heard say that of all things a bargain-hunting wife was to be dreaded." Not that Tom didn't have sweeter thoughts than these, but he really was cross, badgered as he had been by "old Bowers," and the insinuations of mischief-loving Jennie, tempted the evil side of his nature.

When he went home his feelings were in that delicate state of balance, a word from Mattie either way would have turned the scale—made him nice or disagreeable. Though, truth to tell, it would have been easier to make him very pronouncedly disagreeable.

But here was his Mattie, as neat as a pin, as sweet as a posy, meeting him so smilingly, so solicitously, offering to get him some warm water so he could cleanse his hands better than at the store sink. How hungry he was. He had skimped himself at noon—only had a ham-and-egg sandwich of the boy at the street corner. Such a restful, homely air was about his own kitchen. Mattie bustled about so cheerfully, and there was such a warm, suppery smell. Nothing disagreeable occurred to him to say, before all this comfort. And the dining room, with its bright, hanging lamp, and the flowers among the silver and china, looked so tasty. And *his* Mattie, just busying herself for him. She was a sight prettier and more ladylike than Crissy Bowers, whose loud voice always rasped his nerves, even when most fascinated by her dash and style.

Mattie needn't have worried for fear Tom couldn't "fill up" without his steak. He ate heartily, and praised everything. Afterward he lounged around in his shirt sleeves and smoked while Mattie tidied up. It was his night off. He and the other clerk under him took turns keeping open nights. After the work was all done, Mattie, who was keeping up the fire for culinary reasons, and knew how well Tom liked to spend cool evenings, when they were alone, in her cozy kitchen, brought her big "Rochester" and put it on her neat, oilcloth-covered kitchen table. By it she laid the latest papers and magazines, and her basket of work. Then she drew near the table her comfortably cushioned "settle," a quaint, old-fashioned affair that she had designed and painted and cushioned herself, and prided herself on as being the most unique and fascinating of all her household appurtenances. Then she said, coaxingly:

"You poor, tired boy, don't you want to sit down here while you are finishing your cigar?"

Tom does.

"What is it smells so nice?" he asks, presently.

"O," said Mattie, brightly, "I am stewing some beef for all sorts of things. I'm going to cook you some new dishes. And, O, Tom, when you finish your cigar, I just want to tell you something, and I'll comb your hair while I'm telling it, if you like."

"Like! Well I should say. My head aches, and it would be better than a cigar, I do believe. But you seem so busy sewing, perhaps you can't afford to stop. It'll take a good deal of your time, won't it, to make up those bargains you have been getting?"

[*To be continued.*]

Babies and Ballots.

I saw in a paper not long ago a paragraph like this:

One member of a suffrage society asked of another, "What can be the reason that Mrs. Jones has lost interest in our cause?" "Oh, I saw the furniture wagon stop at her door and deliver a cradle."

The editor thought the item a funny one. He put it, with other solemn things, in his wit and humor column. I do not doubt the truth of the incident, but to me it is full of pathos. In these perilous times, when it is so difficult to carry a soul "through all the split saltpetre of the world," there is no more touching sight than a happy young mother with her little child, both alike innocent and unconscious.

Unaware of any legal robbery which gives the entire ownership and control of her child to another, for the present it is hers. She lives in it, and for it. In the safe corner of the secluded home, what harm can come to it? It is too young to be poisoned by the moral miasma which, rising from uncleansed streets and slums, leaves no rural corner of the world untouched, and penetrates to the most cultured and exclusive homes. It is too young to learn profanity or slang, to listen to innuendoes or foolish gossip. It cannot read the papers, imbibe the irreverence of our current literature, or understand pessimistic philosophy. (Neither can anybody else, for that matter.)

The child may die, and the mother never realize her disabilities. Probably it will. The great world is too busy to give much time or thought to the wise care of mothers or babies. It is too much absorbed in what Mr. Grant Allen terms the "distinctively human." If the child lives, the mother will sometime awaken to anxieties which do not trouble her now. She knows that sorow, sin and death are in the world; but somehow we never think that evil things can happen to our own.

But the child so loved and guarded is not exempt. Some day it may fall into the snares so thickly set for young feet. Some awful day it may be a felon or an outcast, or the undertaker's wagon may stop at that mother's door with a casket, which would not have been needed if our homes were protected as they should be from evil influences.

The ballot in the mother's hand is the lever needed to bring the strong, pure love of motherhood to bear against social vices. What this country needs is mothering. Uncle Sam has kept house long enough. It is time for thorough house-cleaning and womanly care of neglected sons and daughters.—A. L. Cornwall in Woman's Journal.

—Haughty lady (who has purchased a stamp)—"Must I put it on myself?" Stamp Clerk—"Not necessarily. It will probably accomplish more if you put it on the letter."—New York Herald.

Young Folks' Column.

A California Wild Goose Chase.

A California boy can hardly understand the peculiar significance commonly attached to the phrase "a wild goose chase." To him, a goose hunt means a day's shooting on the tules, and with any luck at all, more game at night than he can carry home on his back. The numerous flocks of geese, flying and squawking in all directions, made me impatient to get at them with my Parker the first day of my stay at my friend's ranch. But when I spoke of it he suggested that I wait until the first foggy or windy day, when the birds would fly lower. "Then," said he, "we will take a team and go out on the tules and have some shooting that is shooting." The day came before long, and loading guns, ammunition, provisions and a camping outfit into the big box of a header wagon, already half-filled with barley hay for the mules and for our beds, the rancher, myself, one of the hired men and two lads in their teens, sons of my host, climbed aboard and struck out for the tules or marsh lands adjacent to the Sacramento river.

It was late in December; the rains had set in early that winter and the fields were green with growing grain. The north wind blew a gale, but the sun shone bright and the air was soft and balmy, more like May than December to me, just out from Minnesota. A ride of three hours brought us to the bank of a small creek, fringed with oak timber. All around us stretched low, level lands, dotted with patches of tall tules—bullrushes we call them in the East—and numerous shallow ponds and sloughs. Many of the streams of California, throughout their lower courses, flow between banks several feet higher than the surrounding lands. This is caused by the floating down of debris or "slickens" from the hydraulic mines in the mountains, which forms deposits sometimes many feet in depth and extending miles back from the channel. The streams all begin to rise with the first early rains in the winter, and, breaking through the banks, back water among the tall reeds and tules, forming the finest feeding grounds I ever saw for all kinds of water fowl, with which they are alive from October to April.

Tying the mules to the wagon box we cut poles, pitched our tent and fixed up our camp before firing a gun, although flocks of birds kept skimming over our heads, barely higher than the tree tops, and filling the air with their squawking. The camp in order, we donned our gum boots and, with the sun an hour high, started out for an evening shoot, my host and I going in one direction, the hired man and the boys in another. Selecting points where the flight seemed thickest, we squatted in dense bunches of tules and commenced banging away. I thought I had seen pretty good flights of water fowl among the Minnesota lakes, but I had never before enjoyed such sport as this. Our greatest trouble was not in finding something to shoot, but in retrieving the great birds that came flopping down in the water on all sides of us. Ten minutes after sunset we stopped shooting, lest the flash of our guns should spoil our next day's sport. Then came the lugging of game into camp. All kinds of water fowl had been flying, but I had shot nothing but "honkers" and "speckle breasts," and had 16 of them at my feet. My host, who had devoted his attention to spoonbills and mallards, had bagged 21 birds. We had goose fried between slices of bacon for supper, with bread, butter and coffee, and after an hour spent in smoking and spinning hunting yarns, we rolled up in our blankets and tried to sleep. But for my part, the incessant quacking of ducks and the shrill squawk of geese rang in my ears all night long and kept me awake most of the time.

We breakfasted early and were at our stands before sunrise the next morning. The wind blew as strong as ever, keeping the birds close to the ground in their flight, and we had better shooting, if possible, than the night before. The geese flew thickest about nine or ten o'clock, when hundreds of flocks came in from the grain fields for many miles around, to drink and bathe, and rest during the middle of the day upon the shallow ponds. They would not light here and there upon the first water they came to, but hovered about in large flocks until some bold gander flopped down into a pond, when every goose within sight or hearing immediately steered for the same spot. Unless disturbed, in the course of an hour there would be geese enough in that pond to cover acres of water, and as they came circling down from a great height, they looked like a cloud of great leaves carried downward instead of upward by a monstrous whirlwind. Two-thirds of them were white geese and not worth shooting, but there were enough gray geese, brant and ducks to keep us very busy cramming shells into our guns while the morning flight lasted. The hired man and the boys brought in their share of game, and when we started home that afternoon, we had over 100 birds in the wagon. The boys were not very good wing shots, but managed to hold up their end by sneaking up to a small pond surrounded by thick willows, where the geese were lighting by the hundred, and making a great pot shot; their four barrels, two on the water and two as the birds rose, killing no less than 19 geese and brant.

It may seem incredible to those who have never visited California, but wild geese are so numerous in the great grain-growing sections of the State, that, if the large ranches did not employ men to "herd" them off the fields, acres of grain would be pulled up by the roots in a single moonlight night. These goose herders carry long-range rifles and ride about on horseback, firing upon and putting to flight the flocks as they begin to light upon the fields. Just after a long spell of north wind, when they can be shot so readily, the San Francisco market is so flooded with geese that pothunters often receive barely enough for their consignments to pay express charges and commissions.—M. B. Gibson in Am. Agriculturist.

—A howling swell—An ulcerated tooth.

An Army Kitten.

One evening, says *Harper's Young People*, toward the close of the war, while Union soldiers lay in camp on a hillside near the Stanton River, Virginia, the cry of "Halt! who goes there?" from a sentry startled every lounger to his feet; and several of the more curious ran to the guardline to find out what the trouble was. A minute later all knew that the night visitor who had been challenged was no enemy. A little girl, about ten years of age, holding a white kitten in her arms, came forward into the light of the fires, conducted by two soldiers, who had told the sentry to pass her in, and who looked as proud as if they were escorting a queen.

The whole regiment gathered—including the Colonel himself—to look at the child and hear her tell her story. A very short story it was—scarcely a paragraph; but there was matter enough in it for a full chapter. She lived near by with her father who was sick and poor; and they were Northern, she said, and "Union folks." Her mother was dead, and her brother had been killed while fighting in the Federal army. She "wanted to give something," and when the Union soldiers came she thought she would bring her pet kitten and present it to the Colonel.

The Colonel took the little girl in his arms and kissed her, and the kitten, too, and said he was not a bit ashamed of his weakness. He accepted the kitten with thanks, and its innocent donor was gallantly waited on to her humble home, loaded with generous contributions.

The white kitten was adopted by the regiment, but considered the property and special pet of the Colonel, and when the war was over he took it home with him. Like the white lamb that stayed and fed with the victors after the battle of Antietam, that little creature, during its short but stirring army life, was a daily inspiration of better feelings and thoughts in the presence of all that is worst—a living flag of truce gleaming among the thunder-clouds of human passion and strife.

Domestic Economy.

Tested Recipes.

Written for the Rural Press by Ada E. Taylor.

Waffles.—Rub two ounces of butter into a quart of flour, add a teaspoonful of salt, and a pint and a half of milk, with half a cup of yeast. Heat well for five minutes, cover, and stand in a warm place for two hours: then beat three eggs separately, add to the batter, beat, and let stand 15 minutes. Heat the waffle irons, grease well and pour half full of batter. Bake brown, take up, spread with butter and lay on a hot plate. Sift sugar over the top.

Bananas in Jelly.—Make with boiling water, a quart of strong and sweet lemonade, using only the juice of the lemons. Soak half a box of gelatine one hour in a small cup of cold water; stir it into the boiling lemonade, and set it where it will cool, but not harden. Cut three bananas in lengthwise halves and lay them in a mold wet with cold water, cover them with half the jelly, and set the mold upon the ice until the jelly sets. Then slice in three more bananas and pour in the remainder of the jelly. Serve with cream or soft custard.

Oyster Pie.—Line the sides of a deep dish with thin, rich paste, and invert a cup in the middle. Drain a quart of oysters, pepper and salt them, and arrange them around the cup. Strain the oyster liquor, add to it half a pint of milk and put it on to boil. Rub together two tablespoonfuls of flour and the same quantity of butter, and when the liquor boils stir it in, and stir until it thickens. Remove from the fire, season with pepper and salt and pour over the oysters in the pie. Roll out a thick sheet of paste, cut a hole in the center and cover the pie with it. Bake half an hour, or until the crust is nicely browned.

Bananas for Breakfast.—It is best to prepare this dish the night before it is to be eaten. Remove the skins of six bananas, slice and place them in the dish they are to be served in. Sprinkle over them three tablespoonfuls of sugar and then squeeze the juice of a large lemon, next adding about a tablespoonful of cold water. Set in a cool place until wanted. Bananas are also very nice sliced, with sugar sprinkled over them, and a little water added, then let stand a few hours, and a cupful of cream poured over them, or a rich custard, or simply the whites of eggs beaten.

Hard Boiled Eggs.—Put the eggs in boiling water and let them boil *gently* for 20 minutes. After they are removed from the hot water, take off the shells, drop the eggs into a bowl of hot salted water, and keep them in a warm place until wanted. Before sending to the table place a layer of fresh water cresses or parsley in a pretty dish, lay the hot eggs upon the sprays, and strew more greens lightly over the eggs. This is an ornamental dish, and the eggs peeping through the fresh sprays of green, invite the appetite.

Cold Veal.—Slice nicely roasted cold veal in thin, neat slices. Have ready the following dressing. Take the yolk of one hard boiled egg, and the yolk of a raw one, and rub them together. Squeeze into them the juice of a small lemon, a salt-spoon of mustard, a teaspoonful of salt and half a salt-spoonful of white pepper. Stir again and add two tablespoonfuls of butter that has been slightly softened. When this mass has been stirred to a soft paste, spread it thinly upon each slice of veal, arrange the slices in a compact pile and press them together so that they will adhere. To serve, cut slices of medium thickness *across* the previously made slices and serve with cold potatoes that have been sliced and fried brown in the least possible quantity of butter.

—How He Felt About It.—"I would like to have this afternoon off, if you please." Senior Partner—"What is the matter, Mr. Penn?" "I wish to attend my wife's funeral. I feel that it is something that I ought to attend to personally."—Epoch.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FRUIT CROP PROSPECTS.—Chico *Record-Union:* We have talked with all the leading orchardists in relation to the outlook for the fruit crop this year, besides inspecting many of the trees. The cherry and apricot crops will be extremely short, as they, being the early fruits, suffered the greatest damage from the hail and frost. The peaches will be produced in great plenty and of extra good quality. The fruit has set very heavily upon the trees, and in most orchards it will be necessary to have the fruit thinned. Six inches apart is as close as the fruit should be left upon peach trees, and if the fruit be left thus it will be as much as the trees can mature and produce good fruit. There seems to be an idea prevalent among certain classes of people that the fruit should be as thick upon the trees as it can hang in order that there should be a full crop.

GRAIN CROP PROSPECTS. — Gridley *Herald*: In conversation with a great number of farmers from all parts of the county the first of the week, we found that the crop prospects were good in all quarters. On some low, wet, cold land, of course, the grain has been badly injured by the cold, wet weather. The north wind has helped the grain on the black land, as well as elsewhere, as far as we can learn. What the result of the cold snap and recent frosts has been as regards the fruit crop, we are unable to say.

PROMISING OUTLOOK.— Gridley *Herald*: A few years ago our orchard area was very limited. Now it extends clear across the country to the Feather river, and each succeeding year witnesses a big increase devoted to fruit. Rio Bonito is our nearest colony; its 2000 acres of orchard presents a healthy growth and perfect cultivation. And the end is not yet. Every year now will see the prosperity of that section of country growing as rapidly as fruit trees grow in this favored locality. The land adjoining Gridley has in fact become too valuable for cattle-grazing and grain-growing; every acre of it is good for fruit, vines, nuts and berries. Palermo and Thermalito Colonies, in the citrus belt, appear as wonders of the age when it is known that the lands they include were but a few years past exclusively reserved to herds of animals. Now they are the home of the orange, fig, vine and olive, possessing the possibility of making, if not a thriving town, at least a prosperous and important village.

Colusa.

GRAIN CROP PROSPECTS. — Gridley (Butte Co.) *Herald:* Grain on Grand Island is heading out rapidly. In Sutter county the wheat and barley fields are well forward in most localities. Butte has the finest-looking grain we have seen recently in four counties, and we have traveled considerably lately through Yuba, Sutter, Colusa and Butte.

Modoc.

LARGE CATTLE SHIPMENTS.—Reno *Gazette*: W. H. Nelson, of Likely, Cal., has shipped this year 1720 head of beef cattle over the N. C. O. Mr. Nelson owns one of the most extensive ranches in the north. He cut last year 4200 tons of hay, and can put up twice that quantity if necessary. He is at the head of the Modoc Land and Livestock Co. and owns about 5000 cattle and 600 horses. Mr. Nelson is one of the most prosperous farmers and cattle kings at the north, and has earned his wealth by close attention to business and cool calculating judgment.

Monterey.

SUGAR BEET CROP AT MORO COJO.—Cor. Salinas City *Index:* Nine hundred acres of land are to be planted to sugar beets. The soil (a black loam), was in fine condition, there having been a sufficiency of moisture to make a fine crop. Planting has already begun, and they would much prefer that no more rain should fall, as the weeds would not grow and the beets would require less cultivation. The crop prospect in that section for cereals was good, not up to last year, however.

GRAIN CROP PROSPECTS.—Salinas City *Democrat:* Our reporter inspected the grain fields of Santa Rita and vicinity, Natividad and vicinity and the Alisal. Without individualizing, the crops between Salinas and Santa Rita will be fair. On the Newhall tract, better than the average, owing to the land having had rest. Much of this land has been devoted to dairying interests, and to insure good crops in the future there must be a rotation of crops and absolute rest. Particularly is this the case with the Espinosa and De la Torre land grants that have been farmed almost continuously since 1870. To the observer in passing along the regular traveled roads, the prospect for crops looks generally well, but get down from your buggy and go into the fields, and this mirage, so called, at once disappears. There are many places spotted that gave the appearance of being fine but were not.

Napa.

VINES DAMAGED BY FROSTS.—St. Helena *Star*: An investigation of the vineyards of Napa valley discloses the fact that the late frosts have done far more damage than was at first expected. From Calistoga to Napa all the vineyards in the bottom of the valley have suffered more or less, and the only exception is found in vineyards lying on the hillsides or those immediately at the foot of the mountains on the west side of the valley. Conn valley and Howell mountain fared no better according to last report. At a very low estimate one-half the crop is gone in Napa county. What the conditions are in Sonoma and Santa Clara counties we have not yet heard, but it is natural to suppose they have not escaped, as the frost of Sunday morning was general throughout the bay counties. One thing is sure and certain. The next vintage, at the least, will be a short one and far under the requirements of the trade. If the present conditions do not raise the price of wine, it will be because the dealers have become independent of the producers and have become producers themselves in their five-story brick vineyards. In conversation with Mr. T. Moloney, foreman of W. B. Bourn's "Rockland" vin yard, betwe n St. Helena and Calistoga, he said he had made a trip down the valley to investigate the condition of his employer's vineyard near Rutherford, and was surprised to see the great amount of damage done by the frost of Sunday morning. He said it seemed to start in the northeast portion of Mrs. McCord's vineyard and swept through about one-half of Mr. Bourn's place, turning the leaves and buds of fully 150 acres of vines perfectly black. The Chasselas, Grauss Bleau, Grenache, Carignan, Malbec, Pedipediux and a few other varieties have been bitten so badly that there will not be a grape on the vines. The vineyards of Ex-Sheriff Harris, C. P. Adamson, J. B. Atkinson and many others are also injured. It is needless to add that the result will be a very small crop this fall, and it is doubtful whether there will be half the wine made in Napa valley this year that there was last.

San Benito.

BAD WINTER ON SHEEP.—Hollister *Advance*: In a case on trial in the Superior Court last week, several sheepmen testified that this winter has been the hardest on sheep since 1877. One sheepman testified to losing 2000 out of 9000, by starvation. The percentage of lambs lost was over 50.

San Bernardino.

THE CROP PROSPECTS.—Alessandro *Orange Belt*: The grain is up from 12 to 14 inches to a foot and a half and is growing strong and vigorously. Hundreds of acres of as fine appearing grain as one could possibly wish to see covers the country, and everything points to one of the most profitable harvests in Southern California. The rains this year, while they have not been excessive, have come at good times, and each fall has been of the penetrating, soaking kind which does so much good. As a natural consequence, every one will have a crop, even though there be no more rain, and it is hardly time yet to look for dry weather. Those who planted alfalfa fields a month ago are beginning to see them cover the ground in a promising way. The old alfalfa fields have been growing fast for the past six or eight weeks, and on the 24th ultimo Giles Brown cut his first crop for the season. Others are now beginning to cut, and in another week alfalfa hay will be hauled to Redlands for sale.

RIVERSIDE FRUIT NOTES.—*Enterprise*: A visit to the various packing houses of the city shows that the orange market is not what it was this time last year. The season's crop will soon be harvested and disposed of. The prices are lagging, and orders come in slowly. We find that some weeks 40 or 50 carloads are shipped, while other weeks there are but few sent out. The several packing establishments at Arlington and Casa Blanca have been shipping a corresponding number of oranges. However, in a few weeks the season will be practically over. The packing house of Boyd & Silver employ eight or ten packers, and ships on an average five cars per week. The Fruit Growers' Packing Company employ six or eight packers. That company will, for the next six weeks, ship on an average one carload a day. The later shipments will be Mediterranean Sweets. The Griffin & Skelley Company employ nearly a dozen packers. The season with them is practically over. Cook & Langley's packing house has been closed several days, but they will begin packing some time this week and will employ five or six inside hands. The packing of Mediterranean Sweets will finish the season with the Earl Fruit Company. We understand this company intends to ship from its house in this city not less than 240 carloads for the season. They have already shipped about 230. W. R. Strong & Company are employing eight or ten packers, and are shipping six or seven carloads a week. Frank Devine's house ships some weeks 15 cars, and other weeks but few. He employ six or eight packers. The Twogood Fruit Company packs but few oranges, laying off its hands once or twice a week. It has shipped the bulk of its pack, of course, and is just closing. The orange season this year did not require more than one-half the hands of last year. The coming peach, pear, apricot and raisin crops all promise to be exceptionally good.

SUGAR BEET CROP.—Chino *Champion:* Chino beet fields now present the busies' appearance of any place in this county. About 300 men are at work on the beets; of whom some 110 are thinning. The crop is looking fine and growing as vigorously as any one could wish for. The second planting on some fields is well up, and in nearly all cases is a splendid stand. If nothing unforseen occurs later, we have reason to expect a splendid crop this year in general. One thing is sure—never did farmers do better work in their fields than is being done here this spring. From one side of the Chino ranch to the other is a perfect garden, level, smooth, clean, well-cultivated and covered with long straight rows of bright green foliage of beets, healthy, vigorous, and promising to the farmer ample reward for his labors. Probably about 300 acres will be planted yet, most of which will be done this month.

San Diego.

FIRST RECEIPT OF WOOL.—S. D. *Sun:* The first wool of the new crop has been received at the warehouse of W. W. Stewart & Co., and is of the usual fine quality of San Diego county's production. This shipment consists of 66 bales and weighs about 40,000 pounds. This is two days later than the first receipts last year. It is estimated that the crop this year will be about 250,000 pounds.

HAY-CUTTING ON THE MESA.—Otay *Press:* Hay-cutting for the season has commenced on the San Miguel mesa. Geo. Johnson and J. Rooney commenced cutting their 260 acres on Monday; Chas. Sciss is cutting 25 acres; Mr. Jacobson is cutting his 175 acres, and others will soon commence the cutting of the 8000 or 9000 acres that are estimated to have been sown on this mesa.

CROP PROSPECTS IN CHOLLAS VALLEY.—Cor. National City *Record:* Some of the late sown wheat and barley, even on the dry mesas, are doing wonderfully well considering the long dry spell, and much hay will be cut in the aggregate. Barley looks better generally than wheat, and the red oat crop is the most backward of all. The price of good old wheat hay keeps up to $17 by the ton in San Diego, which looks steep at this season.

San Luis Obispo.

CREAMERY AT HUASNA IN OPERATION.—Santa Maria *Times:* Tom Steele's dairy is now in full operation with the new cream separator and other improvements. This is one of the few dairies that has been kept running all winter and always obtained the top price for butter. He is now busy fencing the west line of the Huasna grant, which will completely enclose the entire ranch.

Santa Clara.

FRUIT CROP PROSPECTS AROUND CAMPBELL. Cor. San Jose *Mercury:* The canker worm is putting in good time in its last year's haunts, but has not found its way into this immediate vicinity. The orchards on Meridian road and Leigh avenue seem to suffer most. Thinning of apricots has begun in earnest. It is noticeable that the Moorparks do not need thinning this year. Peaches have taken the freak of doubling badly this year. What effect this will have on the crop as a whole is yet uncertain. Prunes are well set, and will be a large crop.

Santa Cruz.

SUGAR BEET CROP PROSPECTS.—Watsonville *Pajaronian:* The contracted acreage for sugar beets in Pajaro valley this season aggregates nearly 2000 acres. Over half of this acreage has been planted, and the beets are up on over 400 acres and show a remarkably good stand. Thinning was commenced in four fields this week. The season has been extremely favorable for this business, and but a limited acreage has had to be reseeded. The work of the crop is nearly a month ahead of last year. All indications point to a big year for the factory, and the beet crop will most probably be the largest ever harvested in California.

Santa Cruz.

SUCCESSFUL BERRY CULTURE.—S. C. *Sentinel:* Mrs. McCann is making a success in raising berries on four acres of land for market. For the past three weeks shipments of strawberries have been made daily to San Francisco. On an average, 100 boxes a day are sent away to satisfy the palates of San Francisco epicures. Three men are engaged at present in picking the berries. Each man picks, on an average, 120 boxes a day. Soon, 20 boys and girls will be employed. Some of them have been picking the berries for five years, so that they are now experts. This year, Mrs. McCann has planted 50 new varieties of berries, which she received from the East. Next week, the raspberries will be ready for market. Mrs. McCann acts as general manager, secretary and treasurer, and apparently has a personal acquaintance with every plant on the place. She can tell their history, productive qualities, and the flavor of the berries. She also has an orchard of 16 acres in Glen canyon, in which she has planted 5000 trees and 10,000 berry plants.

Solano

APRICOT AND PRUNE CROPS AT VACAVILLE.—Cor. Dixon *Tribune:* Although the apricot crop is somewhat spotted, orchardists think that the coming crop will be equal to that of last year. Some of the growers complain that the prune crop will be unusually light.

Sonoma.

SWISS AGRICULTURE.—Petaluma *Courier:* The Italian-Swiss Agricultural Colony, which has an estate of 1500 acres above Healdsburg, held its 11th annual meeting on the 15th inst. The report of the secretary showed that the assets of the corporation amount to $393,000; the liabilities are $72,000. They have 700 acres in grapes, 100 in orchard and 200 acres in grain and vegetables.

Stanislaus.

GRAIN CROPS.—Westport Cor. Modesto *Herald:* Grain is doing well, considering all drawbacks, and with anything like favorable weather from this time on, the yield will be good, but not near the amount expected by some. Barley shows up to a better advantage than wheat.

Tulare.

DEWBERRY PLANTS.—Grangeville Cor. Visalia *Delta:* Monroe Burrell has several dewberry plants. They produce more than a blackberry bush, yet in appearance and taste they are about the same, but the dewberry is about three weeks earlier. It grows on the ground, but can be trained to climb.

PROFIT IN PIGS.—Tulare *Register:* D. O. Hamman sent a load of young shoats into town and sold them, not as material for pork, but as stock hogs, and he says that they pay him as well as he asks to have things pay. Mr. Hamman says that pigs of good breed will, at 11 or 12 months, weigh 200 pounds each, with nothing but alfalfa to live on, and will be worth eight to ten dollars each, owing to the condition of the market, and that they pay. He expresses the opinion that good Poland-China hogs pay better and do better than the common California hog, and cause less trouble. When fattening time comes a little corn or waste fruit, watermelons or pumpkins, will harden the flesh and make good eating.

Ventura.

BEAN-PLANTING.—Cor. Hollister *Free Press:* If putting the ground in good condition will insure a crop of beans and corn, the farmers ought to be rewarded with good crops this year, as they seem to have the ground about as clear of weeds and as mellow as it is possible to get it. A few have commenced planting, but generally they are waiting for warmer weather. The two or three frosty mornings this week looked as though the time for planting had not come yet. We hear all kinds of predictions in regard to the moisture in the ground of late. Some think more rain is needed, while others seem to think more rain would be injurious.

NEVADA.

PURCHASING BEEF STEERS.—Pioche *Record:* Mr. Joseph Coumerilh, as agent for B. F. Saunders of Salt Lake, is around contracting with cattlemen for beef steers, to be delivered at the Springs, eight miles from Desert station, in the months of May and June. During the past ten days, Mr. Coumerilh has securred some 1200 head in this vicinity, and will materially increase the number before the time for delivery arrives. He came up from Pahrangat valley on Monday, where he purchased 200 head from A. W. Geer, some of which are said to be the finest beef ever offered. Current prices are: Yearlings, $9.50; two-year-olds, $14; three-year-olds, $18; and four-year-olds, $20, which prices are deviated from, however, in cases of prime quality.

ARIZONA.

STOCK NOTES.—*Stockman:* Grass is growing beautifully on our ranges since the late rains and following warm weather. Mortality among stock, in most localities, has about ceased, and the outlook is encouraging enough. Large numbers of cattle have been shipped during the past several weeks, and in another month many thousands will go north, east and west to the feeding grounds, relieving our ranges to no small degree, and in a year from to-day cattlemen will almost have forgotten we had a drouthy season at all. It is believed large numbers of female stock will be spayed—an action necessary for a year or two—which, when put on the market, will give cattlemen surplus cash, and, at the same time, allow the range to recuperate to a considerable extent. Those who look at it rationally believe that the drouth was actually beneficial.

OREGON.

NO HOP LICE AT DALLAS.—Salem *Statesman:* Hopmen of Dallas say that what are taken for lice are not the lice that devour the hops, but simply root lice, which appear on all kinds of green vegetables at this season of the year, and come from around the roots, where they have lain dormant during the winter. Their opinion is based on the statements made by eminent scientists, and must be believed. They also say that the weather has been too cold for the young and tender hoplouse to make its appearance, but believe that it will come later on.

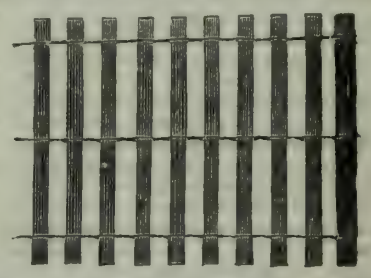
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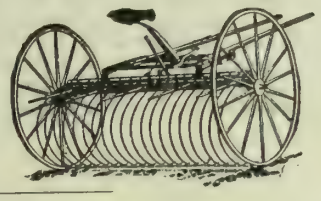
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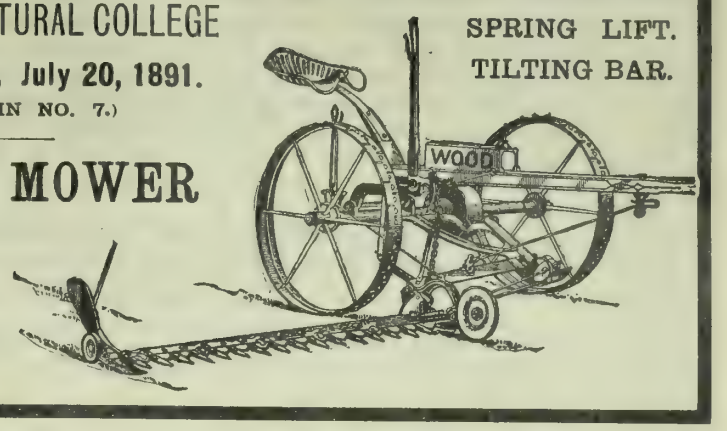


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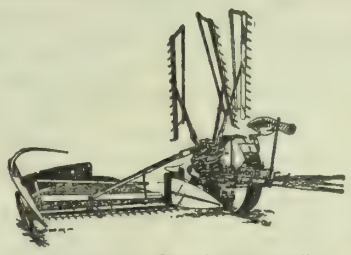
Government Experiment Station,
UTAH AGRICULTURAL COLLEGE
LOGAN, UTAH, July 20, 1891.
(BULLETIN NO. 7.)

WOOD MOWER
Shows Draft Only
215 Lbs.
IN CLOVER.

SPRING LIFT.
TILTING BAR.



THE BEST EVER USED.



EN LO ED GEAR REAPER.

WINTERS, CAL.

FRANK BROTHERS, S. F.:

GENTLEMEN—The two 5-foot Walter A. Wood Mowers I purchased of your agent, R. Morrison, are the best I have ever used. They are light draft, strong and durable, cut clean and are simply constructed. I am much pleased with them, and cheerfully recommend them to anyone needing a first-class Mower.

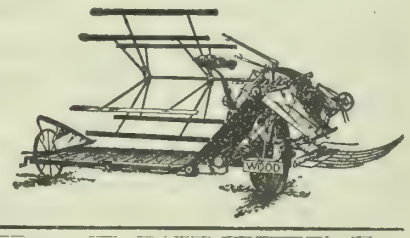
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STEEL HARVESTER & BINDER,
WITH STEEL BUNDLE CARRIER,

One Draper Only is used, securing Great Lightness of Draft, Ability to Handle any grain and Economy in all ways.
The Binder is Absolutely Sure. It Takes Care of Itself.

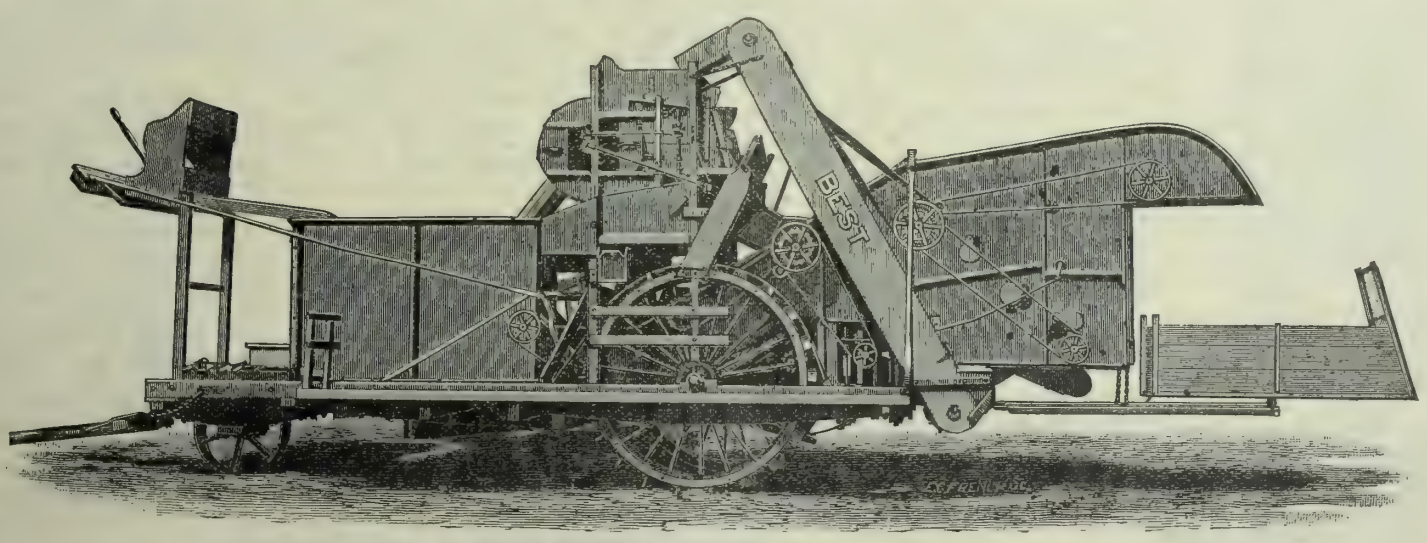
The IDEAL HARVEST MACHINE.

You Drive, the Machine does the rest.



AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST
NEW MODEL COMBINED HARVESTER
FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,
SAN LEANDRO, CAL.

Evolution of Inventions.

A new departure will be made by the patent office at the World's Fair at Chicago. Hitherto it has never attempted to go beyond an exhibition of photographs and drawings. In this instance it will offer an elaborate and comprehensive display of models. The show will be designed to illustrate as completely and vividly as possible the age of mechanical civilization. It will give in concrete form a picture of the the progress of invention.

The Commissioner of Patents says that the great exhibit of the patent office will not be displayed. All that will be attempted in the show proper of his bureau will be to illustrate the processes through which those achievements have been perfected. For this purpose, groups of models will be prepared. For example, one group will represent the progress of the steam engine, beginning with the first one, which was built 150 years before Christ, by a Greek named Hero. It had a boiler, and was able to do work by means of a shaft and belt attachment. From this primitive contrivance to the modern Corliss engine, in miniature, an interesting series will extend.

Other groups will be similarly arranged. One will represent the printing press, all the way from Guttenburg's original invention to the rotary Hoe machine, which turns out newspapers at the rate of many thousands per hour and folds them ready for delivery. In electricity, wonders of all sorts will be illustrated by progressive series. There will be telephones running all the way from the primitive conception to the perfected instrument now in use. The telegraph will be introduced with the actual instrument made by Morse, by which the first experimental messages were sent over the wire from Washington to Baltimore, this line of discovery culminating with the latest devices for printing messages at any distance with type and transmitting one's own handwriting across thousands of miles of space in a fraction of a second. The growth of the locomotive will be shown in like manner; also that of the sewing machine; of the marvelous modern agricultural implements from primitive types; of clocks, from the water clock of ancient Babylon and the later hour-glass, etc.

Many of the models required for these groups are already in the possession of the Patent Office, but a large number will have to be constructed especially for the purpose. Manufacturers all over the country will be asked to supply specimens of their products for representing the latest developments of inventive art. The locomotive works will be requested to lend miniature models of their newest engines. Makers of agricultural tools and sewing machines will contribute the most improved specimens of their handiwork. Likewise with printing presses and everything else. Few, if any, of the mechanical models will be set working, however.—Washington Star.

Patrons of Husbandry.

The State Canvass.

The Northern trip of Past Master Overhiser and of Lecturer Huffman has not turned out to be a great success. Mr. Huffman writes from Orland to the State Secretary as follows: "We left home for a swing around the circle April 17th. We arrived in Vacaville on the evening of the 17th, aud met Vacaville Grange on Monday, the 18th, conferred the third and fourth degrees in the forenoon, but in the afternoon nothing was accomplished. The farmers were all too prosperous and busy to spend any time to learn anything of interest or that would be beneficial to them, and with all the thunder that we possessed we could not awaken any interest in them. That other fellow (the earthquake) stepped in and demonstrated the fact to the satisfaction of all that there was a supernatural power that could waken them from their reticence. On Tuesday morning, after the temblor, all the farmers had time to come to town. They were not half so busy as they were on Monday. It seems to me sometimes that we will have something similar, if not quite as heavy, to waken farmers from their lethargy, or we will all have passed into oblivion and under corporate control for all time, equal to Rome, when ballots will not save the producers. But suffice it to say we got out of there, and have pursued our way northward. At Grimes the Patrons and others got waked up, and, on the 27th of April, Brothers Flint and Frisbie will reorganize them and place that Grange as another star in the galaxy. The encouragement at that point exceeded our expectations. We left there at the time of the shake. At Maxwell we were met by that true and tried Patron, Bro. A. D. Logan, and a member of Antelope Grange, who has accompanied us on our way thus far. At Maxwell an open meeting was held in the forenoon, but as to results, I think there will have to be some more electricity applied than we possess to get the farmers waked up. In the afternoon a closed meeting was held, and we hope it will result in good. But time will tell better. We left Maxwell for Orleans, and succeeded in giving an open meeting in the afternoon, but as to results it is doubtful. In my humble opinion it may take a house-to-house canvass to build up the Grange, but the outlook is somewhat more favorable. We should have had two, three or four days at a place, just as circumstances required. From here to Antelope, Millville, etc., at some of the places we are to go, I fear our visit will be of no value. We had no one to correspond with, and so our trip is more or less of a prospecting tour. At Chico they have a picnic on the 6th of May, which will knock out everything there prior to that time. They have posters out all over the country."

The Reorganization at Grimes.

Concerning the meeting at Grimes, upon which Mr. Huffman touches in his correspondence, we have a fuller account from the Secretary, Mr. A. A. Thayer. He writes: "In accordance with arrangements heretofore announced, Bros. Huffman, Overhiser and Frisbie paid Grimes a fraternal visit on April 20th, and as the announcement had been pretty well circulated throughout the vicinity, there was a large and respectful crowd at the hall to meet them. Bro. Overhiser explained what the Grange had done and what it was trying to do. After his address, which lasted about an hour, there was an adjournment for lunch, and upon reconvening, Bro. Huffman spoke, and, among other things, explained the working of the new ballot law, which was listened to with close attention. After remarks by Bro. Frisbie and others, the proposition was made to reorganize Grimes Grange, and it met with unanimous approval. It was found that 20 old members were present, and five more expressed their wish to become members. After dismissing the open meeting, the hour was found to be so late that it was decided to postpone organizing until April 27th, at which time Bros. Frisbie and Flint of Sacramento will be present. So you see the prospects are good that Grimes Grange will soon be in a flourishing condition again."

Past Master Flint's Trip.

Past Master Flint, in reporting to the State Secretary concerning his recent trip to Tracy, Lodi, Stockton, Clements and other points in the San Joaquin valley, says: "Bros. Walton, McConnell, Caples, Huffman, Berry and Senator Langford gave me the best kind of support, and I consider that our efforts were fully appreciated, and will be the means of adding more to our ranks. I spoke from two to four times a day, and instructed three classes in the Second Degree, one class in the First and Second Degrees, and two classes in the Third and Fourth. We have been received and entertained in the kindest manner, and transported to our several appointments free of charge. I was constantly among agreeable and entertaining companions, and the trip proved a round of pleasure."

The Worthy Master.

No report has been received at the office of the State Secretary in San Francisco of the doings of Worthy Master Davis during the past week. He spent Saturday in the city, in attendance upon official duties, and during the week has not been idle, though we have no specific account of his work. The Dixon *Tribune* of the 22d inst. speaks of his presence with Dixon Grange on the preceding Saturday, characterizing the meeting as one of the most interesting ever held by that body. After a business meeting in the morning, the general public was invited to join in a sumptuous feast, after which, addresses were made by Past Master Coulter and Mr. Davis. Speaking of Mr. Davis' remarks, the *Tribune* says: "This was Mr. Davis' third visit within the current year, but he was not at a loss for fresh topics. Although Mr. Davis terms himself a 'plain farmer,' he is a highly educated and cultured gentleman, and one of the most fluent speakers ever heard in Dixon. California never had a more able exponent of the Grange doctrine, and no one, whether a member of the Order or not, could fail to be benefited by his talk. He is deservedly very popular with the members of Dixon Grange, and they look forward to his visits with anticipation."

The Yuba Picnic.

The Yuba City *Farmer* of April 22d has the following concerning the Grange reunion and picnic to be held on May 6th: "The Grange Reunion and Picnic Committee held a meeting last Monday afternoon and discussed plans, etc. It was decided that the Order take charge and conduct the dinner tables and also the temperance bar. The subcommittees made reports. The work so far shows that there will be a complete program of races, games, etc., with liberal prizes for the same and also for exhibits of cut flowers, grain, etc. The Marysville Independent brass band has been engaged, and also the Yuba City orchestra. A merry-go-round will be in attendance to amuse the little folks. The ball in the evening will be one of the main features, and a good platform is now being contracted for. Posters and newspaper ads will keep the public informed on all new developments.

Farmers' Alliance.

The Rural went to press last week before the meeting of the State Alliance Executive committee in this city had concluded, and, it will be remembered, just after the resolution had been passed supporting Pres. Marion Cannon in his attitude concerning the Nicaragua Canal. It is very evident, from expressions of members of the Committee, that Mr. Cannon's attitude was entirely satisfactory, and that there would be no wavering, so far as the Committee themselves were concerned, in giving him full and cordial support. It was the feeling among the members and the direct expression of the Committee that they were in favor of the construction of the canal, though, as the Rural looks at it, their position is, in a practical view, directly antagonistic to the canal project.

The question next in importance to the canal discussion related to the establishment of an official Alliance organ in this city. The sentiment of the members of the Committee was unanimous in support of the project, but they did not succeed in accomplishing anything. The question is still an open one, however, and it is announced that within 30 days, or at the farthest by the 4th of July, a strong daily newspaper will be established in San Francisco devoted to the interests of the Alliance. We suspect that those who are most hopeful concerning this matter have very little idea of how much it costs to print and establish a daily newspaper.

At a meeting of the Contra Costa County Alliance held April 15th, the following resolutions were passed:

Resolved, That it is the sentiment of this County Alliance that the rate of license for keeping a saloon in which malt and spirituous liquors are sold in Contra Costa Co. should not be less than $200 per annum.

Resolved, That applications for license to keep a saloon in this county shou'd be signed by at least twelve (12) qualified electors residing in the school district in which the saloon is situated, twelve (12) of them being freeholders.

Resolved, That we, as members of the Alliance, do hereby pledge ourselves not to support any candidate for Supervisor in our respective townships unless he is pledged to the foregoing resolutions.

At the same meeting Mr. Geo. P. Elliott, a farmer of Hollister, made a stirring speech, winning a great deal of sympathy from his audience. He advocated an increase in the circulating medium, Government ownership of railroad and telegraph lines, the abolition of national banks, a seventh day of rest for all classes, and the emancipation of politics from the saloon interest. As one step along this line, he advocated the enlistment of a million men, if necessary, to build a railroad across the continent, said road to be owned by the Government and operated in the interest of the people, the expense of building to be paid by an issue of treasury notes good for all debts, public or private.

H. C. Wetmore, the Secretary of the meeting, to whose courtesy we are indebted for these notes, remarks by way of comment: "The hearty applause which greeted Mr. Elliott's allusions to temperance and a Sabbath law shows that there exists in the community a desire for a higher state of morals in politics than is evidenced by the old political parties."

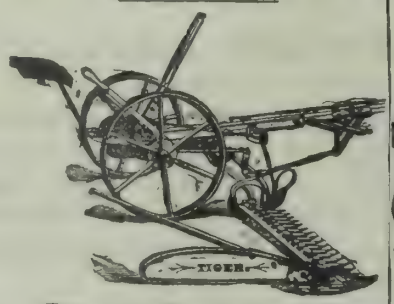
San Diego Resolves.—The San Diego County Alliance at its last meeting reindorsed the resolution passed at the Murrieta meeting, recommending the passage of a law for the purpose of more accurately collecting the tax on mortgages—that each assessor be furnished a stamp to be used on mortgages when assessed and any mortgage not bearing the stamp of the assessor could not be collected by law. Also President Cannon's message advocating the Government owning the Nicaragua canal. Also recommending that women be given the ballot.

Unitarian Literature

Sent free by the Channing Auxiliary of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. E. F. Giddings as above.

UNEXCELLED—"OUR THREE LEADERS"—UNEQUALLED.

TIGER.



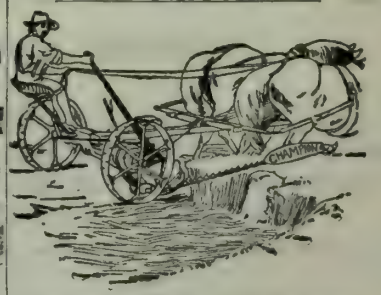
Three sizes—will cut anywhere: Guaranteed—equal to any—superior to most. We have handled this Mower for years and know of its merits well. Write us and we will tell you about it, and give you prices.

ADRIANCE BUCKEYE.



This is the Buckeye which has been sold for years on this Coast. Everybody is familar with the name. Look out for inferior imitations. The Adriance is the genuine. Write us for prices, etc.

CHAMPION GIMBAL JOINT.



The Champion Gimbal Joint has absolutely no lost motion. It ranks as the equal of any machine made. It has no superiors. The Gear can not wear out. Cutter bar can be folded up or down. You should get our prices and circulars before purchasing elsewhere.

BAKER & HAMILTON, San Francisco and Sacramento, Cal.

ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

Produces all fruits possible to both the temperate and semitropic zones.
The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
Owned by the largest land company in California.

The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

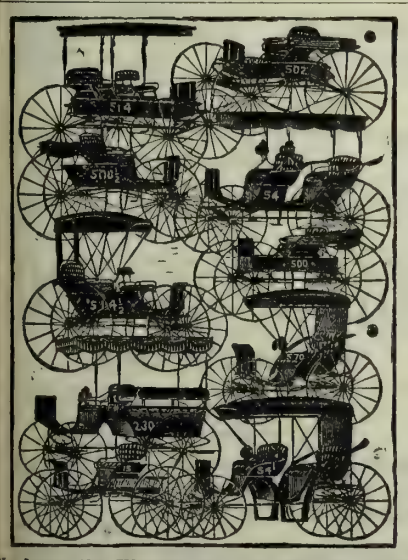
No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

FOR FURTHER INFORMATION, ADDRESS

KERN COUNTY LAND CO.,

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We have the Finest and Largest Carriage Repository on the Pacific Coast.

For prices and full particulars, address

'RUMAN, HOOKER & CO.,

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BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD

To be Happy buy a DANDY STEEL MILL AND A DANDY STEEL TOWER.



We Make the Challenge, Dairy and O.K. Wooden Mills, and a Full Line of Pipe, Gears, Pulleys, Shafting, Tanks, Grinders, Shellers, Etc.

With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

Challenge Wind Mill & Feed Mill Co.,
Batavia, Kane Co., Ill.

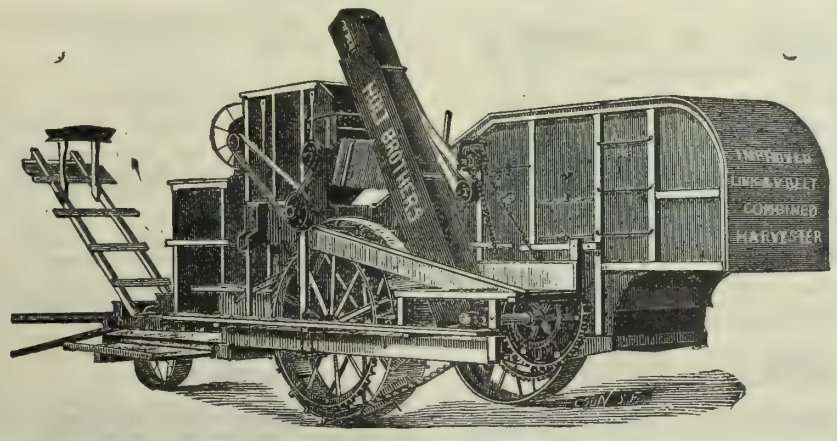
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CORPORATED A. D. 1864. **San Francisco.**

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HOLT BROTHERS'
Improved Combined Harvester.



For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. or, **HOLT BROTHERS CO., 30 & 32 Main St., San Francisco.**

DEDERICK HAY PRESSES.

BEST ON THE MARKET.

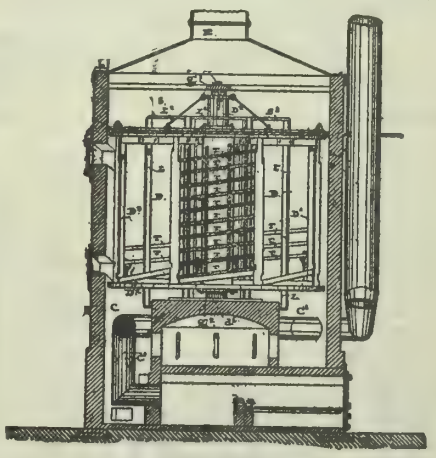
PATENT FULL CIRCLE LEVER HORSE PRESSES,

All Steel, with Automatic Feeder and Condensing Hopper. Also

PATENT CONTINUOUS REVERSIBLE LEVER PRESSES.

Write for Illustrated Catalogue and Prices.

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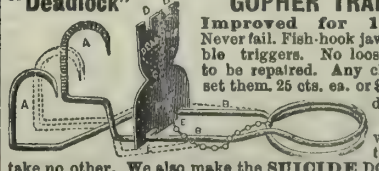
BECK FRUIT EVAPORATOR

This unequaled apparatus is constructed on a new and novel principle, by which its capacity for rapid and uniform evaporation of fruit is attained to a degree that is wonderful. It creates a rapid and continuous current of hot air and distributes it equally and uniformly over every portion of the fruit surface, carries off every particle of moisture as fast as extracted and leaves the fruit bright and clear and of excellent flavor.

Send for circulars. Address

T. & W. A. BECK,
Watsonville.

"Deadlock" GOPHER TRAPS.



Improved for 1892. Never fail. Fish-hook jaws. Double triggers. No loose joints to be repaired. Any child can set them. 25 cts. ea. or $3 a doz. deliver'd Ask or write for them & take no other. We also make the SUICIDE DOUBLE-END TRAP. Price 30 cts. each. The only trap which catches coming from either end. Send for both traps.

IRA F. WHITE & SON, Pomona, California.

UNION IRON WORKS,
SACRAMENTO, CAL.

ROOT, NEILSON & CO.,
MANUFACTURERS OF
Steam Engines, Boilers,
AND ALL KINDS OF
MACHINERY FOR MINING PURPOSES.

Flouring Mills, Saw Mills and Quartz Mills Machinery constructed, fitted up and repaired.

Front St., bet. N & O Sts., Sacramento, Cal.

Entomological.

Questions Concerning the Smyrna Fig.

San Francisco, April 4, 1891.

To the Editor:—As I have been asked different questions in regard to the Smyrna fig and its relation to the gallwasp, I think it convenient to answer them in your esteemed paper instead of answering separately in different letters.

1. Do you think the fertilization, and in consequence the officiating insect, necessary for the production of the Smyrna fig?

I am convinced it is necessary from the time I learned the views of Prof. Count Solms Laubach, but I confess that, like many others, for a considerable time I have been a skeptic in this matter, and considered caprification a superstition, although I should have known that there exists no superstition that is without some foundation. Superstition always rests on misunderstood or wrongly interpreted facts, and in this case caprification, if a mere superstition, could not have lasted 3000 years if its believers had not seen real benefits resulting from its practice.

2. Are you certain that the blastophaga introduced in spring or summer perishes without offspring?

As to the fact—yes.

As to my explanation, I am not quite certain. There are several explanations possible, but the fact has been noticed and decribed 3000 years ago by Theophrastus, is confirmed by modern investigation, and here in California also by several failures in the permanent introduction of this insect.

3. Are you certain that the blastophaga can be found in the wild fig during winter?

Yes, because all real gallwasps hybernate in their winged form, with the sole exception of the genus *Teras*, of which I know a European species *Teras Terminate*, which passes the greater part of the winter in the larva state. This exception probably extends to our California *Teras* and may have its cause in the fact that the species of *Teras* inhabit galls of organs that remain in connection with the tree, viz., branches, while all the other gallwasps, as far as I know, produce their galls on deciduous organs, viz., leaves or flowers. The genus *Andricus*, for instance, the cause of galls in the catkins of oaks, falls down with the withering catkin, and consequently has an exceedingly short existence in its larva state.

4. Are you certain that the Smyrna insect will be found in Northern Mexico or elsewhere at a distance nearer California than Smyrna?

Not the Smyrna insect, but another insect doing the same service. In the year 1865, Major Preiss, living near Guaymas, sent me, among other things, some figs of a native tree, which he described as being highly ornamental. These figs must have swarmed with the little parasite, because the cotton and paper were full of dead ones. At that time the observation was without practical value, but later, when the fig question was frequently discussed, I recollected the fact. Since that time I have spoken to several people about the matter, have sent at different times gentlemen to the district, but never obtained anything else except the pierced seeds of the fig, which fact proves that the insect had been there, but had escaped. Such seeds I have received from Lower California, Mazatlan and Hermosillo. H. H. Behr.

Army and Navy Supplies.

The Government Buying Royal Baking Powder.

New York Tribune.

Large purchases of baking powder have recently been made by the United States Government. In one lot 80,000 pounds were bought of the Royal Baking Powder Company.

During the last year, including the contract just made under date of March 5th, the Royal Baking Powder Company has supplied over 212,000 pounds, or 106 tons, of baking powder for the United States Government and Navy officers.

For many years the Government has given its orders for Royal Baking Powder in preference to all others, it being found that this is the only baking powder that will keep and retain its strength in the various climates to which it is sent by the Department.

Whenever the Government wants the most trustworthy article and the best in quality, it prefers the Royal, as this brand was found to be superior to all others in leavening power by the official chemical tests, made at the instance of the Government, in the Agricultural Department, at Washington.

Electrical Fog Annihilator.

The effect of an electrical discharge to clear an atmosphere containing suspended matter has long been known, and we believe it has already been applied in the arts for various purposes, as, for instance, to precipitate fine powder, such as zinc oxide, which, in the course of its manufacture, is contained suspended in a current of air. It might also be applied to advantage in rooms containing dense tobacco smoke, in which the air will then be rendered quite clear, the smoke being condensed into threadlike hairs resembling cobwebs. It was also suggested some time ago to use this property of a discharge for clearing the air of a fog. It appears now that some actual experiments have been carried on secretly at Sandy Hook and at Boston Harbor, which are said to have been successful. The reports so far are meager, and, being of the daily newspaper order, they are not very clear, and, perhaps, not authentic! From what we can gather from this report, it appears that an electrical discharge is used, and that the effect is directly proportional to the intensity of the fog—that is, the denser the fog the more easily it is affected by the discharge, and in consequence the larger the area that can be cleared with the same amount of energy. There is no electric spark to be seen and no detonation or explosion accompanying the discharge. The largest area which they have been able to clear by one discharge has been 70,500 square feet, or nearly two acres, which is approximately 150 feet in every direction from the point of application. With more powerful machinery, such as exists on large ships, it is claimed that much greater areas could be cleared. The fog falls in the form of rain and the atmosphere afterward is stated to be exceedingly clear, as after a rainstorm in summer. The time of the absolute absence from fog is merely momentary, as it immediately afterward becomes foggy again from the surrounding areas, and within five to seven minutes the original conditions prevail again. It is stated that discharges made at intervals of two minutes would keep the air practically clear. If all this be really true, and it does not appear to us unreasonable, the inventor has our best wishes for success.—Electrical World.

FOLDING
Sawing Machine.

9 CORDS IN 10 HOURS.



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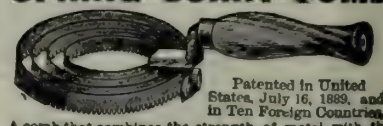
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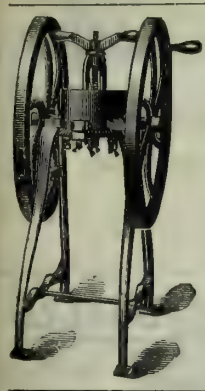
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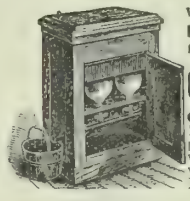


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HORTICULTURE.

Success and Failure of Different Fruits in Livermore Valley, and Why.

An essay by W. P. BARTLETT read before the Alameda County Farmers' Institute at Livermore.

The dry climate of Livermore valley, so unlike that of the portion of our country skirting San Francisco bay, has, until late years, repelled the horticulturist.

A few family orchards were planted, from time to time, and conscientiously neglected all the time; and it is within the past ten years that an orchard of more than an acre or two in extent could be found in Murray township. We have to-day upward of 1500 acres of commercial orchard, all young, cared for properly, and protected from disease and the assaults of insects.

These plantings have mostly been made with a clear discernment of the needs of the various fruits, in the matter of soil and climate, and it is therefore probable that the proportion of failures will be less than is usual in inaugurating an industry in a new country. I once heard a prominent orange grower at Riverside, who began when land could be bought for little or nothing, say, that he had better have paid a thousand dollars an acre and had it with the experience he had gained in planting wrong varieties.

But fortunately there was, for the keen men who were our first orchard planters for profit, an infallible guide to success. This day it may seem strange to so state in view of the poor, broken-down, forlorn-looking, neglected orchards of the wheat farmer, pointed at by every one as proof that fruit-growing was a failure in this valley. Remnants of these orchards still exist in favored localities; where fairly well cultivated, entire plantings exist and bear fruit. But generally only a few trees remain. And these are what? The pear, the almond and the apricot. The rest are either dead or merely dragging out a miserable existence. Apple, peach, plum, prune, cherry, all have succumbed to neglect and bad management, only these, then, being left to tell the tale. The almond and pear produce considerable fruit. The apricot misses pruning and is sulky, but makes a large tree nevertheless. There is a small orchard near the Martin ranch, seven miles north of Livermore, where the trees are but 19 feet apart, have been neither pruned nor cultivated for 12 years, and are open to the incursions of stock. Yet the pear trees bear heavily every year. I have seen barrels of fruit on a single tree.

With good cultivation, on rich soil, the pear flourishes here, delighting in our dry air, which represses the slug and prevents mildew, that enemy of the sets in moist climes. The fruit, too, is large and firm, and will stand shipment as that grown in fogs will not.

The almond has been largely planted here and is essentially a dry-air tree. It is later in coming into bearing here than in some other localities, but is a heavy producer when it does begin bearing. Mr. Hatch's El Primo orchard, planted in 1886, bears its first fine crop this season, though the trees are of large size. No insect enemies have appeared.

The apricot bears young, makes a fine, large tree, stands erect against the wind, and unless its tendency to overbear is strongly checked by either spartan pruning or heroic thinning, the fruit is apt to be small. Its only insect enemy so far is the junebug.

The peach does well here in protected spots, on naturally subirrigated land.

The olive thrives, and after the third year makes a vigorous growth, bearing in the sixth. Its productiveness is something marvelous. All the Roche importations, and several others, have fruited here. All bear regularly and nearly all are extremely prolific. The tree has no enemy here but the twig borer, which does little harm.

The White Adriatic fig makes a good growth here, but the first crop is small, and the second is mostly cut off by the frost. Experiments in cultivation and treatment may cure the defect. It has no enemy but the gopher.

The prune is not a success, excepting, perhaps, on the moist loam lands about Pleasanton. In our best orchard, the fruit runs 100 to 110 to the pound—entirely too small. This tree requires fogs. In the Santa Cruz mountains it branches out like an apricot; here it runs up like a cherry. This close habit allows the sun to scald the bark and the tree is gone.

The cherry, except in a few dry spots, is practically a failure for the same reasons.

The apple tree planted here often brought the woolly aphis from the nursery; and as if that were not enough, our dry air and soil do not agree with the tree.

Insect enemies are not numerous and do not give such trouble to the fruit growers as about San Francisco bay.

The San Jose scale has often been introduced here but has made no headway, being, I believe, killed by our dry north winds. I have witnessed three instances of the destruction of the scale in this way, and believe that whenever it is exposed to the direct effects of this wind it is destroyed. What this means to the orchardist can only be appreciated by those who have fought this pest.

The apricot and pear do best on our heavier and richer loams, and light alluvial and loose gravelly loams. The olive thrives best on deep, well drained, rich vegetable loams, and not on shallow soils and rocks, as is often stated.

In fruit, as in all else, we attain quality rather than size, though culture, close pruning and thinning will give us this quality as well.

The same exquisite climatic conditions that have made Livermore valley famous for its wines and its hay also combine to give a rare flavor and a delicate aroma to its fruits.

Rancho Chico Fruit Crops.

CHICO, Butte Co., April 23, 1892.

TO THE EDITOR:—Statements have recently appeared in various papers that the fruit crop on Rancho Chico this year is an entire failure.

This is something of an exaggeration, and in the line of correct information, in which all fruit growers at least are interested, I will give an approximate estimate of the growing crop.

Of cherries, we expected when the trees were in bloom to have about 150 tons. My present estimate is 15 to 20 tons.

Of apricots, a fair crop would have given us 150 tons. We shall have practically none. Nectarines are also almost an entire failure.

Compared with last year, we shall have one-third of a crop of plums, one-third crop of French prunes, one-third to one-half crop of pears and one-third crop of peaches.

The crop of peaches last year was too heavy. In portions of the orchards the peach trees this year are fairly full, while in other portions the crop will be small.

The crop of almonds is better than last year, many of the trees being very heavily loaded.

The damage to fruit was occasioned by the hailstorm, which occurred three weeks ago, and which was followed that night by a severe freeze. The hail was local, and I am informed that in many of the smaller orchards of this vicinity fruit, except apricots and cherries, sustained little damage from either hail or frost.

C. C. ROYCE,
Manager Rancho Chico.

A Fruit Growers' Convention in San Jose.

CAMPBELL, Santa Clara Co., April 26th.

TO THE EDITOR:—There will be a mass meeting of fruit growers at San Jose, May 7th. The purposes of that mass meeting I can only state in part, and that, too, from memory, hence cannot give them fully nor accurately; but enough can be given to show the great importance of that meeting to the fruit growers. Among its purposes are the following:

1st. To establish a Fruit Exchange in San Jose.

2d. To prevent the present ruinous competition of our products.

3d. To establish and maintain a brand of fruit, if possible, of unequaled excellence.

4th. To secure uniformity in grades of fruit.

5th. To provide storage room, issue warehouse receipts on stored fruits, and make advances on same.

6th. To obtain for our products what the law of supply and demand entitles us to.

7th. To have a voice in establishing and maintaining the price of our products.

8th. To obtain reliable reports of the state of the market, both domestic and foreign.

9th. To exhibit our own products at the World's Columbian Exposition.

10th. To buy for members of this Exchange in large quantities, and consequently at wholesale prices, such indispensable articles as sulphur, sacks, trays, boxes, etc.; and a number of other important purposes that I cannot now call to mind.

The severe frost of April 25th did great damage in Santa Clara Valley. How great has been the damage cannot yet be accurately determined. Probably at the convention of May 7th a correct estimate can be made.

F. M. RIGHTER.

ANOTHER ANNOUNCEMENT OF THE CONVENTION.

SAN JOSE, April 25.—A call has been issued for a County Convention of Fruit Growers to be held in San Jose on May 7th for the purpose of organizing a Dried Fruit Exchange so that growers can dispense with the middlemen in disposing of their products. The plan is explained by Col. Philo Hersey, a director of the successful West Side Fruit Growers' Association. Last year, the first of its existence, the West Side Association shipped 43 carloads of dried fruit, netting $45,000. The fruit was purchased from the stockholders, it being paid for according to the grade, and they being advanced 50 and 75 per cent on it and frequently 85 per cent. The last lot of apricots on hand, about 6¼ tons, sold only a few days ago, and there is now remaining a small amount of fruit. The Association dries its members' fruit or it buys their dried fruit.

The Association commenced with a capital of $50,000, which it expended in purchasing a tract of land and erecting buildings. Its gross profit was $19,000 and its net profit was $14,000. The stockholders are satisfied with the working of the Association, and it has been decided this year to purchase more land and extend its operations. The only drawback that has been encountered is the employment of a commission house to do the selling, but it is hoped that this necessity will soon be obviated. The commission merchants kept the Association constantly informed as to the state of the market, both by telegram and letter.

It is desired that such Associations be organized in every part of the country, with one or more directors from each, to form a central Association, that the purposes of a Fruit Exchange may be realized without destroying the individuality of the district Associations. The central Association would receive all orders for fruit, and place them and regulate the prices.

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ST. JACOBS OIL
cured me. No return in 5 years. FRANCIS MAURER.
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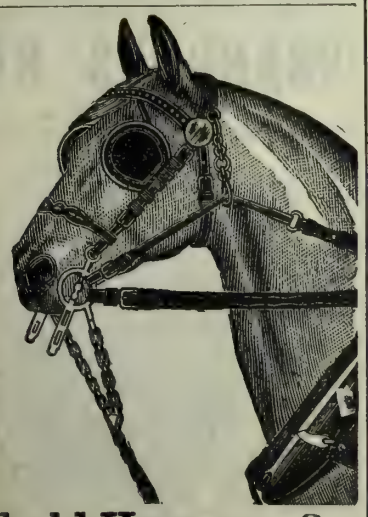
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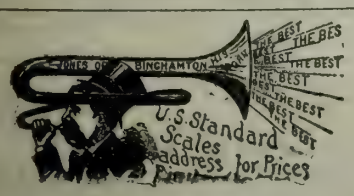


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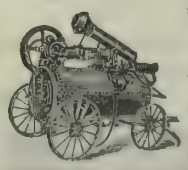
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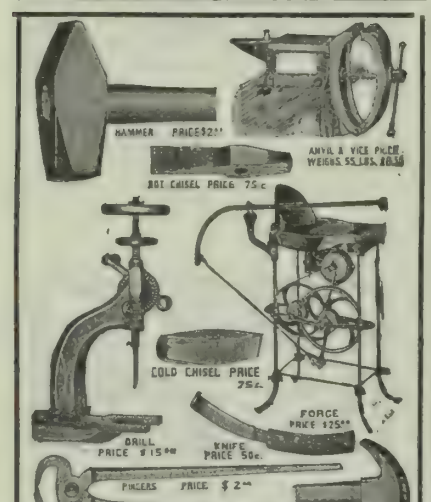
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 27, 1892.

The weather is the absorbing topic of conversation, and, as usual, the croakers (but th's timethey appear to be justified) are getting in their work to good advantage. With two fairly dry winters the ground is deficient in moisture, and therefore plant vegetation is ill prepared to withstand the dry weather we are now experiencing. Unless rain falls soon, the cry of short grain crops will become more pronounced. The local money market continues to rule easy. Taxes have been paid up closer than for years past.

Foreign Grain Review.

LONDON, April 18.—*Mark Lane Express* says: English wheats are dull; prices have declined 1id during the past fortnight. Foreign wheats are steady; the stocks now held at 15 grain ports amount to 2,951,000 quarters. The outlook for the holders of these stocks is serious. English flour is dull at 29s; Minnesota flour is active at 25s. Corn is firmer. Barley, oats and beans are cheaper. At to-day's market only California wheat advanced, the rise being 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June	July.	Aug.
Thursday	7s03⅜d	7s01 d	7s00 d	6s11½d	7s00½d
Friday	7s03½d	7s00⅝d	6s11½d	6s11½d	7s00½d
Saturday	7s03⅜d	7s01 d	7s00 d	7s00 d	7s00½d
Monday	7s03½d	7s00⅝d	7s01 d	7s00 d	7s00½d
Tuesday	7s03⅜d	7s01 d	7s00½d	7s00½d	7s00¾d

No. 2 Red Winter are quoted and not No 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	36s6d	36s0 1	36s0d	Steady.
Friday	36s6d	36s0d	36s0d	Steady.
Saturday	36s6d	36s6d	36s0d	Firmer.
Monday	36s6d	36s d	36s d	Steady. Weather wet.
Tuesday	36s6d	36s3d	36s3d	Firmer. Held higher.

To-day s cablegram is as follows:

LIVERPOOL, April 27.—Wheat firm but active. California spot lots, 7s 5d; off coast, 3's 6d; just shipped, 36s; nearly due, 36s 3d; cargoes off coast and on passage, firmer but not active; Mark Lane wheat, slow; French country markets, weak; weather in England, cold.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug.
Thursday	155⅝	150¼	149⅝	149¼	149⅛
Friday	156	151	149⅝	151	149⅝
Saturday	156½	151½	149⅝	150	149⅝
Monday	157½	152½	150⅝	150⅝	150
Tuesday	154½	152½	151	151¼	150⅝

The following are to-days' telegram:

NEW YORK, April 27.—Wheat, 95¾c for April, 91½c for May, 90⅞c for June, 91c for July and 90⅜c for August.

CHICAGO, April 27.—Wheat, 81¾c for May and 81⅞c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	153½	152⅝	....	....	140¼	139
Friday	153⅛	153⅝	....	....	....	....
Saturday	153½	153⅝	....	....	....	....
Monday	153⅝	153⅝	....	....	141½	141
Tuesday	153⅛	153¼	....	....	142⅝	141¼

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal Session: Buyer season, 200 tons, $1.53⅜; seller 1892, 100 tons, $1.43½; 900, $1.43⅜ per ctl. Regular session: Seller 1892, 100 tons, $1.43½; 200, $1.43⅝; 400, $1.43¾. September, 200 tons, $1.47⅛ per ctl. Afternoon session—Buyer season, 300 tons, $1.53½; 100, $1.53. Seller 1892, 300 tons, $1.44; 1000, $1.44¼ per ctl. Buyer August, 500 tons, $1.47¾. Buyer September, 500 tons, $1.48 per ctl.

BARLEY.

	Buyer Season. H.	L.	May H.	L.	June. H.	L.
Thursday	1.17½	100½	....	....	95¼	94½
Friday	101⅛	101⅝	....	....	....	....
Saturday	102½	101½	....	....	....	....
Monday	104	103½	....	....	....	....
Tuesday	103¾	103¼	101	101	....	....

The following are to-day's recorded sales on Call:

Barley—Regular session—Buyer season, 200 tons, $1.03⅜; 200, $1.03⅝. Seller 1892, new, 100 tons, 99⅝c; 200, $1.00½; 300, $1; 200, $1.00½ per ctl. Afternoon Session—Buyer season, 100 tons, $1.03½; 100, $1.03⅞; 100, $1.03½. Seller 1892, new, 200 tons, $1.01½; 100, $1.02; 100, $1.01½; 200, $1.01½; 300, $1.01⅝ per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, April 22.—*Bradstreet's* says: There continues to be a good demand for wool. Prices, while low, are unchanged. The fact that London sales have reopened at an advance has strengthened the feeling here, not only in Australian wools, but domestic fleeces. Stocks are not heavy, and there seems to be little choice wool from which to choose. Manufacturers, while refusing to pay more for wool, are more inclined to take wool at current quotations. New wools are beginning to come forward, but in only small lots. Some new spring California wool has already arrived, but as yet has not been sold. Fleeces are selling better at former prices. Texas wools are quiet and the supply light. The demand for Territories is weak, although a few sales are reported. There is a good, steady demand for medium grades of pulled wools. An increased demand for carpet wools continues. Prices are, however, unchanged, but firm. Stocks are said to be small.

NEW YORK, April 25.—A liberal closing out of old continues, and late prices are accepted. Many broken parcels are regarded as well rid of, though sold cheap. Fleeces—australian are active. A recent estimate of the receipts of prime foreign are much modified. Parcels ostensibly taken for this market were resold at the tempting advance in London. All of our mills are busy. Fabrics of all kinds are moving well. Sales at New York were 472,500 domestic; 738,000, mainly Montevideo, to arrive; and 18,000 mohair. Boston sold 2,674,000 domestic and 634 000 foreign. A few lots of new California are shown, but not yet quoted. Philadelphia is hopeful of a better deal for the new clip, based on the strong European situation.

Eastern Hop Markets.

NEW YORK, April 25.—There was considerable marketing of unexpected lots for consumption, and prices have been under them. There is no export buying of moment, and brewers will hold off from liberal purchases while the market is weakening. State and Pacific choice 91 dropped to 29c; others range down to 21c; '90's, 14@20c. Options bid and asked: May, 24¾@26½c; June, 25@28c; July, 25½@28c; August, 25c bid.

Eastern Raisin Markets.

NEW YORK, April 25.—Fine quality are scarce on the market; slow. We have never carried many bags into hot weather, and buyers are therefore cautious. A speculative lot is reported to have been placed at 3¼@3½c; trade lots above 4¾c for three crown. Some selected bag crowns are being packed in boxes here to fill certain wants.

CHICAGO, April 26.—California Dried Fruits—The market for raisins remains quiet and easy, but in all other lines there is a feeling of firmness, with prices in numerous instances showing improvement.

Eastern Orange Markets.

Choice California oranges, clean-skinned, in fair demand and ruling steady, but common or smutty sl w and offerings becoming smaller. California oranges; Seedlings, light, ₱ box $1 40@1 60; heavy smutty, $2@2 50; heavy bright, $2 75@3; Navels, light, $1 50@1 75; heavy smutty, $2 50; heavy bright, $3 75@4 50. California nuts, very quiet: Walnuts, hard shell, lb. 6@6½ cts.; soft shell, 7½ cts.

Eastern Fresh Fruit Markets.

The Earl Fruit Company received to-day the first consignment of California cherries of the season. This shipment sold at $1 ₱ lb. and constitutes the opening of the California green fruit season in Chicago for this year.

Eastern Dried Fruit Market.

NEW YORK, April 25.—Apricots are strong again. Prime bags are quoted at 7½c; extra at 7¾c. Bags at the moment take precedence over boxes. Peaches are steady at 6@7½c; two hundred old sold at 4½c. Prunes—Several reserved lines have shown up, but the market is not heavily supplied. The West took four cars of bags with seventies and eighties quoted at 7@7½c. For trade wants, specified sizes, if choice, bring the last quotations.

Miscellaneous.

NEW YORK, April 25.—Mustard seed—Steady in a wholesale way. Brown, 4@4½c; yellow, 4¾c. Lima beans—Firm and fairly active at $1.65@1.75 spot bushel.

General Remarks and Statistics.

Cereals.

The *Wisconsin Crop Bulletin* says that the winter wheat and rye passed through the cold weather in much better shape than expected. The condition is now fair.

Through Southern Dakota, Southwestern Minnesota and most of Iowa, the late storms of snow and rain were very severe, putting back seeding a week or so. In eastern parts of Minnesota seeding has progressed well. Probably a third of the seeding has been done in the southern half of Minnesota and South Dakota, with only occasional lots put in in the north.

Advices from St. Petersburg are that late returns from various parts of the empire indicate quite a satisfactory change in the appearance of the growing crops. Spring seeding is said to have begun under very auspicious circumstances.

Early in the season it was estimated that France would require imports of 96,000,000 bushels of wheat to supplement her crop of 224,000,000 bushels. From August 1, 1891, to March 1, 1892, there have been delivered from French custom houses 63,424 000 bushels of foreign wheat, and at that date 17,200,000 bushels were in store and 4,120,000 bushels afloat, making a total of 84,744,000 bushels. It will take only small imports the balance of the season to bring the total up to the first estimates.

The crop bulletins of Iowa, Michigan Illinois and Missouri say that the cold weather and frosts the past week injured early vegetation and fruit to some extent, and likewise delayed the spring seeding of oats, but were generally beneficial to the growing wheat crop.

Dornbusch's report of the condition of crops in Western Europe the second week in April says that in England a distinct improvement was observable. In France, the wheat and rye began to present a fine appearance. Later reports from Belgium and Holland showed improvement, while in Germany the favorable outlook for the crop was affecting the market. The Hungarian official report was not so encouraging as commercial reports. The Italian reports were quite favorable. Russian reports showed improvement.

Mark Lane Express April 11th reports as follows: "The surface soil is becoming rather arid, and as March rainfall was half an inch below the average, April showers are now awaited with some anxiety by farmers. The wheat plant still looks a trifle starved, though the color is better than it was a fortnight ago. Despite the low prices, a good area seems to have been sown to oats and barley. Foreign wheat has been helped a little by an improved inquiry for Germany, and also by a slight rise in prices at New York, Antwerp and Amsterdam. Value, however, cannot be said to have recovered anything from a week ago; there have simply been larger sales at the low prices then accepted. The supplies which the United Kingdom will require during May, June, July and August are already in sight either in granary here and in America, or on passage, and this imparts an ease to trade which is unusual. Unfortunately, the losses which have been incurred on the midwinter purchases of cargoes are very heavy and there is a feeling of disorganization almost amounting to panic. We have already commented upon the low price at which the new Indian crop is being sold forward, while the price is so low as to absolutely preclude any such losses as have been recently experienced. This safety has not been purchased without considerable sacrifice. The whole future of the summer trade is much weakened and the chances of advancing values are reduced.

London cables, April 26th, report as follows: Wheat and flour on passage to United Kingdom, 2,807,000 qrs.; Continent, 1,232,000. Imports of wheat into the United Kingdom during the past week, 203,000 qrs.; flour, 238,000 bbls.

The local wheat market has held to strong but fairly steady prices throughout the week. It now looks as if the bears will not be able to send values below $1.50, if even to that figure, for No. 1 White shipping. The strength of the market is due largely to local causes, viz., a certainty of a small carryover, a liberal supply of tonnage and present prospects not warranting our expecting a larger aggregate outturn than in 1891, notwithstanding a larger acreage was seeded. Many fields which were intended for grain-harvesting will either not have enough to justify cutting, or else will be cut for hay. Continued dry weather has been against growing crops in many sections of the State. Our advices from the interior report about all the warehouses cleaned out of both wheat and barley. From up north, crop advices continue uniformly favorable.

Cold weather the past few days has been favorable for growing crops, and with a liberal rainfall within a few days, crops, as a rule, will revive, but the chances now appear to be against a rainfall.

Barley shows considerable strength, with a growing impression that although the acreage seeded to the grain is larger than it was in 1891, yet the aggregate outturn will probably be considerably short of that in last year. From the southern part of the State our advices are confirmatory that large areas will be cut for hay; as far as that is concerned, haying is well under way in two or more of the counties. The carryover this year will not be large, while the demand steadily grows.

Oats show more strength, owing to a steadily increasing demand from trainers of speed horses. Oregon and Washington are sending to us heavy supplies, but as the surplus in those two States has fallen quite low, it looks as if still higher prices must rule soon.

The receipts of corn are heavy, but owing to unfavorable crop weather and light available supplies, the market holds strong.

Rye is weak and dull.

The action of the San Francisco Produce Exchange Call Board in sustaining the directors of that institution in confirming trading in futures to seller option and monthly sales, ought to create more interest in trading on call. If we are to have gambling or dealing in futures it is much better for it to be conducted as it is elsewhere, by monthly options. An exporter there can buy cargoes ahead for delivery within a certain month, against sales for shipments made in the demand markets of Europe, while farmers can sell their crop for delivery within a specified month. It looks as if the new rule will work for the best interest of all concerned.

Feedstuff.

Ground feed shows considerable strength with an advance established in bran, middlings and feed meal. Ground or rolled barley is very firm with a free demand ruling. Owing to dry weather it is claimed that the consumption of ground feed this year will be larger than it would have been had the usual spring rains fallen.

The market for new hay which began to show signs of opening low, is now exhibiting more strength, owing to a growing impression that dry weather will shorten natural pasture. With a short pasture season and renewed attention given to dairying, combined with increased requirements by orchardists, the consumption will be so large as to require all that will be cut. The carryover of old will be large.

Dairy Produce.

The market for butter shows a strong tone, which is accepted by dealers as giving evidence of having touched bottom. Receipts are larger, which admits of extensive packing. It is said that one firm in this city is receiving orders for packed butter for future delivery at the rate of 18 to 19 cents per pound, according to size of package and grade of butter. The firm sells on 30, 60 and 90 days' time. The older established houses, so far as we can learn, are not pursuing this line of policy, believing that it destroys the market.

Cheese is weak and in buyer's favor. Receipts are enlarging, causing buyers to hold off for concessions.

Eggs are weak at quotations. Heavy receipts of Eastern are against Californian; fairly cool weather admits of their keeping better. The more experienced dealers think that the market for Californian is about bottom for the season. This opinon is grounded on past experience that it will soon be difficult to make shipments of Eastern to this market with the expectation of their arriving in good condition, consequently fresh-laid Californian will command the market.

Fruit.

Advices to hand report heavy damage by frost to grape vines in the lowlands, chiefly in Napa and Sonoma counties, but tree fruits have so far escaped with only a light loss. It now looks as if the vintage this year will not be more than one-half of what it would have been had there been a favorable season. This loss will probably be made good by better prices.

Some green apples came in the past week. Last year's apples are in light supply. They sell at from $2 to $3.50 a box.

Cherries are coming in more freely, but as yet the quality is poor. Sales are made at from $1 to $1.50 a box. The crop promises to be large. F. S. Jones of Suisun is said to have made the first shipment of cherries to Chicago. The consignment consisted of 11 boxes.

Gooseberries are in slightly better supply.

Strawberries are coming in quite freely. The quality is better than last year's. The demand for local requirements and shipping is sufficiently large to keep prices well up for the better keepers.

Dried fruits are slow, but strong. Apricots are about cleaned up. We doubt if a carload could be picked up in this city.

Raisins are about as heretofore reported.

Mail advices coming to hand from the East report that the peach crop will not only be short in Delaware and New Jersey, but that frost killed the early fruited in the Central States, particularly in Illinois and Indiana.

Vegetables.

Frosts the past week nipped the more tender vegetable plants and vines cultivated on the lowlands, which will necessitate replanting.

Asparagus is weak and heavy, owing to a poor demand. Rhubarb is stronger. String beans are coming in more freely, with Winters a large contributor. The market for green peas is demoralized. Receipts to-day were very large, and with only a few buyers in the market, sales had to be made at low figures. Sweet peas sold at one cent a pound. It is said that canners will not buy heavy this year owing to the market being well supplied with last year's pack.

New onions are coming in. The quality is good for the season of the year. Onions are coming to hand from Nevada and Oregon.

Old potatoes are demoralized. New potatoes are stronger, with 85 and 90 cents obtained for something fancy for shipment to the East. The low prices now current are inducing heavy shipments to distributive points east of the Rocky Mountains.

Live Stock.

Bullocks and mutton sheep are lower, with a weak tone reported at the close. Hogs are fairly steady. Milch cows are about as heretofore reported. Dairy cows sell at from $20 to $35, and family milkers from $35 to $75. The horse market does not show any material change.

Wool.

The market is exhibiting more life, with buyers and sellers meeting in their views. So far, scourers are the largest operators. This is easily accounted for, for manufacturers in buying, preferred scoured to wool in grease, for they know what they are buying; besides, shipping scoured wools, they do not pay freight on grease and dirt. Large wool growers are beginning to learn the advantage of having their wool scoured. A firm in this city reports as follows: "As a rule, shippers have done but little, chiefly because real nice, free, bright, light stock for shipping is hard to find. The San Joaquin wools are, as a rule, poor, so far as received, and the wools now coming from what are termed "foothill" districts have more defects and less staple and character than usual. These drawbacks, as well as the continued dull and low-priced market in the East, prevent shippers from buying liberally, and it is feared they will also prevent much, if any, improvement in present prices. Sales are reported for the past ten days of 300,000 pounds."

Miscellaneous.

Poultry is fairly firm at quotations.

Lima beans are strong and higher. Other kinds are firmer. The demand comes from the East.

Grain bags are weaker, with a slight concession reported in asking prices.

Hops are about as reported in our last week's issue.

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,068,524	10,676,149
Flour, bbls	873,072	931,020
Barley, ctls	786,338	208,535

Live Stock.

BEEF.		MUTTON.	
Stall fed	6 @ —	Wethers	7½@—
Grass fed, extra	6 @ —	Ewes	7 @—
First quality	5½@ —	Do Spring	9½@—
Second quality	5 @ —		
Third quality	4½@ —	HOGS.	
Bulls and thin Cows	2 @ —	Light, ₱ lb, cents	5½@ —
VEAL.		Heavy	4½@ —
Range, heavy	5 @ —	Feeders	3½@ 4
Do light	6½@ —	Stock Hogs	3½@ —
Dairy	7 @ —		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, April 27, 1892

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 40	@	2 80
Pea	2 20	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 15	@	2 35
Fld Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nlies	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	—
Do good to choice	15	@	—
Do Giltedged	—	@	18
Do Creamery rolls	—	@	18½
Do do Giltedge	—	@	19
Eastern	—	@	—
CHEESE.			
Cal. choice mild	10	@	10½
Do fair to good	9	@	10
Do gilt edged	—	@	11½
Young America	—	@	11½
EGGS.			
Cal. ranch, doz	19½	@	—
Do do selected	—	@	21
Do store	16	@	18
Eastern	16	@	18
FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 50	@	28 50
Gr'd Barley	22 00	@	23 50
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@	14 50
Wheat and Oat	10 00	@	13 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	1 00	@	1 03½
Do Choice	1 05	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 35	@	1 40
Yellow, large	1 36½	@	—
Do small	1 38½	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 25	@	—
Gray	1 25	@	—
Rye	1 42½	@	—
Wheat, milling. Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 40	@	—
Sonora	1 45	@	1 57½
HOPS.			
1891 Choice to Ex.	26	@	30
Fair to Good	22	@	—

FLOUR.			
Extra, City Mills	4 80	@	5 00
Do Country Mills	4 65	@	5 00
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	2 00	@	3 00
Fair to Good	1 20	@	—
Cut	75	@	—
New	1 50	@	2 00
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	50	@	70
Do do Oregon	90	@	1 15
Do Humboldt	40	@	75
River Reds	15	@	35
New	50	@	80
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	5 50
Do large	6 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@	9 00
Geese, pair	1 75	@	2 25
Goslings	2 50	@	3 00
Turkeys, Gobl'r.	17	@	19
Turkeys, Hens	19	@	21
Manhattan Egg Food ₱ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'v & F'th'll.	14	@	17
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def	10	@	12
Nevada (S'ate)	15	@	17
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, April 27, 1892.

Limes, Mex	2 50	@	3 50	Cherries, box	1 00	@ 1 25
Do Cal	—	@	—	Beets, sk	—	@ 1 00
Lemons, box	1 00	@	3 00	Carrots, sk	35	@ —
Do Sicily	5 00	@	—	Okra, dry, lb	15	@ —
Oranges, Seedlings				Parsnips, ctl	—	@ 1 25
Redlands	1 75	@	2 25	Peppers, dry, lb	10	@ —
Riverside	1 50	@	1 75	Do green	—	@ —
Los Angeles	1 25	@	1 50	Turnips, ctl	50	@ —
Do Navels—				Cabbage, 100 lbs	40	@ —
Redlands	3 00	@	4 00	Garlic, lb	2	@ 4
Los Angeles	2 50	@	2 75	Squash, Mrft, tn	12 00	@15 00
Riverside	2 50	@	3 00	Do Summer, lb	10	@ 15
Duarte	2 50	@	3 00	Tomatoes, box	2 50	@ —
Oranges fronted and sell at a decline of $1@$1 50 per box on the above quotations.				Asparagus, box	1 00	@ —
				Do choice to ex.	2 00	@ —
				Peas, green, sk	75	@ —
				Do sweet	1½	@ 2½
Strawberries, per chest—				Rhubarb, box	25	@ 1 00
Longworth	7 00	@	12 00	String Beans	8	@ 12½
Sharpness	5 00	@	8 00	Cucumbers, doz	75	@ 1 25
Gooseberries, lb	12	@	15	Mushrooms	10	@ 30

Grain and Wool Bags.

Calcutta, spot	7⅜	@	7½
Do, June-July	7½	@	7⅝
Wool Bags	36	@	38

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Additional Grange News.

Grange Notes.

E. W. Davis, W. M., called at headquarters on the 23d inst. He expressed regrets at not being able to visit Temescal and Eden Granges; is looking well and will continue the State canvass with his usual energy.

EDEN GRANGE. — The State Grange special meeting was well attended at Haywards. The Harvest Feast spread in N. S. G. W. Hall was extra fine. We learn that the arrangements for the day throughout were well planned and carried out. Some nine visiting Patrons from San Jose were in attendance, besides a number from Danville, Temescal and other Granges. Bros. Coulter, Adams and Blackwood were the leading speakers. Master Dennis and other officers of Eden Grange were credited with doing good work.

A GRANGE AND ALLIANCE PICNIC is announced at Creston, San Luis Obispo Co., for April 30th. Past State Lecturer Geo. Steele is expected to attend. About the middle of May it is proposed to hold another joint Grange and Alliance picnic at Arroyo Grande.

O. N. CALDWELL writes from Carpenteria, Santa Barbara Co., April 17th, saying: "Our Grange is alive, but not making much progress. Past Master Overhiser's visit to the Grange meeting on the forenoon of April 9th was profitable to us all. He gave us information of the Trade Card system and other things of importance to Grangers. After lunch, which was greatly enjoyed, a number of outsiders met with us. Bro. Steele read the Declaration of Principles, and gave a talk on Grange subjects. He spoke of the early work of the Grange and the sterling advantages which the Grangers' Bank and Business Association had proved for the welfare of farmers. I believe we have more strength, as well as knowledge, from his visit."

IMPORTANT CIRCULAR.—The Chairman of the State Grange Committee on Woman's Work, Mrs. Hattie S. Jones, has sent the W. M. of each subordinate Grange, for the Committee on Woman's Work in the Grange, an urgent appeal. Mrs. Jones requests notice to be sent her if any Grange fails to receive the circular.

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For Female Voices Only.

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For Children.

THE MERRY COMPANY, OR CADET'S PICNIC: Introducing melodies from The Mikado, The Mascot, Patience, etc., with other popular airs. Price 40 cents. SCHOOL FESTIVAL: A pretty Cantata for school exhibitions. It is instructive and simple; no scenery. Price 25 cents. VOICES OF NATURE: Bright and interesting; one hour in length. Introduces birds, animals, insects, and flowers. Price 40 cents. STRANGE VISITORS, OR A MEETING OF NATIONS, by J. C. Macy. Twenty children, in the costumes of fairies, sing characteristic national songs; a little dialogue. Price 30 cents, or $3.00 per dozen. HOUR IN FAIRYLAND. Five scenes, very simple; time, one hour and a half. (Orchestra parts may be rented, $5.00 per month.) Price 50 cents. DAY IN THE WOODS, by Gabriel. Excellent music, easy for children, but very bright. Some recitations; a charming Cantata. Price 40 cents; $3.00 per dozen. KINGDOM OF MOTHER GOOSE (by Mrs. Bordman, in three acts). Price 25 cents; $2.28 a dozen. A TRIP TO EUROPE (just issued, in three scenes). Price 30 cents; $3.00 per dozen. THE DAIRY MAID'S SUPPER (for church festivals; with music and illustrative pictures). Price 20 cents; $1.80 per dozen. THE RAINBOW FESTIVAL (for a fair or church entertainment, in two scenes; very pretty tableaux). Price 20 cents; $1.80 per dozen.

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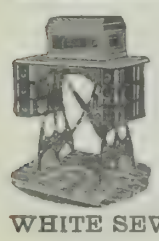
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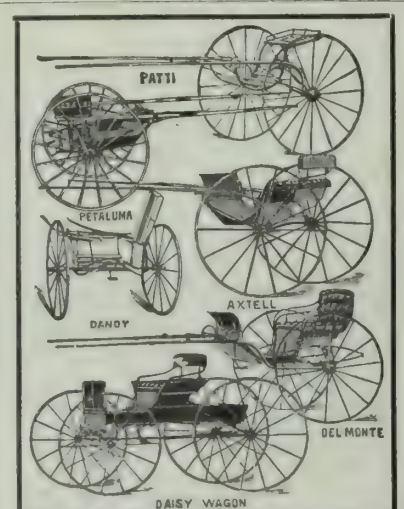
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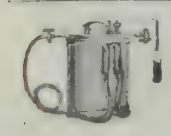
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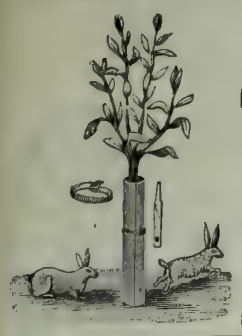
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Protect Your Trees from Sunburn, Borers, Rabbits, Etc., by Using

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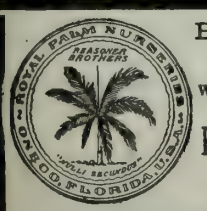
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Habit Distinct—Largest Flowers of any Sort Offered—Self Color—A beautiful blending of Carmine and Scarlet Petals, 1¼ by 1½ inches across, and 3 inches long, tapering at center, and curving gracefully outwards; Spikes very large, flowers not crowded; Foliage large, rich dark green, dark line on edge of leaves; Height, 3½ to 4 feet. Commences to bloom early in Spring and blooms till late December; Vigorous Grower—**A PRINCE AMONG CANNAS, $1.25.**

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THE FRUIT BELT OF NEW MEXICO,

Farmers in this valley raise two or three crops a year of grain and vegetables and five crops a year of hay;

Stock grazes on green alfalfa all winter;

Every farmer in the Pecos Valley is writing to all his friends to come here;

The Pecos Valley is destined to rival the portion of southern California as a fruit-growing country;

It produces nearly every variety of fruit, vegetable and cereal that can be grown anywhere in the United States;

Nearly every species of forest tree can also be grown here under irrigation;

Vegetables and grain can be grown between fruit trees while the latter are growing to the bearing stage;

We have a home market for all our products at good prices;

We have the most delightful and healthful climate in the world;

The thickest ice formed here this winter was less than one inch thick;

The tot l snow fall was less than two inches;

The sun shone on this valley 352 days in 1891;

This climate is a never-failing cure for consumption, bronchitis, asthma, catarrh, rheumatism, etc.

All pulmonary troubles are relieved by a permanent residence here;

There is just freezing enough here in winter to kill out any and all possible impurities in air or water;

Men can work outdoors with comfort every day in the year;

Our Pecos River water is pleasant to the taste and healthful;

It is, moreover, a never-failing cure for dyspepsia and liver troubles, and for all diseases of the bladder and kidneys;

It is also excellent water for stock;

All kinds of stock thrive on it;

Good, pure, cool, well water can be had anywhere in the valley by digging 20 to 40 feet;

And a great many others equally important which we will point out when you come here.

Meanwhile send for handsomely illustrated book, map, etc. Address

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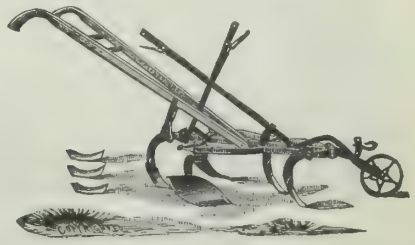
Money IN Farming

Not if the farmer throws it away.

Not if he spends an hour on a row of onions, which the "Planet Jr." Wheel Hoe would do better in six minutes.

Not if he takes half an hour to "set" his old cultivator, when he could change a "Planet Jr." without stopping his horse.

Not if he wastes his seed in sowing thick, and then his time in thinning, when he might save both with the new Hill-Dropping Drill. Money lies in raising double the stuff at half the cost. It can be done.



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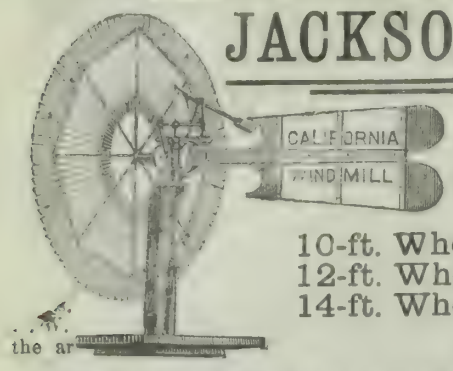
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APIARIAN SUPPLIES. Golden Italian Queens. Tested, $2.00 each; untested, $1.00 each. L Hives, $1.90 each. Root's V groove sections, $5.00 per 1000. Dadant's comb foundation, 58c and 65c a pound. Smokers, $1.00 each. Globe veils, $1.00 each, etc. **WM. STYAN & SON, San Mateo, Cal.**

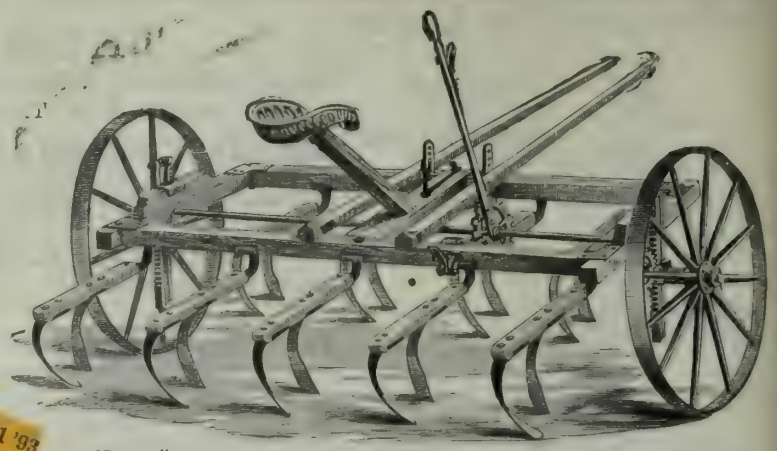
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NOTE THESE PRICES !

10-ft. Wheel, Weight 650 lbs $35.00
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14-ft. Wheel, Weight 930 lbs..... 55.00



No. 3 "Bull Dog" Six-Foot Riding Harrow, uses two horses.

SUPERIOR WINDMILL PUMPS AT EQUALLY LOW PRICES

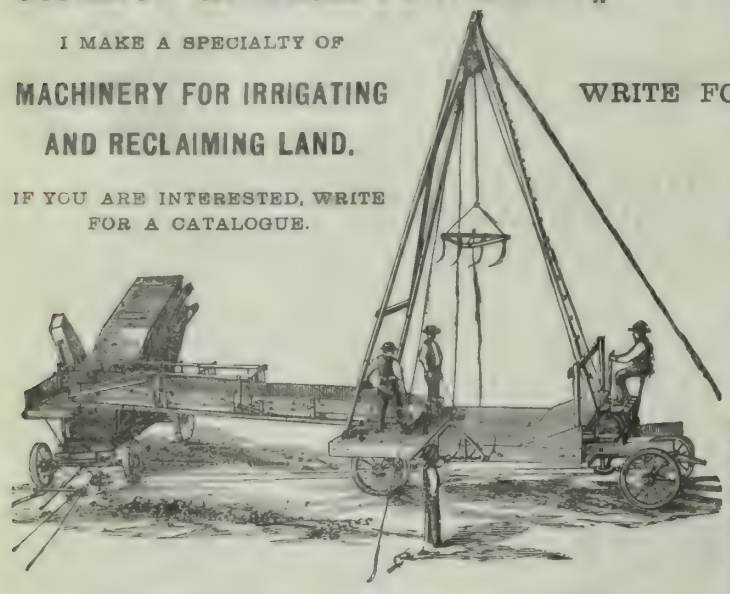
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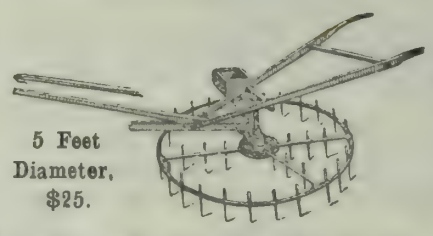
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IF YOU ARE INTERESTED, WRITE FOR A CATALOGUE.

WRITE FOR CIRCULARS. "BULL DOG" RIDING HARROW, $25.



JACKSON'S HARVESTING MACHINERY.



5 Feet Diameter, $25.

THE JACKSON VINEYARD HARROW

Was designed especially for vineyards and orchards, where very thorough and careful work is required. It is made of gas-pipe, bent round like a wheel and made perfectly smooth on the outer rim, and presents no sharp corners to the trees or vines to injure them as it revolves. It is provided with handles, so the operator can hold it to or from the row. Every farmer should have one for his garden, and to level any uneven land or to fill up dead furrows. Every vineyardist or orchard owner should have a sufficient number to go over the whole ground in a short time. When the surface is just in proper condition, one day's work is worth a week's out of season.

JACKSON'S LIGHT-WEIGHT
DERRICK FORK
LIGHTEST, STRONGEST, BEST.



WEIGHS 40 to 45 lbs. OTHER FORKS Weigh 60 to 75 lbs.

MADE IN SIX SIZES

Constructed on common sense scientific principles. *Every ounce of unnecessary weight left out.*

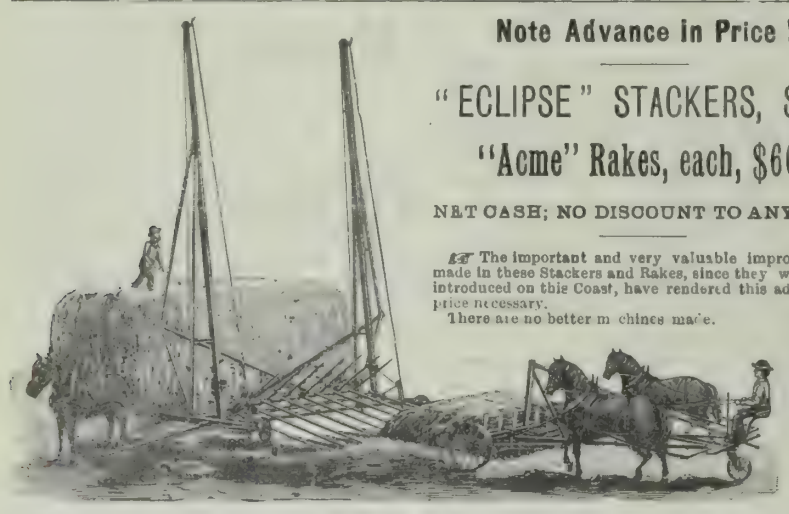
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BYRON JACKSON,
625 Sixth Street, San Francisco.

PRICE, *$25, $30, $35*

BYRON JACKSON,

625-631 Sixth Street.....SAN FRANCISCO, CAL.....149-169 Bluxome Street.



Note Advance in Price !

"ECLIPSE" STACKERS, $125.

"Acme" Rakes, each, $60.

NET CASH; NO DISCOUNT TO ANY ONE.

☞ The important and very valuable improvements made in these Stackers and Rakes, since they were first introduced on this Coast, have rendered this advance in price necessary.

There are no better machines made.

Jackson's Improved "ECLIPSE" Stacker and Loader.

PRICE, $125.

Price of Stacker and Two Rakes, $245. Rakes are $60 Each.

THESE PRICES ARE NET CASH.

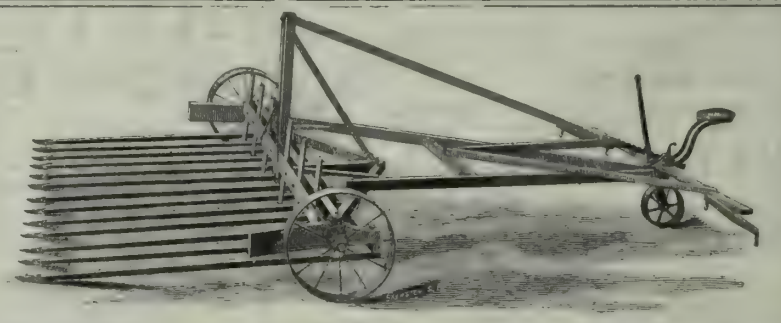
The above is our standard Stacker and is an improvement on all others, as it is lighter, stronger and dumps the hay at any desired height, instead of carrying it all up over itself, without regard to height of stack. This latter point is quite important in stacking in windy weather, as with the "Eclipse" the hay is only raised as high as necessary to dump it on the stack, and it is not scattered by the wind. The uprights of the "Eclipse" are made 28 feet high, as this is as long as they can be shipped, and with them it will stack nearly or quite that height; but the height it may be made to stack is really unlimited, as these uprights may be spliced out as high as desired, and guyed with ropes.

This machine is made under the "Acme" and Oliver patents. It is mounted on wheels and will build a stack 25 feet high.

With the rake the hay is taken from the swath, when cured, just as left by the mower, or from the cock or windrow, if it is desired to rake it before it is cured sufficiently to stack; and when the rake is loaded it is driven to the stacker, the rake teeth entering between the pitcher teeth; the hay is pressed forward against the pitcher head. The horses then back the Rake off, leaving the hay in a compact mass upon the pitcher, and return to the field for another load. As soon as the rake is out of the way the horse attached to the pitcher rope is started, elevating the load the desired height, when the latch rope is pulled and the hay is dropped in the center of the stack, the horse is backed up, the pitcher being brought back to the ground by its own weight, ready for another load.

The "Eclipse" has special advantages for stacking in windy weather, and for loading hay, etc., on wagons. *It dumps the load at any desired height* from 5 to 25 feet, while it is easily moved, quickly set and amply strong.

This principle of *making* hay, by which the expenditure of manual labor is reduced to a minimum, is now almost too well known to need much description, as these machines are now in the hands of all the largest farmers, and have proven entirely successful. The words "*making hay*" are used advisedly, for this Stacker and Rake *do all the work* from the time the mower cuts the hay until it is *in the stack* or *on the wagon*, and no other machines or implements, nor the expenditure of any manual labor, is either *required* or even *desirable*.



Jackson's Improved "ACME" Rake & Buck Combined.

PRICE $60, NET CASH.

Does the work of all other Hay or Horse Rakes, viz., wire rakes, sulky rakes, revolving rakes, buck rakes and "go-devils." It rakes from the swath, and leaves the hay in large bunches at once, **requiring no handwork.** One man and two horses will keep up with two mowers, following the mower as soon as the hay is wilted enough to be raked clean with any rake. It rakes **cleaner.** The hay will cure **quicker** without bleaching by dew or sun. Very large bunches can be made by pushing from two to six rakefuls into one.

If raked and bunched by the improved "Acme" Rake the hay is in very much better shape to reload and deliver on the stacker evenly and level (loading the rakes all they will carry to the stack), and spreads well over the stack, saving labor in stacking, because it has not been tangled, as it is when gathered with a sulky or revolving rake. Bear in mind that windrowing hay with any rake is labor thrown away, and is detrimental to the neat and most economical working of the "Acme Hay Harvesting Machinery.

THE "MONARCH" SWEEP RAKE

—MANUFACTURED BY—

ACME HARVESTER CO., PEORIA, ILL.

"MONARCH," KING OF RAKES, PASSING THROUGH A GATE.



PRICE $60, NET CASH.

The only SWEEP RAKE made that can be transported from farm to farm or one meadow to another, through gates anywhere a farm wagon will go. Write for catalogue, giving prices and full information.

FOR FURTHER INFORMATION ADDRESS

DEERE IMPLEMENT COMPANY,

(SOLE AGENTS FOR CALIFORNIA), 305 MARKET STREET, SAN FRANCISCO, CAL.

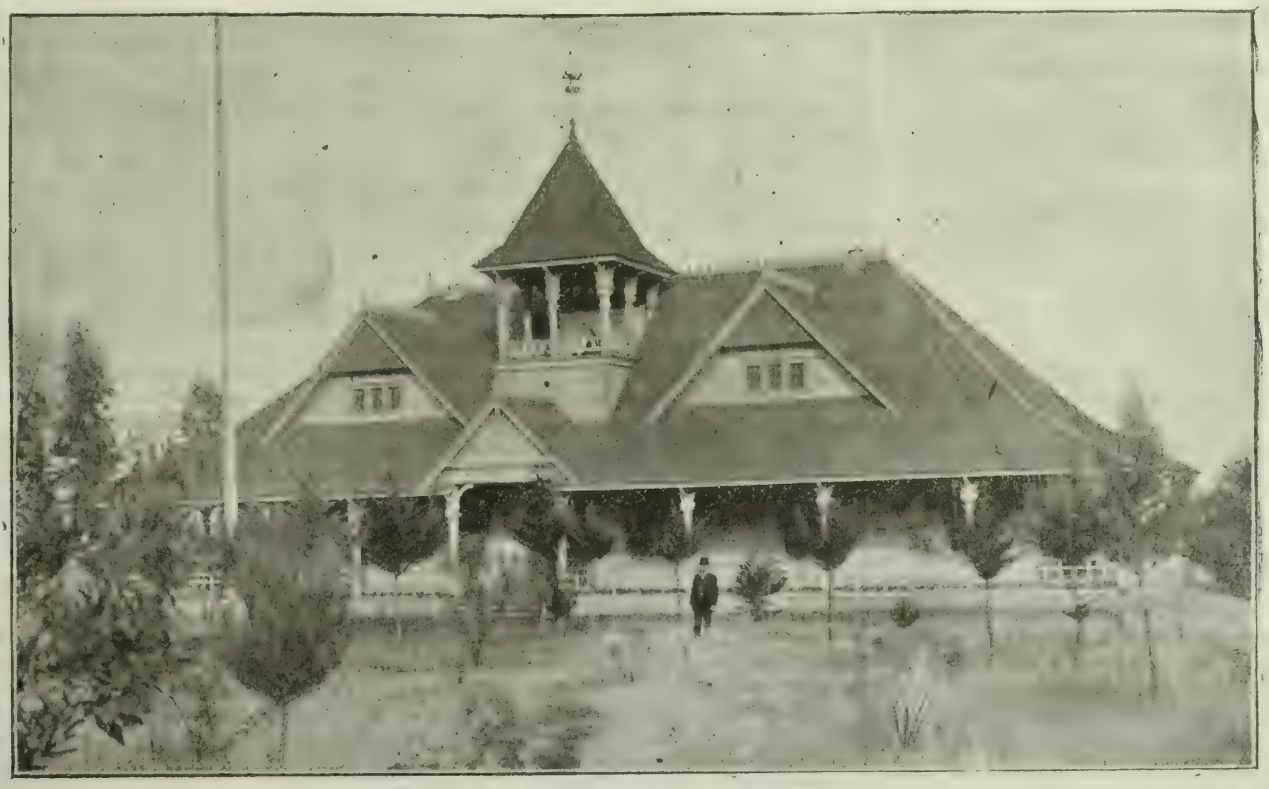
PACIFIC RURAL PRESS

Vol. XLIII. No. 19. SAN FRANCISCO, SATURDAY, MAY 7, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

A Schoolhouse in Contra Costa.

California has an enviable reputation for her public schools, and, if we are not mistaken, the State has a good claim also for excellence in schoolhouses. Certainly there are to be found in all the more progressive and prosperous parts of the State at least, structures for schoolhouses which have required large expenditure of money, which has been most willingly furnished by the tax-payers. So far as we know the California people, we believe that they would rather furnish money for schools than for any other public purpose, and therein they are wise as well as liberal.

Not alone the large towns, surrounded by high priced lands, devote money for fine educational structures, but the smaller and newer places, in the midst of moderate surroundings, build schoolhouses which in some cases may require a greater proportion of the public moneys. This is a good investment in the higher sense, and it is also a good common business proposition, for localities are judged largely by their appreciation of education and the liberal arts, and enterprising home and investment seekers desire to place themselves and their money amid such environment. When we see a good schoolhouse well equipped, we enjoy the reflection that the people have done a good thing.



PUBLIC SCHOOL BUILDING, BRENTWOOD, CONTRA COSTA COUNTY.

The dwellers in Brentwood, Contra Costa county, and its vicinity did well when they erected the handsome schoolhouse which we show in the engraving on this page as an illustration of an excellent moderate-sized school building. One searching for indications of progress in this generation would find it in a comparison of recently built schoolhouses with those of years ago. Cast over against the tasteful building on this page the "old red schoolhouse" of our childhood, or even the "Union school" of the Eastern village of 50 years ago, and no doubt will remain of substantial progress. This the interior of the building will show as well in its neat, comfortable seats and full instructional equipment.

Especially would we note in the Brentwood schoolhouse the excellent adaptation of the structure to a hot interior situation. The broad surrounding veranda affords most grateful relief from the glare of the summer sun, and the high ventilated space between the roof and the ceilings of the school rooms gives good protection from the heat of the sun rays falling upon the roof. Besides these considerations, the building is pretty and the grounds, so far as the photograph shows, declares that the people appreciate the desirability of making the school grounds handsome by plantations of shrubs and trees. The picture may be suggestive to many of our rural readers.

A Loophole in the Oleomargarine Law.—The United States Supreme Court has decided that there was no penalty imposed by the oleomargarine act upon dealers who refused or neglected to keep books and make monthly returns of the receipts for and sales of oleomargarine as required by the regulations issued under the provisions of the act by the Commissioner of Internal Revenue. The Court says a matter cannot be made a legal offense by the regulation of a department. If Congress intended to make liable to a penalty dealers who failed to keep the required books it should have done so by direct enactment.

Viticulture at the World's Fair.—The Viticultural Commission thinks the viticultural interest should have $12,000 of the World's Fair appropriation instead of $6000. The secretary of the viticulturists is now sending out notices to the various County World's Fair Associations, to get their ideas on the subject, and also to have them assist in getting the appropriation increased. The counties are also asked to say how much of their exhibit will be devoted to viticulture. A state convention of wine growers, wine merchants and wine makers has been called for May 16th by Clarence J. Wetmore of the Viticultural Commission, under instructions from the Executive Committee. The viticultural display to be made at the Columbian World's Fair will be the subject for discussion by this convention.

The State Flower Show.—Readers should not forget the show of the State Floral Society, which will open in the Mechanics' Pavilion, in this city, May 11th, and continue during the week. It is believed that it will be the greatest display of flowers and ornamental plants ever held in the State. The exhibits will be named and classified so as to make it as instructive and valuable as possible, as well as beautiful and entertaining. Flower growers and flower lovers should come long distances to see a display of this kind.

Peach Yellows.—The State Board of Horticulture has arranged that the disease affecting the peach trees known as "peach yellows" and "peach rosette" be fully investigated and the results published for the information of the Legislature in framing laws to protect fruit interests.

Plants for the State University.—Hon. S. Merrill Jr., United States Vice-Consul-General at Calcutta, has returned from India on a visit of a few months to California. He brought with him a number of new varieties of fruit and ornamental trees, which he has presented to the State University. Among the fruit trees are the Bombay and Lengra mangoes, the custard and rose apples, the sapota and litchi. The ornamental shrubs are the Amherstia, Mohwa, Bangainvillea, Brownea, camphor tree, purple wreath and flame leaf. The plants were packed in a large Wardian case, and were somewhat too closely confined, for some of them had died and some others were in low condition. The donation will be handled with the greatest care by the agricultural department of the University. Mr. Merrill's thoughtful action in bringing home for public benefit plants of value in far distant lands should prove suggestive to others who go abroad.

California Cereals.—The telegraph brings an outline of a census bulletin on cereals, of which we shall have fuller notice later. It is of interest, however, to note now that the figures of California, for the year ending June, 1, 1890, are given as follows: Wheat, 2,840,807 acres, 40,869,337 bushels; corn, 70,303 acres, 2,381,270 bushels; barley, 813,995 acres, 17,548,386 bushels; rye, 27,413 acres, 243,871 bushels; oats, 57,569 acres, 1,463,068 bushels; buckwheat, 664 acres, 10,388 bushels. The total area developed to cereals was 3,812,751 acres, as compared with 2,561,800 acres at the tenth cersus. There was an increase in acreage in wheat of 1,008,378 acres, and in the yield of 11,851,630 bushels; an increase in barley of 229,645 acres; in oats of 7622 acres, and in rye of 7132 acres. There was a decrease in corn of 1478 acres and buckwheat of 348 acres.

Irrigation in San Joaquin.—The large Woodbridge canal in San Joaquin has been filled for irrigation and water applied to a large area. It is now announced that much more will be done in the same line so as to bring a large portion of the county under ditch. One plan is to take the water from the Mokelumne River near Campo Seco, and irrigate the whole north end of the county. The company has secured many miles of right of way, and promises to commence work at an early day, and rush it to completion. It isbelieved the several plans will be carried out to irrigate from both the Stanislaus and Mokelumne rivers, thus covering the county.

The November Convention in San Jose.—The State Board of Horticulture has decided to hold the sixteenth State Fruit-growers' Convention in San Jose from November 22d to 25th. A. Block of Santa Clara was appointed director of the convention with J. A. Clayton, Professor C. H. Allen and A. K. Whitton of San Jose as assistant directors.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 7, 1892.

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[NEW THIS ISSUE.]

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Agricultural Implements—Allison, Neff & Co.
Agricultural Implements—Wm. Deering & Co.
Agricultural Implements—Frank Brothers.
Wagons—Baker & Hamilton.
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Buggies, Harness, Etc.—California Wagon and Carriage Co.
Coal, Coke and Pig Iron—J. C. Wilson & Co.
Baking Powder—Royal Baking Powder Co.
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Agricultural Machinery—G. G. Wickson & Co.
Baling Wire—Washburn & Moen Manufacturing Co.
Holstein Friesian Bull—T. Liliencrantz, Aptos.

☞ *See Advertising Columns.*

The Week.

Copious rains have followed the frosts, and rejoicing over improved grain and pasture prospects has replaced the grieving over reduced fruit crops. Happy is the man who has the rejoicing in one hand and the grieving in the other, for he can average up the emotions and herein the old argument against eggs-in-one-basket farming. If the man has his fruit on the hillside and his grain in the valley, he would have escaped the frost and been benefited by the rain. Again, if one man owned the fruit on the hills, and another the grain in the valley, both would now rejoice. And if this is the case, what becomes of our argument? It looks very much as though the deduction would be that we ought to plant our fruit out of the frost and our grain in the wet. And we are not sure but that is the true doctrine after all. Read the full weather and crop report which we print on a following page, by courtesy of the officials named, and see what you think of it.

Fruit Outlook.

The forecast of the fruit crop given in last week's RURAL seems to cover the case, so far as developed up to this time. There has been, in some parts, injury to tree plants where frost effects are not usually felt. The general outlook is that fruit supplies of nearly all kinds will be moderate, and no surplus likely which can depress values; in fact, the outlook for prices, counting an ordinary demand, must be considered good.

At the meeting of the State Horticultural Society last Friday, a few members gave informally their impression of fruit crops in the regions where they reside, as follows:

Alameda county—Haywards region: Cherries almost a failure; plums light; French prunes less than one-quarter crop; pears uneven; apricots good. Niles region: Egg plums injured by frost; peaches light; apricots good.

Solano county—Putah creek region: Apricots uneven, best on young trees, poor on old; cherries very light; peaches good; pears light. Vaca Valley region: Apricots not over one-quarter of a crop; pears light; cherries scarce; French prunes and all plums light.

Sutter county—Yuba City region: Peaches full crop; apricots half a crop; prunes nearly a failure, and pears light.

Contra Costa county—Martinez region: Apricots and pears light; cherries very uneven; in some parts of the county, almonds hurt by frost.

Santa Clara county—San Jose region: On low lands, apricots, peaches and prunes badly hurt by frost. On higher lands, prunes uneven. Mountain View region: Pears fine; prunes good; also apricots, except Moorpark; cherries half a crop.

San Joaquin county—Stockton region: Grapes lost one-quarter of crop by frost.

Prize Letters for 1892.

The signal success of our effort to draw out valuable and practical information by the offer of prizes for letters upon hay-making, leads us to push on with a similar method to draw out full and satisfactory experimental knowledge upon other important branches of California agriculture. The technical, or as they may be called the practical, departments of the RURAL have always been its chief value. Its pages have been filled to a greater degree than most other journals of its class, with articles written by men and women who have actually done the things of which they write. We conceive that in its accounts of successful practice the RURAL must be a *journal by the people and for the people.* Of course, upon this framework of solid practice, our scientific investigators throw the light of their researches, and around it other writers weave a decorative environment of sentiment and fancy, that a medium of instruction shall be elevating and entertaining, as well as industrially valuable. Such has been the RURAL during the 21 years of its life, and we propose that its future shall be a reflection of its past, but more abundant. If our readers will cooperate with us in the prize-letter plan, the RURAL for the balance of this year shall not only have a higher practical value than a single year's issues have ever had, but possibly the year 1892 will be worth more to technical readers than all earlier years combined.

We propose a Prize-Letter Contest for each month of the present year. There will be three prizes for each subject, viz.: First prize, $10; second prize, $5; third prize, one year's subscription to RURAL PRESS. The outline of subjects (which may be more fully defined in each case hereafter) will be as follows:

JUNE.—SMALL FRUIT-GROWING: Counting as "small fruits" everything which is commonly understood by the terms "berries" and "currants;" which are the best varieties, how to plant, cultivate, irrigate, and harvest them to secure the best results.

JULY.—FRUIT PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST.—FRUIT DRYING AND RAISIN CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine evaporating each and every kind of fruit; packing and marketing of products.

SEPTEMBER.—DAIRYING: The best practice in every productive step from the pasture and the cow, through the feed barn and silo into the dairy house or creamery and on to the market. A full discussion of results with improved practices and implements.

OCTOBER.—GRAIN-GROWING: The treatment of grain lands, the best varieties in different localities, and the best time for sowing; the most satisfactory arrangements for harvesting cheaply. All about steam in California agriculture, from the steam plow to the steam wagon which hauls the crop to the landing.

NOVEMBER.—ORCHARD AND VINEYARD: Preparation of land for laying off and planting; what varieties yield best results; pruning of trees and vines; winter treatment of insect pests.

DECEMBER.—POULTRY FARMING: The best breeds for practical purposes and how best to feed and house them; the prevention and cure of parasites and diseases; a broadside of useful experience with small-feathered stock, which yields millions, but is yet imperfectly understood.

Letters in competition for the prizes in each of the above subjects must be mailed to us on or before the *first day of the month to which the subject is apportioned.* The writer may make his letter as long as he or she pleases; the competition is open to all. The reader of a good letter does not care whether the writer is a regular subscriber or not, nor do we. We want the facts and the successful experience from all trustworthy sources. We will therefore thank any subscriber who may call the attention of anyone ,qualified to write a valuable letter, to our prize offer.

This is the outline of our plan for drawing out the facts which will make the RURAL more valuable than ever to the practical farmers of the Pacific Coast. We are willing to sink or swim on the issue of making a journal of direct technical and industrial importance to every producer in the agricultural lines. In this age of progress in a new country whose resources are being rapidly developed, the producer must have the best and fullest knowledge of what all other producers are doing to command success. This is just what will occupy our columns in the future, and this is the information which men who wish to succeed cannot afford to neglect.

Now let all who know how to grow small fruits of any kind, by any method practicable on this coast, go to work on the letters, which must be mailed to us not later than Wednesday, June 1.

The Dairy Industry.

The dairy industry in this State is making such rapid progress as to encourage the belief that before another half decade passes, it will not only supply the consumptive demand, but will give a large surplus for shipping out of the State. In 1888 the receipts of butter at this port aggregated 8,376,700 lbs of Californian and 3,597,500 lbs of Eastern. Last year the receipts aggregated 10,484,900 lbs of California and 1,580,900 lbs of Eastern. This shows a most remarkable increase in the receipt of California butter within the short space of three years. Not only do the receipts of butter show a large increase, but the receipts of cheese have kept fully abreast. In 1888, receipts of California cheese at this port aggregated 3,321,700 lbs and last year the aggregate was 4,427,800 lbs. When it is considered that San Francisco in point of population is only about one-fifth of that of the entire State, then the rapid strides made by the dairy industry is readily seen.

Aside from these comparisons of the receipts of butter and cheese in this city, there is another and probably more correct means of estimating the growth of dairying: by the increase in the number of milch cows in the State. According to county assessor's returns there were in California on March 1, 1889, 258,915 milch cows, and in 1891, 290,521; an increase in two years of 31,606. It is claimed by those in position to know that the number now in the State is well over the 300,000 mark. This increase has been made in the face of strong competition with Eastern creamery butter, high local transportation charges, higher wages paid to help and higher cost of land and feed when artificial feed is used.

With a more general introduction of creameries, cooperative and private, in the Central and more Eastern States, there grew up stronger competition; and as the product increased, new outlets were sought, when this coast, particularly this State, became a dumping-ground for a large part of the surplus. The butter being of superior quality and uniform grade, our dairymen were placed at a disadvantage, but this was soon overcome by their supplanting the old methods of making butter with the new, and to-day creameries in this State are largely in the ascendancy, with the number being steadily increased. So far as the writer can learn, every dairy having over 40 milch cows, and in many cases a much less number, has a creamery plant. Many dairymen individually own and milk several hundred cows. Within the past year there have been several creameries built, the owners of which buy the milk or cream from adjoining farmers. According to G. G. Wickson, there are in Humboldt county five of such creameries, one each in the counties of Sonoma, Monterey and Inyo, one in Marin county with another being built, while in Los Angeles there are several. It is claimed that several more will be built before the end of the year in other parts of the State.

In the States of Nevada and Oregon the number of creameries is increasing at a rapid rate, and with the best financial results to the owners of those which are properly managed. The surplus of the output of the creameries in Nevada will seek this State for a market.

The butter market in this State holds out the promise of ruling fairly strong throughout the year. So far in this year, prices have not sunk to much lower figures than were touched at one time in June of 1891, and it now looks as if they will not go any lower than the prices now current, but, on the contrary, advance, and this, too, in the face of a much larger production in the State. In the first five months of last year the receipts of creamery butter from the Central States were very large, but, notwithstanding, the market price for California butter kept well up until the month of June, and even in that month giltedged brought 21½ cents per pound. The last half of 1891 the receipts of Eastern creamery butter were light, not even higher prices here offering inducements to shippers, owing to relatively better prices ruling at the Atlantic seaports. The high prices at the East were due to a lessened manufacture of butterine, owing to the high cost of the material used in its production. The same conditions obtain at the East still, and consequently it is only reasonable to conclude that our markets will have to rely on California butter to meet their requirements, which ought to cause a strong and higher price to rule when country supplies begin to lessen. Packing, as has heretofore been reported in the commercial department of this paper, is well under way, not only on the large dairies, but also in this city. Putting butter in rolls in brine continues the favored mode of packing, for it gives the best results to packers and more satisfaction to consumers.

The State Press.

Petaluma *Courier*: "It has come to be a proverb that whom the Southern Pacific protects the law cannot punish."

Escondido *Advocate*: "No man should be chosen to represent us in the next session of the legislature, who is not known to be a stanch friend of the Wright Irrigation Act. The irrigation question is, and should be made, paramount to all others in the selection of an Assemblyman."

Stockton *Golden State*: "We would warn our readers to keep a close watch upon all enterprises of a private nature that require backing up with public money. Experience should teach every citizen that private enterprise corporations never let loose when they once get a comfortable hold on their victims."

Santa Maria *Graphic*: "While we are sending ship loads of bread to the suffering Russians, thousands of our own people are actually in need in all the large centers of population. America is prone to helping starving foreigners and she is repaid for her kindness and liberality by thousands of European paupers flooding her country."

Healdsburg *Enterprise*: "A book that holds up as a hero a man of bad heart or desperado and which throws a halo of romance around low life or rude character is dangerous to most boys and girls. It tends to give them false ideals, depraved tastes, and a disinclination for good literature. On the other hand, a novel which pictures a noble character or gives a sketch of sweet, pure life, has an elevating influence of the most positive character."

The *Pajaronian*: "The people are settling this Chinese question in their own way—just as they have settled all serious questions since the commencement of time. Gradually, Chinese labor has become the most expensive in the market, and with the growing demand for laborers it is not the easiest to obtain. White labor is supplanting the Chinaman right along, and it will not be long, exclusion act or no exclusion act, when the Mongolian will not be 'in it' in California."

Oroville *Register*: "Money earned by selling liquor to a child ought to sear and burn the hand that receives it like the heated iron that in olden times was used to brand the word thief on the criminal who deserved the name. We would that it might prove to him such a curse that like the terrible disease cancer it might, inch by inch, day by day, eat and sap the life blood from his veins, cause his flesh to rot and his bones to decay. Better scatter poison among children that would cause speedy and violent death than to furnish boys 10 or 12 years of age liquor that sooner or later will send them to a drunkard's grave."

San Diego *Union*: "The railroad, the steamship, the canal—these have multiplied and improved phenomenally, but the wagon road that is just as necessarily the feeder of the railroad and steamship line as the springs and creeks are of the rivers, remains as it was a hundred years ago. Ex-Senator Ingalls, Clem Studebaker, and others equally distinguished, have recently contributed to the public discussion on this subject. There is a growing opinion that the Government should take the matter up and either act itself or advise the several States. Ex-Senator Ingalls urges that convicts in the several States' prisons be employed in making roads and in preparing material for them. Clem Studebaker, the famous wagon manufacturer, advises the employment by the General Government of large numbers of common laborers—to enlist them for a term of years, furnishing clothing, rations and pay, as is now done for the soldiers. 'There is a numerous class in this country whose enlistment as road makers, under an arrangement that would insure them a frugal living, clothing, shelter and care when sick, would be a boon indeed.' He would have the government control our wagon road systen for two reasons: To give to the country, roads scientifically and durably built, which would be of incalculable value to the whole country in improving and cheapening communication between the farm and the market; and to furnish a safety valve to the labor market, giving ready employment to the men most in need of help the moment they are thrown out of work—the unskilled classes."

Letter from Mr. Pool.

FRESNO CITY, CAL., April 27, 1892.

TO THE EDITOR:—You say in your criticisms that I ought to understand that the canal company is a private organization. I do understand that, and have always understood that way; and another thing, I understand that Lake Nicaragua, which will be part of the canal when finished, is also leased to a private company to navigate exclusively for 99 years. Now, sir, who dares to navigate Lake Nicaragua without paying for the right to do so, and at the price set by this private corporation?

You say the canal should be built as cheaply as possible, and, when built, it shall be subject to control by Americans, in American interest. We don't deny but what it should be controlled in American interest, but we do deny that any private corporation ever ran anything in the interest of the people.

Why did that convention held in San Francisco, after getting up the memorial to Congress, strike out the words "build and forever control," if there was not a negro in the corner? I tell you, Mr. Editor, the people have had enough of all such work as this scheme. In building the Pacific railroad, they furnished the money to build the roads, they granted millions of acres of our domain, that should be owned by the poor of our land for homes, and now these same roads, instead of being run in the interest of the people, are run in the interest of the railroad magnates, and are nothing but grinding monopolies to the people; and this Nicaragua canal scheme, controlled by a private company aided by the Government, would only grind out a few more millionaires, as has already been said by the State President of the F. A. & I. U.

You say we are demanding something that cannot be done at this time; that the Government cannot take up the project at this time and make it its own, because there is at present no sentiment in the country that would support such a violent change in our national policy. My friend, read the Ocala demands of the F. A. & I. U., read the platform of the St. Louis Conference, read the resolutions passed by all the Sub Alliances of the country. Listen to the voices of the producing millions, and you will find out that the sentiment is strongly in favor of the Government owning and controlling all the means of transportation and communication, which they should do the same as they do our postal system, and all of these things should be run at actual cost, and not be used in the interest of a favored class. That is the sentiment of the people to-day.

If we can modify that bill as Bro. Cannon suggested, by the Government building and forever controlling the canal, I and my friends are in favor of it, but, when they strike out those two words, we oppose the Nicaragua canal. I am surprised to see a paper like the old RURAL PRESS, which has been a weekly visitor to my house for ten years, take the stand it does in favor of that company. WM. POOL.

If Mr. Pool really believes that the RURAL PRESS "stands in favor of the canal company" he has sadly misjudged its motives. We realize how great a benefit the Nicaragua canal would be and we feel that no chance to get it should be lost. We do not believe that it is possible at this time for the Government actually to own it; and we would rather have it under private ownership than not at all. We believe that the only way to get the canal and to keep it under American authority is to assist the company to build it *under conditions that will secure Governmental control;* and that to attempt more than this at the present time is to attempt the impracticable, and so, to throw away a chance upon which the future fortunes of California depend. On this subject of universal interest the people of California should, as Mr. Doyle said in his letter last week, stand as a unit. And they should stand not for impracticabilities, but for what they can reasonably hope to secure. Whoever advises the farmers of California to take a position that will defeat the Nicaragua canal project or throw its ownership and control into foreign hands does them and the State a very grievous injury. We do not question Mr. Pool's motives. We know them to be of the best, but we believe that he is very seriously mistaken.

Parcel Postage.

MURPHYS, CAL., April 30, 1892.

TO THE EDITOR.—In a recent number of the RURAL, I advocated the reduction of postage on merchandise and claimed that if granted, the measure would prove of greater value to the people as a whole, and the Agricultural classes in particular, than the free rural delivery now before the people. In reply, our worthy Post Master General has forwarded to me a copy of his annual report, which, on examination, proves very interesting reading, not so much for what it shows has been accomplished, but on account of the numerous suggestions of desired improvement in the postal system which it is seemingly impossible to secure on account of the apathy of those who should champion the cause, or of being effectually curbed by the monopoly interests that would suffer if the dear people were given their rights. That the Pacific Coast is not forgotten, is shown by Mr. Wanamaker's suggestion that a Dead Letter Office be established at San Francisco. That California deserves recognition is shown by the fact that she leads all the Pacific States in the extent of her postal receipts by almost one milllion dollars, and shows the gratifying increase of $141,803 31 in the past year, and further shows the only decrease in postal expenses of any section of the United States. The free rural delivery has proven a profitable venture by confining it to the densely populated sections, except in California, here Roseville was selected; a town sitting at the edge of the valley and below the fruit belt, and having no rural population of any extent in the immediate neighborhood. Had New Castle or Auburn been selected, with the close settlement of fruit growers surrounding them, or Fresno with its colonies of a family on every 20 acres, the result in this State would have been very different. I am not opposed to rural delivery, but from a personal knowledge of the plains and mountains, I know that it will not be possible, if desirable to extend the system to remote sections, that it will be a boon to the sections favored, goes without saying. The P. M. Gen'l has shown his nerve in the vigorous manner in which he has suppressed the lottery frauds, at a loss of over $1,000,000 to the Department, and a gain to the people of many times that amount. That the letter postage can and will be reduced to one cent is now shown, as the figures at hand prove that it can be done at a profit. The Postal Bank and Telegraph Systems meet with the opposition of the Telegraph and Banking Association, and the P. M. Gen'l must be upheld by the people if they are ever to be placed at the service of the people.

Now I come to my hobby, the reduction of postage on merchandise to 8 cents a pound. The report shows that the present rate of 16 cents a pound does not pay because the express companies take all the short hauls at a lower rate, and leave the Government the long hauls. Mr. Wanamaker very aptly hits it when he states "There are but four strong objections to the parcel post, and they are the four great express companies." The whole question settles down to this: Who is the greater, the people or the express companies? That the system will be self-supporting when properly enforced is shown, and if it should not be, cannot our Government afford to serve the people at a slight loss? No other branch of the Government service reaches out to every citizen and is so generally useful or so fully appreciated. To ask that in every instance every new departure must first be shown to be self-supporting is not creditable to our country. We might far more consistently ask that our Navy be made self-supporting by carrying merchandise, and our regular army be cured of the vice of idleness and made self-supporting by producing agricultural products.

E. H. SCHAEFFLE.

The Nicaragua Canal.

CARMEL VALLEY, April 30th 1892.

TO THE EDITOR:—I've handled cattle some for 27 years, and I believe in taking the bull by the horns. I don't care if the bull is John Bull, or even a Papal Bull, the same rule applies.

The U. S. Government, politicians tell us, *cannot* confer a benefit like the Nicaragua Canal on their own citizens and humanity at large—because why? Because a certain Clayton-Bulwer treaty, made 42 years ago, forbids us from exercising any sovereign rights in Central America. Because, also, a private company now has a charter to make said canal.

Now, Mr. Ed., what would a business man do under these circumstances? If I were that business man I should make John Bull a call. "Look here, John, you have some little common sense and sometimes make use of it. To make things mutually pleasant 42 years ago you and I agreed to follow a certain line of conduct. It is now for the benefit of all parties concerned that a different course should be followed. I would like, for the sake of mutual good fellowship, that you should consent to revise that Clayton-Bulwer arrangement which suited us both in 1850, and no longer suits us in 1892."

What do you think John Bull would say? He might toss his head and paw the ground, and grumble and bellow a bit just for fuss. It's a way most bulls have; but just show him how the canal opens a door for fat pasturage, for John Bull among others, and my word for it, he'll act like a very sensible Bull. Give him a fair deal and he'll be as ready to come to amicable terms as his sturdy offspring, Jonathan.

Nor need the second "because" be an obstacle. The company holding the franchise, hold it for one reason and one only—to make money out of it.

Uncle Sam has money enough to make it worth their while to sell. He is proposing to fool away ten times the cost of the canal in ironclads, etc., unproductive and destructive unnecessaries, surely he can furnish funds for something so necessary and so reproductive as the interoceanic canal. The canal would even diminish the assumed need for these ships of war, as our North Atlantic and North Pacific Coasts would not then be divided by the whole distance of circumnavigating South America.

I never saw the Clayton-Bulwer treaty, and don't know for how long its stipulations were made binding, but all such agreements are surely open to revision; and it is to meet just such cases as this that the International Arbitration and Peace Federation urges the establishment of an International Supreme Court to decide differences on a basis of equity and righteousness—righteousness which exalteth a nation as war bestializes it. Surely a better plan than the old-fashioned blunder-headed nonsense of going to war to settle every trifling dispute.

Perhaps my ideas smack too strongly of the farm; but would to God there were a little more fresh air perpetually blowing over the stinking pool of politics. It's getting to be a question of whether the saloon or the farm is to run this Government, and if there is a short cut to hell, the saloon door is the portal. EDW. BERWICK.

Asphaltum for that Leaky Cistern.

BAKERSFIELD, April 23, 1892.

TO THE EDITOR: If Mr. S. H. Herring of Los Gatos, who writes on March 22d for a remedy for his "leaky cistern," will apply a coat of pure asphalt, as manufactured by the Standard Asphalt Co. of Bakersfield, Cal., to the wall of his cistern it will make it waterproof by filling the pores of cement and cracks, if any. It should be heated to about 300°—very liquid, as it chills and hardens quickly when applied to cold surfaces. The walls should be dry. Build a fire in the cistern if necessary to dry them. Numerous reservoirs in Southern California are lined with asphalt instead of cement, and are a success. Apply the asphalt to the cistern wall or floor with a whitewash brush or small broom. The asphalt leaves the water perfectly sweet. LOUIS BLANKENHORN.

SALE OF HAGGIN'S HORSES.—The following concerning the Haggin sale of May 10th and 11th will be read with interest: The draft horses raised upon the Haggin Ranchos have acquired such a reputation as hardy, true pullers, that the various corporations, fire department and large teaming firms rely principally upon this annual sale to replenish their plant. The harness horses are yearly becoming more popular, their uniformity is increasing and a poor animal is an exception. Their desirability for general utility and road work is more apparent each year. To this is added the probability of getting an animal of exceptional speed. During the year several trotters and pacers sold at late sales have made records, and a number more are eligible. The present offerings are mostly sired by standard animals and the dams generally of trotting descent. The sale will be as usual by Killip & Co., the great live stock auctioneers.

MORE RESERVOIRS IN SAN BERNARDINO.—It is announced that the Arrowhead Reservoir Company will build three immense dams north of San Bernardino in the mountains, thus forming a great reservoir system to place water on thousands of acres of barren land. They will invest $1,000,000 in the enterprise and have a large force of men employed on the work.

PACIFIC RURAL PRESS.—This San Francisco weekly has just celebrated its twenty-first year. It has cause to be proud, for in our estimation it is one of the best "all-round" weeklies in the world. Every California industry is fostered in its pages,—and agriculture, horticulture and popular botany especially so.—Meehan's Monthly.

From such a source this is indeed high praise.

Weather and Crop Bulletin for Week Ending April 30th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Franklin, Observer at Los Angeles:

Lassen County.—Susanville—The week has been very windy, with cold and frost three times, killing about half of the cherry crop. Grain and alfalfa are looking well.

Humboldt County.—Blocksburg—Cold rains are delaying all farm work. What is now needed is sunshine and warmth and less rain. Farmers are feeling uneasy about getting potatoes in the ground. *Eureka*—The week has been cold and stormy, with frost and ice nearly every night. The fruit crop has been damaged to some extent.

Tehama County.—Red Bluff—The weather is unusually cool for this time of the year. The mean temperature has been from 2 to 13 degrees below the normal for the past 14 days, with light frosts on the 17th and 26th, the latter severe enough to kill all young tomato vines just set out. Fruit and grapes have not been injured. The rainfall has not been heavy, and we are still about three inches short of the usual amount.

Shasta County.—Anderson—The weather has been cold and frosty, but has not apparently injured the fruit prospects. Grapes have suffered to some extent.

Butte County.—Chico—Grain crop continues to do well. Warmer weather is needed to force the growth.

Glenn County.—Willows—Wheat slightly injured by frost. All crops looking well.

Colusa County.—Colusa—Frost on Monday night, 25th, injured the grape crop considerably, also vegetables. Wheat and barley doing well. The outlook is all that could be desired.

Sutter County.—West Butte—The frost of the 26th killed potatoes, tomatoes, beans and melons on low land. *Yuba City*—Variable weather with frosts. Grain is growing well. Some has lodged on account of recent rains. Fruit is developing fast and is uninjured, with the exception of grapes, which were nipped by the frost.

Yuba County.—Wheatland—Grain is making an excellent growth, and looks promising. Apricots, peaches and cherries will not be over half a crop.

Yolo County.—Rumsey—Light frost, damaging to vines and vegetables in some places in this (Capay) valley. Crops are looking well. *Davisville*—Gentle showers will do the crops considerable good. *Winters*—The recent heavy frosts are said to have injured both trees and vines. *Blacks*—The light showers will result in much good. *Madison*—The light showers will help all crops. *Knights Landing*—The farmers say that a good rainfall is needed to insure good crops. The cold weather has been detrimental to the grain. *Woodland*—The light showers will do fruit and grain much good.

Nevada County.—Nevada City—There have been several frosts during the week, but no material damage done. The rains have been very beneficial to all growing crops, and large hay yield insured. More sunshine and warmer weather is needed.

Placer County.—Newcastle—Weather rather cool. Hay and fruit crop looking well.

Sacramento County.—Mayhew—Frosts on 25th and 27th. Damage to vines from 10 to 20 per cent on some varieties only; mostly Muscats and Mission. *Sacramento*—Hop report by C. Wagner: Hops are retarded by reason of the cold weather, and prospects for early harvest are not so favorable as a fortnight ago, considering the cold weather as retarding the growth; prospects are, however, as favorable for a large yield as usual.

Solano County.—Vacaville—The peach crop continues looking well, and there is every prospect of a fine yield. Other fruit crops will average light. The frosts on Sunday and Monday nights were damaging to grapes in the low valley, but did not affect the higher ground. Warm weather needed.

Napa County.—Calistoga—The hillside vineyards generally escaped the frosts. Most of the lowland vineyards badly damaged. *Napa City*—Mr. Evans, secretary Napa Fruit Growers' Association, says there will be a light crop of cherries this year, both in this and Vaca valleys. A. L. Bryan's orchard is the only one in this vicinity which promises a full yield. Browns valley reports extra large crops both of grain and fruit.

El Dorado County.—Coloma—Cold rains have not been very beneficial to the fruit crop. No damages noticed in this vicinity, with the exception of garden truck, such as beans and tomatoes. The fruit outlook is very good.

Sonoma County.—Sonoma—Light frosts, but nothing damaged by it as far as heard from. Warm weather required. Rainfall .60 of an inch, and 20.79 inches for the season. *Santa Rosa*—Changeable weather, with light frosts, which damaged peaches and pears slightly. Total rainfall for the season, 24.91 inches.

Forestville—With several exceptions, the cherry crop will equal the average; French prunes are light; peaches will require thinning; berries look promising. Warm weather is needed to warm up the corn land. *Petaluma*—High winds and light frost slightly damaged the grain hay and grain crop. *Healdsburg*—Cool weather has had a retarding effect on all crops; the light frosts have done no damage, apparently. The grape vines look thrifty with abundant fruit.

San Joaquin County—*Lodi*—Highest and lowest temperature, 74 and 35; frost on the 26th injured grapes to some extent, some places being affected more than others; beans and tomatoes nipped; fruit not hurt. Wheat is doing fairly well, but the crop will not be an average one; warmer weather is needed. *Stockton*—The weather has been cool; more wind than usual; the light frosts have done considerable damage to early grapes, but late varieties will not suffer at all.

Contra Costa County.—Cornwall—The continued cool weather favors the grain; feed is drying up.

Alameda County.—Livermore—Average temperature exceptionally low; frost every night except one; grapes and other fruit on heavy soil are much damaged; grain doing fairly well; berries are ripening. *Niles*—All barley sown immediately after plowing in the spring is very foul with weeds; high winds injurious to all grain crops, which need more rain very soon. Black cherries dropping badly.

Santa Clara County.—Gilroy—All crops looking well; light frosts slightly injured fruit and grapes. *Santa Clara*—The cold weather has not tended toward the development of the fruit crop, the frost having done considerable damage to some varieties.

Monterey County.—Salinas—Frost unusually severe; fears of the barley crop being injured. All crops here are in splendid condition in other respects. *Jolon*—Cool and strong westerly winds and frost the past week. Some fields of wheat are past help. Much of the wheat in this valley would make a fair crop with a good rain; without rain the crop will be a light one. *San Ardo*—High winds and frosts injurious to the crop prospects. All in the southern part of the county are sadly in need of rain, principally in Salinas valley; north end of county crops are fairly good. The fruit outlook is for an average yield.

San Luis Obispo County.—San Luis Obispo—High trade winds are very drying on land prepared for beans, corn, etc. Nights quite cold. We need warm days with dewy nights.

Stanislaus County.—Turlock—The cool nights with dew have helped the crops, but the drying winds have about offset the dews, and all kinds of grain need rain badly. On the west side of the San Joaquin crops are about gone. *Modesto*—A few light showers of rain would be of great benefit to grain; with the continued cool weather to retain the moisture our prospects would be great. The prospects for fruits are good and our vineyards promise a large yield.

Fresno County.—Selma—North winds have prevailed, drying the ground where not irrigated. Rain is needed for grain, although in this vicinity it generally looks well.

Tulare County.—Visalia—The north wind still continues, all grain on the plains injured. Some will be cut for hay only. Near this place all crops are good.

Amador County.—Oleta—Drying northerly and westerly winds have dried winter sown grain somewhat but the rains of the 24th evened up matters. Grapes much injured by the frost, peach trees injured by the curl leaf and some of the fruit is falling; pear trees and fruit doing well. *Bridgeport*—Another cold wave has passed over this section, finishing the apple crop entirely so far as heard from. *Shenandoah Valley*—Light frosts but doing no damage.

add Humboldt Co.

Upper Mattole—Weather still cool and is good for all kinds of crops grown here, especially fruit, of which the prospects are good. *Hyderville*—Frost on 23d but no damage done. Crops of all kind never looked better; warm weather is the most needed. *Phillipsville*—Showery weather nearly all the week but generally warm; two light frosts at elevation above 800 feet; fogs protect the lower land from frosts.

J. A. BARWICK.

SOUTHERN CALIFORNIA.

Santa Barbara]County—Santa Maria—The weather has still kept up its perpetual blow since three weeks, drying out the feed and the crops generally. No rain since April 1st. Grain on summer fallow is holding out well, but on other lands it is poor; late sown will not mature without rain. Bean and corn lands are ready for planting. Ground less moist than average of years at this time. Too early to predict about fruit outcome but trees are well set. Highest and lowest temperatures 72 and 40 degrees.

SOUTHERN CALIFORNIA FOR WEEK ENDING APRIL 29, 1892.

Ventura County.—Hueneme—Haying has commenced. Bean-planting is progressing rapidly. More moisture is needed for late crops. The barley crop, from present indications, will be about three-fourths of last year's yield. *Bardsdale*—The weather is quite warm, and, with some wind, is very drying. Barley sown late will be short. Corn is coming up nicely. Alfalfa needs rain.

Los Angeles County.—Lancaster—The warm weather of the first part of the week was injurious to grain. The present indications are, that there will be two-thirds of a full crop. Where land was not planted too heavy, crops look well, and, in many cases, will make a crop even if it does not rain. *Rodeo de los Aguas Ranch*—Early and late grain is looking well and will make an average crop. Corn is coming up finely, sugar beets are growing nicely and the orange crop is promising. *Duarte*—The past week has been warm and pleasant, but rain is needed for the late grain. The fruit crop still promises well. Highest temperature during the week, 83 degrees; lowest, 47 degrees. *Pomona*—The temperature was about the average for the the season; no rain fell. Light fog occurred two mornings. Carloads of oranges, uninjured by frost, are now being shipped; and shippers say there are more sound oranges than was supposed some weeks ago.

San Bernardino County.—Ontario—The continued warm weather is favorable to trees. Grain harvesting has begun; the crop will be light, except in hay. *Chino*—The prevailing warm weather is forcing vegetation very rapidly; but the warm, dry winds are drying the soil rapidly. The beet crop is assured.

Orange County.—Anaheim—Hay-cutting has commenced; the crop will be very light, but of the best quality. The cooperative beet sugar factory is now an assured fact. *Tustin*—The finest of weather has prevailed since last report, except the continued drouth, which has injured the grain and hay prospects, the crops of which will be light. Apricots promise a very full crop.

San Diego County.—National City—The hay crop is proving rather better than was expected. Early sown grain is looking fairly good. Highest temperature 71 degrees, lowest 44 degrees. *San Diego City*—Harvesting has begun, but the crops are very poor, and some are reported too much so to cut, especially on the mesa lands. The fruit crop promises well, and but little has fallen from the cold nights; apricots and peaches are the size of walnuts. Grapes promise well, and have not been touched by frost. Low temperatures were reported from the back country, with light frost at Campo, which did no injury. The orange crop is about all gone, except some scrub stock.

GEORGE E. FRANKLIN,
U. S. Weather Bureau,
In Charge.

HORTICULTURE.

Thinning Fruit.

An essay prepared for the April meeting of the State Horticultural Society by R. C. KELLS of Yuba City.

Not many years past the questions of thinning fruit and how to thin it were not looked upon as being of much importance. The manner in which it was formerly done, and the results of the labor did not prove successful, hence the necessity of discussing the question of thinning. First—Why shall we thin?; second—when shall we thin?; third—how shall we thin?

To the first I would answer that *nature* says we *must* thin for many reasons, and I may mention a few of them. We neglect the pruning of most varieties of trees to such an extent that nature provides an overabundance of fruit, and when this is the case small fruit is the result. The human eye is not pleased with small fruit, and many times the placing of such a product on the market results in touching our pockets, and when you touch the fruit growers pocket you at once become a member of the first class. Why does it touch my pocket? Because nature's eye does not like a small pear or peach.

Why shall we thin, and when shall we thin? In answer to this question I would say that we must be governed something by the season; but in all cases with stone fruits they should be thinned before the time for the stone to harden. With us in the Sacramento Valley, the apricot should be thinned by April 15th to the 20th; peaches from May 1st to 20th. I think we find conditions different in different sections. These dates I mention are as late as we can thin before pits harden, but we can begin three to four weeks earlier, and be sure to thin early enough to get the required results, for it may call for the second thinning to get the fruit properly thinned.

How shall we thin? I might state that the pioneer growers of California did not have to thin their fruit, as nature's eye was not so observing in early days—the small as well as the large fruit found a market; and when the pioneer's attention was first called to thinning, what did he do? Why sir, directed his men to cut long poles for the purpose of thrashing off a portion of the crop. Nature said he must thin, and human nature said he must thin cheaply, but as fruit growers in this progressive age, we find the pole system a poor one, and at this date we are compelled to pick the fruit by hand, one at a time, and I might say with some system and rule, while with the pole we had plenty of rule but no system.

I imagine my hearers expect me to have a laid down rule for thinning stone fruits, but as yet I do not think we have reached that point, while I know we are making great progress in the view of thinning as well as in other lines of fruit growing. I might quote Mr. L. W. Buck who spoke at our Horticultural Society at Yuba City, April 20th on "how to thin and what rule to follow" etc., in which he spoke of the peach principally (and I think the same rule can be applied to other varieties of fruit, viz., apricots, pears, etc,) which is in thinning the peach so as not to leave the fruit closer than four to six inches, on good healthy branches; or in other words, not to leave the fruit closer than the width of the hand. As to how much to thin, it is well for example, to take a peach tree, follow the above rule, and after having thinned, count the fruit on one branch which may be about one-tenth of the tree, and estimate balance of the tree by the fruit left on this limb. You will find that on a seven or eight year old tree you will have from seven to ten boxes of peaches, 20 lbs. per box, counting about 60 peaches to the box. Estimating seven boxes to the tree, 90 trees to the acre, gives us 12,600 pounds of fruit at 1 1-2 cents brings us $189.00 per acre.

When the fruit sets so that we find it necessary to thin, we find it very light thinning if we do not take off more fruit than we leave on the tree. Thus we reduce the number of fruit and increase the size of that which is left, and do it with a less expense than to pick the whole crop, when ripe and when labor is higher, and compelled to take one-half the price for the small fruit which gives the same result per acre, $189.00, and we are unable to sell the same as readily as the large, all things being equal. The man with the large fruit is called upon first, meets with first sales, is able to pay his debts first—in fact he is first, last, and all the time.

Thus we find thinning fruit is of great importance, and is now classed with the many questions of fruit growing. But my plan of how to thin will be by more thorough pruning in the future. The cost of pruning is less than picking the fruit, and we will not overtax or have broken down trees, while on the other hand we will have a more vigorous tree and prolong the age of our orchards.

Suckering Young Trees and Vines.

Read at the April meeting of the State Horticultural Society by ED. M. EHRHORN of Mountain View.

The term suckering, as generally used by fruit growers and vineyardists, means the removal of such sprouts which are not wanted on the tree or vine, and which, if allowed to remain, sometimes prove to be a serious detriment to them. There are trunk and crown suckers. Young trees which are pruned back very much, have a larger root system than the crown requires, and the food furnished by the root has to be placed somewhere, thus it forces every bud out on the trunk and limbs. The lower buds throw out the strongest suckers, and if these are not removed they will make more growth than any limb on the tree. A crown of four branches will be finer and stronger than the one with eight. I have seen newly planted orchards in which trees, as above stated, were not suckered, and the crown was stunted so badly that a sucker, which was a very thrifty one, had to be turned into a tree, thus losing a whole year's growth. We often hear men talk of watersprouts. These are nothing more than matured suckers on the inside of trees. They have been shaded and have a glossy appearance, terminating in a sharp point, and, if furnished with laterals, these generally look like thorns.

The best time to sucker trees or vines is when the sprouts are yet tender, say from two to three inches long. If removed at this time, no knife is needed and the sprout can be removed very easily by hand. When two sprouts start from one bud, one should be removed.

An orchard ought to be well plowed before suckering, as the horses and singletrees are sure to assist you in doing it, and if you have removed all the unnecessary sprouts you will find that, of the few remaining ones, the plow will have picked out the very ones that ought to remain. In very hot localities some practice has been made of leaving the trunk suckers on newly planted trees and pinching them back as soon as they are four or five inches long, and repinching them later on. This is done to protect the trunk from sunburn. These sprouts can be removed as soon as the crown of the young tree can furnish shade enough to protect the trunk. About the month of July would be the time to do this. Judicious suckering saves a great deal of pruning in the fall, and careless pruning causes a great many suckers to grow in spring. The symmetry of a tree can be greatly improved by removing the unnecessary sprouts, and the strength and vigor of the tree will be greatly benefited by it. Shade caused by suckers has a tendency to weaken the crown of the tree and cause the wood to be soft and the fruit spurs to be sickly.

Although suckers are generally detrimental, they can be sometimes made use of. If trees grow lopsided, as very often occurs to the annoyance of fruit growers, a sucker, or, we may say, a branch, can be forced to grow out on the side where wanted by making an angle cut above the dormant bud on the trunk. This will prevent the sap from flowing past the bud, and in nearly every instance the bud will sprout.

Every fruit grower must use his own judgment, as no rules can be given. Suckering is half the cultivation of a young tree, and if not done it will soon grow into a scrubby bush. I consider suckering just as essential as thinning fruit, and from personal experience can see the difference it makes. What has been said about trees will answer also for vines. A great annoyance to vineyardists are the root suckers, but these are generally caused through neglect. If the young vines are well suckered the first year they will not require much more attention. What I mean by well suckering, is to dig down to where the sprout starts and cut clean, so that no blind buds remain. I am sorry to say that this is practiced very little. It is caused either by unreliable help or to save expenses.

THE FIELD.

Hay Notes from a Kansas Reader.

PFEIFFER, KANSAS.

TO THE EDITOR:—In your number of March 26th you offer prizes for the best letters on hay-making on the Pacific Coast. I am not so fortunate as to live there, having spent the best years of my life in drouthy Kansas, but have grown and gathered many a load of hay in my lifetime here and in the old country, and believe that the principal part of it will be mostly the same, only varying a little according to soil and climate.

In planting a crop that is destined for hay and not for seed, sow thick; at least, double the quantity, because we do not want hard stems and long stalks with big seed heads, but lots of leaves and fine stems. Next of great importance is to cut in the right time. This is when the majority of your grasses, clover, barley, wheat, rye or whatever else it may be, is in blossom. At that time you will be able to get the best quality without losing in quantity.

Now, in handling the hay, and not exposing it to the bleaching influence of sun and dew or rain, I have not found a method yet that beats the raking up of the green fodder immediately after cutting and putting it in such shocks as will not heat, but cure without being further handled. The hay will not lose any of its aromatic properties, will bleach only a little on the outside of the shocks and withstand even a good solid shower of rain without being penetrated by it. In the old country, I learned this way of haying when I was a boy and found it to be the best even in our changeable climate of Northern Germany. Here in Kansas I have followed it for 20 years with success, and I believe it would be good for California, where they say it does not rain in haying time.

If the green grass or fodder gets a little warm (not hot) in the shocks so as to sweat some, it will not hurt, but rather improve on the flavor of the hay. In one or two weeks, according to the dryness of the atmosphere, the shocks may be stacked, hauled to the barn or baled, just as desirable, or according to the custom of the country.

In handling clover and alfalfa, this raking up green will prevent the loss of a good many leaves and flower heads, which constitute the most valuable part of the hay, and are often partially sacrificed by exposing on the swath to the hot sun after mowing.

One of the cheapest and best of hay for Western Kansas is green rye. It can be raised by simply drilling a bushel and a half of rye to the acre in wheat stubble without plowing the land. It never fails to grow, and can be cut by the middle of May. The land can then, by summer fallowing, be prepared for wheat again if so desired. Hoping you will find my letter worth reading, I sign

CONRAD THRISGER.

[Our correspondent's note is interesting. He will see by the letters published last week that it is better to cut the grains we grow for hay later than the blossoming. Hay then cut has not substance enough, but his rule is a good one for some grasses, which, however, we do not grow. He will also see that curing in the shock is the accepted practice here. We are using green rye for dairy feed in some parts of the State.—EDS. PRESS.]

An Irish Agricultural Graduate on Hay-Growing.

SANTA BARBARA.

TO THE EDITOR:—In treating the subject of growing and harvesting hay, which properly comes under two heads, as grain and grass or clover—grain being either wheat, barley or oats, and grass or clover being, as in this State, timothy, or perennial rye, or Italian rye, also alfalfa, or even buckwheat.

The preparation of the soil, taking for granted it is rich and suitable for such purpose, should include thorough cultivation, deep plowing and pulverization, rolling, etc. In European countries, or Ireland, and in the East, grass seed is sown with a grain crop, as barley, successfully—the sowing being early in the fall. After removal of the grain, the grass comes up well and it saves the land, being often foul with weeds. This method succeeds here with grasses and alfalfa.

The curing or harvesting of the hay crop is a nice point, the great desideratum being to turn often and not allow any one part or portion to get too much sun. This is essential with alfalfa, or otherwise the leaves all are lost and nothing but stalks left. On the other hand, if not sufficiently cured, the hay is apt to heat, sweat too much and mold. Chimneys or air holes in stacks are a good preventive of heating and molding. Also a little salt (coarse) shaken over it, say half a pailful to every load, is particularly good for wheat and barley hay, when being stacked.

As to the length it should remain in cocks, depends on the weather and state of the crop. Generally, three days or less ought to be about long enough in swaths before being cocked, and a week in cocks of about 100 to 300 lbs. to each cock, which too might, just before being moved for stacking, be turned over to admit more air. A good plan to remove it is a long, strong scantling, with some spikes, rake-like, put on this, and it then drawn over the cock, which saves forking it into the wagon. The derrick easily hoists to the stack; otherwise those hay nets for this purpose are good.

I may add, in conclusion, that I recommend the steeping of all seed grain or even grass seed, but not alfalfa or clover. In steeping grass, which floats on water and is hard to thoroughly soak, 24 hours ought to be enough; after, mix with about one-fourth its bulk with nice, fine, dry sand, after having drained off all the water from the seed. Grass seed or grain so steeped has greater weight in sowing and is easier scattered, but a machine for broadcast sowing is much more satisfactory.

I would strongly recommend all who have even a few acres, to have a small patch of alfalfa, which is excellent for horses. I have seen on the Nevada Bank big ranch, Merced county, horses work and thrive on alfalfa alone. For feeding cows, hogs, even chickens, it is invaluable, and once well put in, with plenty of farm manure plowed in, it will stand drouth and return good crops, even on average rainfall, without irrigation. Once well put in, it is in to stay permanently, and yield, as I have seen in San Bernardino county, from three to ten tons average yearly. Even more is not impossible, especially if irrigated or top-dressed with manure.

Grass hay, as Timothy, is far inferior to grain hay, as they, when allowed to mature, are liable to shed their seed. The waste is so much consumed, unmasticated, which grows after being out on the land. Again, grain hay or straw, if on rich land, is so apt to lodge or be coarse, and that part nearest the ground (except the grain itself) is the best of it. This is lost because not cut close enough to the ground.

M. J. BYRNE.

Growing and Curing Hay.

BUTTE CITY, COLUSA CO.

TO THE EDITOR:—California farmers can pride themselves on having a soil and climate capable of producing most varieties of hay in the greatest profusion.

Where water for irrigating purposes is easily obtained, it is no trick to raise very large crops of hay per acre, as, owing to our superior climate, several crops can be secured from the same soil in one season. But, as your humble servant lives in the Sacramento valley, where irrigation is yet in its embryo state, we must content ourselves with fewer varieties and only one crop per season. However, I think in this we are not unfortunate, as nowhere in the State is a better class of hay made and fed than in the banner county of Colusa. We can have a wild-oat hay, a wheat hay or a barley hay. I prefer an even mixture of the three.

In the fall of the year I burn off a piece of wheat stubble. This, if left alone, will produce a fair crop of wheat and oats; but I sow broadcast on it 40 pounds of Chevalier barley per acre and harrow the ground twice, thereby making a smooth surface for the mower and rake. I cut as soon as the oats and barley are in the dough, letting it lie 24 hours in the swath to wilt. I then rake into windrows and cock it up till fully cured, when it is then hauled to the haymow or baled, as may be required.

I generally get from two to three tons per acre of this hay, than which no better fodder could be placed before stock, reference being had to its nutritious qualities and fine aroma. Stock will eat very little grain with this class of provender before them, as I witness daily.

Farmers who use harvesters, and generally cut considerable hay around the headlands of each field, can have the same result by sowing the headlands with a mixed seed, and much heavier than their usual seeding, so as not to have the hay too coarse.

N. J. CLARK.

Producing Hay.

NAPA, April 12.

TO THE EDITOR:—In preparing land for raising hay, it is not necessary to plow as deep as for grain; four or five inches are sufficient.

The amount of seed per acre depends on the quality of the soil and time of seeding; early in the winter less is required than later, for the reason that early sown grain stools more than late. On rich land, between 100 and 110 pounds of seed per acre is considered the correct amount for early sowing. After sowing, the land should be thoroughly harrowed no less than twice, once each way.

The best variety for feeding horses is black oats and wheat mixed; for cattle, grass hay is preferable.

Land that is used for hay only, needs to be plowed only every other year, alternating with a cultivator.

In cutting hay, care should be taken not to have it too green. All grain and timothy hay should be cut when it will weigh the most; that is, when the kernel is in the dough.

Raking and stacking should be done as soon as possible after being cut; at the same time, be careful that it is dry enough so as not to mold or heat. When practicable, hay should not be left in the swath overnight, as it will lose its brightness more or less through the effects of the dew, but put into the windrow. The state of the weather must be considered; if dry and cool, two days will be time enough to dry so that it can be piled. In 1887 the weather was so hot and dry that we cut, raked and shocked hay in the same day, and then it was so dried as to be only second class.

The sooner hay is put in the barn or stack the better quality of hay you will have.

The cost of producing hay depends on the locality and quality of the soil. Land that will grow two and a half tons per acre will cost, on an average, $8.37 per acre in the bale, ready for shipping; 110 pounds of seed for one acre, at one cent and a half, $1 65; plowing, sowing and harrowing same, $2; stacking, $1.50; baling, including rope and board of balers, $3.22.

W. J. S.

ENTOMOLOGICAL.

Summer Wash for San Jose Scale, Red Spider, Fungus, Etc.

The Sutter County Board of Horticultural Commissioners recommend the whale oil soap and sulphide of potash wash for the summer-spraying of deciduous trees, infested with the San Jose scale, red spider, yellow mite, etc. The following is Prof. Hilgard's formula, and is used throughout the State, being not only cheap but easily mixed and quite effectual for summer-spraying. To accomplish the best results this wash should be applied after the scale are hatched and while they are crawling on the trees. It is impossible to state the date when this occurs, as it varies according to the season and weather, but it is usually about the first of May in this part of the State. All infected trees should be often examined and when, with the aid of a magnifying glass, the young scale can be seen crawling on the tree, no time should be lost in applying the remedy.

WHALE OIL SOAP AND SULPHIDE OF POTASH REMEDY.

Whale oil soap (80 per cent strength)	20 pounds
Sulphur	3 pounds
Caustic soda (98 per cent strength)	1 pound
Commercial potash	1 pound
Water to make 100 gallons.	

Place the sulphur, caustic soda and potash together in about two gallons of water and boil for at least an hour, or until thoroughly dissolved. Dissolve the soap in the water by boiling; mix the two and boil them for a short time; use at 130 deg. F. in vessel.

Prof. Hilgard recommends, in bad cases of scale and in fighting red spider, an addition of kerosene, in the form of an emulsion, to the above wash.

Kerosene	1 gallon
Whale oil soap	¼ pound
Water	½ gallon

Dissolve the soap in the water and when boiling hot add the kerosene. Churn the mixture for five or ten minutes with a hand spray pump until it forms an emulsion. If the emulsion is perfect it will be of a creamy nature, no oil appearing on the surface. Add this to the 100 gallons of spraying material.

The sulphide of potash and the kerosene emulsion are often made up in large quantities and the proper amount added to the whale oil soap, as required. Keep this wash well stirred when using.

It is very important that the whale oil soap used should be at least of 80 per cent strength. To test the soap, spread five or ten ounces of it on a tin plate counterpoised on a pair of upright scales reading to ounces, and then dry the whole by setting it on top of a pot of boiling water. The loss in drying will indicate the amount of water in the soap. Thus, if five ounces were taken and one ounce was lost in drying, the soap would be of 80 per cent strength.

FORESTRY.

Eucalyptus, Rostrata and Viminalis.

MONTECITO, Santa Barbara Co.

TO THE EDITOR:—The note of Mr. Abbott Kinney in the current number of your paper, in which he refers to the frequent sale of *Eucalyptus viminalis* under the name of *E. rostrata* calls attention to a matter of some importance to all those interested in planting gum trees.

The manner in which Mr. Kinney seeks to point out the differences between these two trees, however, leads me to surmise that he has perhaps, himself been deceived by taking for *E. rostrata* another gum which is often, though not so frequently as *E. viminalis*, sent out as the true red gum. After describing the *viminalis* he says, "the lanceolate leaves of the red gum are less long and narrow than those of *Viminalis*." In this he is incorrect. The leaves of the genuine *E. rostrata* are if anything longer and narrower than those of *E. viminalis*. Such a method of distinction, however, is at best inexact and unsatisfactory.

Had Mr. Kinney possessed a more intimate practical acquaintance with these trees he might have been able to give in a few words a test by which the most inexperienced or careless observer could have easily distinguished between them at the first glance; namely by saying that the leaves of young trees of *E. viminalis* are opposite and sessile, while those of *E. rostrata* are alternate and petiolate.

As this is a subject of some interest to a considerable number of tree planters in this State it may not be out of place to publish a full description of these two trees as given by Naudin, the highest European authority on the genus, in his memoir entitled *Description et Emploi des Eucalyptus Introduits en Europe*, which was reviewed in the RURAL PRESS of March 14th, 1891, p. 245.

Of the *viminalis* he says: "The tree is eminently biform (that is, it changes greatly from its youthful to its mature form). When young the leaves are sessile, opposite-decussate, lanceolate, more or less pointed and usually green or slightly glaucous. When the trees reach maturity the leaves, like those of the greater part of the Eucalypts, become alternate, petiolate, slenderly lanceolate, straight or very little curved and pendant. Their general color is light green, even verging toward yellow. The flowers are in triple axillary cymes, and the bud at the time of opening is of the size of a small pea, as is also the fruit, the mature seed-pod of which scarcely reaches beyond the edge of the tube of the calyx. The tree generally grows straight, assuming a more or less pyramidal shape, and the trunk after throwing off its old bark which detaches itself in large strips, appears smooth and almost as white as that of a birch. The *E. viminalis* is a handsome ornamental or avenue tree, which attains a height of 100 feet without growing quite so rapidly as *E. globulus*. Nor has it the same density or durability, which however does not prevent it from finding numerous uses for interior work. It is considerably hardier than *E. globulus;* trees which have reached some size, enduring without any injury, a passing temperature as low as 140 Fah."

Regarding *E. rostrata*, Naudin says it is one of the most widely distributed species throughout the Mediterranean region, and especially in Algeria. where it seems to be tending to supplant in favor the *E. globulus*, although its growth is less rapid than that of the latter. It owes this preference, justified or not, to the excellence of its wood, more easily worked than that of *globulus*, with straighter fibres, less subject to checking, of great durability even in sea water, where it appears not to be attacked by the teredo, though in this quality it is perhaps surpassed by the wood of *E. marginata*. It has long been used in Australia, especially for piles, railroad ties and telegraph poles, etc.

E. rostrata, which many planters still continue, says M.

Naudin, to call by the meaningless name of "red gum," grows into a tree 125 feet or more in height, and from three to four feet in diameter. He classes it among the *uniform* gums as its characteristics in its young state do not differ perceptibly from those of its maturity. Its bark at first smooth, gray and somewhat marbled, detaches itself in patches something like that of the sycamores, thickening greatly with age and cracking open with long and deep fissures. The leaves of a grayish green or glaucous, more or less pendant, a trifle sickle shaped or quite straight, and lanceolate are from 10 to 15 centimeters long by one to one and one half wide.

I will add that this description corresponds with specimens I have growing in Montecito received from the State Board of Forestry since Mr. Kinney's retirement, and with others raised from seed sent me by Prof. Maiden of the Technological Museum, Sydney, N. S. W.

The characteristics which most accurately distinguished this eucalypt, are furnished by the inflorescence and the fruit. The inflorescence is composed of axillary umbels containing as many, perhaps, as 25 flowers all neatly pediceled, whose operculum prolonged into a sharp beak, is longer than the receptacle of the calyx. The seed-pod, about the size of a pepper seed, is always exserted, protruding beyond the calyx nearly half its length.

E. rostrata is a little more hardy than the *globulus*, and appears to accomodate to all soils, preferring however, those which are rather moist and more or less sandy.

FRANK M. GALLAHER.

FRUIT MARKETING.

The State Society Discusses Fruit Exchanges.

At a regular meeting of the State Horticultural Society, held in the rooms of the State Board of Horticulture, on April 29th, the following Report of the Committee on Fruit Exchange was presented:

To the President and Members of the Horticultural Society:—Your Committee met. Present, C. F. Wyer, B. M. Lelong, C. H. Allen, E. W. Maslin—Mr. Wyer, Pres.; E. W. Maslin, Sec.

Mr. A. L. Bancroft submitted a plan which was discussed. Mr. P. W. Butler addressed a letter to Mr. Chas. H. Allen endorsing Mr. Bancroft's plan. Both the plan recommended by Mr. Bancroft and Mr. Butler's letter accompany this Report, which are referred to the Society for its action.

The Committee found the subject too complex for acceptable adjustment, and hence have refrained from reporting a definite plan, believing that the people who are to be affected should be called into consultation.

The Committee believes that the interests of the dried-fruit producers would be best subserved by separate organizations formed in each county, or at least in contiguous groups of counties, and to prevent these companies or associations from conflicting with each other and thus aid in depressing the market for dried fruit; that there should be formed out of these separate organizations a main association having jurisdiction over the branches. By this means, the marketing of the fruit at inauspicious dates could be prevented and machinery organized for obtaining for the use of all the branches, information of the condition of the fruit market in the East.

Your Committee recommends that this Society call a convention of the fruit growers of the State to meet at a place and time designated by the Society to take into consideration the feasibility of organizing a general and special or separate association, as above described, for the joint and profitable marketing of the dried fruits of the State.

CHAS. F. WYER,
CHAS. H. ALLEN,
E. W. MASLIN,
Committee.

The report was accepted, and after discussion, it was decided, upon motion of Mr. Bancroft, that the Committee be continued and be empowered to call a meeting of those interested in dried fruit whenever it sees fit. The Committee is C. F. Wyer of Winters, Leonard Coates of Napa, B. M. Lelong, A. L. Bancroft and E. W. Maslin of San Francisco, and C. H. Allen of San Jose.

The following are the documents referred to in the above report:

MR. BANCROFT'S SUGGESTION OF A DRIED FRUIT EXCHANGE.

The object is to furnish a medium through which to market California's product of dried fruit, figs, raisins, almonds, nuts, etc.; to have a Board of five Directors, monthly meetings; compensation to each Director, $20, for each meeting attended, provided they are strictly on time; to have an Executive Committee of three from the members of the Board of Directors; weekly meetings from June 15th for six months and bi-weekly meetings for the remaining six months, or say 40 meetings in the course of the year; compensation, $20 to each member for each meeting attended, if on time; a record to be kept of their transactions by the Secretary. Where the members are not unanimous upon any point, it may be dropped or referred to the Board of Directors for action.

A manager, to devote his entire business time to the interests of the Exchange; to be Secretary and ex-officio member of both Board of Directors and Executive Committee, but to have no vote in either body; compensation, $200 per month; two assistants—one at $50 per month and one at $25.

The members of the Exchange to be of two classes—selling members and buying members; the selling members to pay a fee for the season of $5; the buying members to pay a fee for the season of $10; the Exchange to locate in rooms as near to the State Board of Horticulture as practicable; rent probably about $75 per month.

The Exchange to receive samples of dried fruits, etc. and to sell by sample, charging to the seller and buyer *each* a commission of 1½ per cent, making 3 per cent in all to the Exchange. The commissions, or a part of them, to perhaps be deposited with the Exchange in advance, or the seller to be responsible for all—he to collect from the buyer at the time of sale.

The Exchange to effect sales by correspondence as well as in their rooms, charging the same commissions; the seller to furnish samples and the purchaser to pay transportation on them.

No samples to be accepted by the Exchange except from parties who contract to sell their entire product for the entire season through the Exchange. No one to be admitted as a seller for any season if he shall have made any sales previous to applying for membership. No *dealer* in dried fruits to be admitted as a *selling* member.

The Exchange to assume no responsibility as to goods agreeing with samples; that must be arranged for between buyer and seller. No goods to be consigned by the Exchange. The selling prices to be determined from time to time by the Executive Committee.

The Exchange to issue bulletins *to the seller* weekly from July 1st to January 1st, and biweekly from July 1st to January 1st; giving statistics of sales made, goods unsold, etc., and market rates of dried fruits, etc. all over the world. The bulletins to be mailed in sealed envelopes. Accompanying each bulletin shall be a blank form of ballot—perhaps to be numbered—for the seller to fill out, showing the quantity of dried fruit he may have on hand and the prices at which he is in favor of offering it, but the prices at which it is to be held are to be finally determined by the Executive Committee.

Lots of goods offered shall be listed at the Exchange in the order accepted and shall be offered to the buying members in the same order. If goods remain with the Exchange for a period of six months unsold, the selling member is to be allowed to apply for and receive permission to offer them at private sale at any price he may desire, and if so sold the Exchange shall be notified, but the Exchange shall not be entitled to any commission upon them.

The Exchange to make the most favorable arrangements possible for the storage of goods while awaiting a purchaser and also for the obtaining of loans upon them.

The Exchange should organize at once and commence preparations. Applications for selling memberships to be solicited at once conditioned upon business amounting to an estimated amount of not less than $250,000 for the season before obtained before they shall be considered binding. Requests should be made in each notice published, that producers send their names and address to the Exchange in order that circular matter may be sent to them. Advertisements to the same end should be inserted in the trade papers.

Estimates Of Receipts and Expenditures.

RECEIPTS.

Com. on $250,000—sales at 3 per cent	$7500 00
Fees from 500 selling members at $5	2500 00
Fees from 25 buying members at $10	250 00
Total	$10,250 00

EXPENDITURES.

Board of Directors—12 meetings at $100	$1200 00
Executive Com.—40 meetings at $60	2400 00
Manager and Secretary	2400 00
Assistants	900 00
Rent	900 00
Stationery, printing, postage, fuel, lights, etc	2000 00
Sundries, extras or surplus	450 00
Total	$10,250 00

The $250,000 worth of goods to be sold by the Exchange would be about one-eighth or one-tenth of the apricots, peaches and prunes alone, to say nothing whatever of figs, raisins, grapes, almonds, nuts etc. How much business it would be reasonable to expect might be done by the Exchange the first year, it would be difficult to say. If the sales were materially in excess of the amount named, the commission to the selling members should be reduced or be cut off entirely, or they should have a draw-back at the end of the year which would materially reduce or wipe them out. The commission to the buying members should *not* be reduced.

Subscriptions should be started at once to a fund to guarantee the expenses of attempting an organization. If the attempt is successful, the expenses would be met in the ordinary way; if not successful they would be divided *pro rata* among the subscribers.

The Board of Directors should be elected by ballot by the selling members—each $100—of sales made during the preceeding season to be entitled to one vote. The election should be held April 1st of each year.

The Board of Directors should elect the officers: President, Vice-President, Executive Committee, Manager and Assistants. The management of the Exchange should fall upon the Executive Committee; it being all the time subordinate to the Board of Directors.

If an enterprise of this kind bids fair to succeed, there will be danger that the middlemen will try to find some way to strangle it in order to protect their own interests. The possibilities of such an attempt resulting successfully should be very carefully guarded.

MR. BUTLER'S LETTER.

LOS GATOS, March 12, 1892.

CHAS. H. ALLEN, San Jose:—The plan for the operating of a Dried Fruit Exchange, by A. L. Bancroft, I have carefully examined, and I find the plans suggested to be intelligent and seemingly practical. They are clear and business like in form, and can be readily understood by all interested parties. Twenty dollars to be paid to each director for his attendance at each meeting, might be considered as too high, but it is doubtful if competent men can be secured at less compensation. It might not be necessary to have weekly meetings of the directors begin as early as June, or so long before any dried fruit was ready for the market, but this matter could be determined by experience. A portion of all samples should be held by the Exchange until the goods are delivered and accepted or rejected, as difficulties are liable to occur by buyers claiming goods to be inferior to samples.

I fully concur in what is said about the danger from middlemen, and it is to avoid these men, and bring the producer and consumer nearer to each other, that the proposed organization is to be formed.

P. W. BUTLER.

What the West Side Association Has Done.

As stated in last week's RURAL, the joint committee of the Doyle and Campbell Fruit Growers' Association has called a convention of fruit growers to be held in San Jose May 7th, at 10 o'clock A. M., for the purpose of organizing a Dried Fruit Exchange. The committee has issued a circular setting forth the objects of the meeting, and it is hoped that fruit growers from every section of the county will attend this proposed convention.

Colonel Philo Hersey, one of the Directors of the West Side Fruit Growers' Association, at the meeting of the Campbell Association Saturday evening, gave the history of the West Side corporation. He stated that a little over a year ago the growers in the vicinity of Doyle met, organized and incorporated. The West Side Fruit Growers, Association purchased 20 acres of land on the Stevens Creek road, put up a large drier with all the other necessary buildings, trays, trucks, tracks, sulphur-houses, boxes, etc., and when the season opened they were ready to handle the fruit of the members of the association who were not prepared to dry their fruit at home, and to find a market for those who did dry their own fruit. These latter hauled their dried fruit to the drier loose in boxes, and the association graded, packed and marketed it. During the season the association handled about one million pounds of fruit, and so far as he could learn all who were interested in the association were satisfied with the management of it, and received more for their fruit than did other growers who acted independently of the association. The business was conducted on a working capital of about $4000. The association was in shape so as to be able to advance growers from 50 to 75 per cent on the fruit delivered. The association was daily in receipt of advices from all the leading markets, showing the condition of each, and these reports were posted up in the office so that all members had access to them, and could inform themselves; not only were the reports open to members, but to all others who wished to see them, and by this method many growers no doubt were prevented from consigning their fruit when the market was depressed. This move proved a benefit to the association as well as to the individual grower who prepared his own fruit for market. So successful was the venture, that at the close of the season the stockholders were paid eight per cent on the money they had paid in. Some money was borrowed by the Directors at the beginning of the season, but they paid only $60 interest for what they had borrowed, as prompt returns were made for the fruit. For one carload of apricots the association received ten cents per pound. The par value of the shares of the association is $25.

Continuing, Colonel Hersey said he thought it would be a good thing for the growers if several associations were organized in the county; then a central association might be formed and controlled by a Board of Directors selected from the several organizations. This would give the central organization a large quantity of fruit to dispose of, and it would be an object for buyers to consult the central organization and secure their supplies. Each local organization could have its own brand, which in the course of two or three years would become known in the markets, and sales could more readily be effected. Of course fruit of all kinds must be properly graded and classified, so that the brand would be a guarantee of the quality.

THE STOCK YARD.

A Chicago Cattle King on the California Outlook.

Nelson Morris, who has been spending the winter in California, gives an interview to one of the daily papers, from which we select the following paragraphs. Mr. Morris is senior member of the house of Nelson Morris & Co., whose establishments in Chicago and St. Louis are among the leaders in America in the manufacture of animal food products. Mr. Morris has been spending the winter on this coast for the benefit of his health, and at the same time to give more or less attention to the extensive stock yards, slaughtering and packing-house industries now in course of erection in South San Francisco, San Mateo county. G. F. Swift and P. D. Armour are also joined with him as chief promoters of this great enterprise.

"California," said Mr. Morris, "in my opinion, has a great future, having, as it has, unlimited resources which are susceptible, by being properly developed, of making this the wealthiest State in the Union. By observaton, when here three years ago, I learned that the grain-raising farmers of California were in the habit of pursuing the ruinous policy of exhausting the soil by drawing successive crops from it without giving it adequate rest or restoring anything to it in the way of fertilizer or nutriment, which obtained with Eastern farmers when they began to deplete the virgin prairies of Illinois and Iowa. Recent observation has confirmed this opinion.

"The experience in the East, coupled with intelligent appreciation of the progress of events in California, induced me to join in the purchase of a large tract of land near San Francisco, to be used in part for slaughtering, packing and canning beef, pork and mutton, and in part to be subdivided and transformed into homes for the numerous persons who will be employed in those industries.

"It is easy to see, from the rapidity with which the soil is deteriorating, that the farmers of California will sooner or later realize the necessity of following the example of the the farmers of Illinois and Iowa, in seeding part of their lands to pasture, upon which they can profitably graze and raise cattle, hogs and sheep.

"Part of it may advantageously be seeded with Egyptian corn, which can be raised, as a rule, for not over $4 an acre, and fed to stock in the entire plant. The stalk, as well as the grain, is one of the best foods known.

"The success and profitableness of this crop in this State has already been duly demonstrated by Messrs. Miller & Lux and others. Still other parts of the land may be used,

as now, to raise small grain, until they show the need of rest and recuperation. By this time the parts already rested and recuperated by use as pasture land will be in condition to be planted with small grain, if this should be found more profitable, and the freshly exhausted soil may, in its turn, be restored in a similar manner. The straw and stalks of all grains should be utilized as feed, instead of being burned and thrown away, as is now the practice of the average farmer of this State. These parts of the plant contain some nutriment, and, fed to the cattle and sheep, make a fair substitute for the hay used in the East. The droppings of the stock are one of Nature's means of nourishing the earth. All this can be done in California to greater advantage than in any other State in the Union, by reason of the mildness and equableness of her climate. Moreover, it takes about twice as much grain feed to fatten animals in the winter, East, as it does on the Pacific Slope during the same season of the year, for in cold climates much food of a fattening tendency is consumed in the maintenance of bodily heat, and hence does not contribute to increase the weight of the animal. During the mild winter weather of this State a properly fed animal will usually gain in flesh and fat two pounds per day, while if exposed to the rigors of an Eastern winter it will not gain an average of one pound pound per day, even with twice the quantity of the same kind of food.

"As to hogs, in the winter season, East, they crowd together and often upon one another in great heaps, for greater warmth, and not uncommonly with the effect of smothering numbers of the undermost. The intimate contact which comes from crowding is most favorable to the spread of infectious diseases, and hence the prevalence of what is known in the East as 'hog cholera,' and its rarity or entire absence under more favorable conditions of climate and soil in California. Here animals have warm and dry places to rest upon at all seasons of the year, consequently they grow faster and on less feed than they do in less favored regions, while the early grass is of almost priceless benefit to the female and her young.

"Sheep raising has been one of the main industries on this coast as a livestock enterprise, but it has not been made what it is possible to make it under the influence of a permanent and steady market. Yet to-day mutton is higher in California than almost any other State in the Union. This is not only unnatural, but directly the opposite of the natural condition of things existing in the State. The most desirable results in this, as in all other important live stock industries, can only be attained under strict commercial laws, such as are only created and maintained by and through a central market exchange, as now exists in Chicago and St. Louis, the influence of which has not only made the great Mississippi valley the great grain-producing center of the world, but has made the once-supposed deserts of the plains west of the Mississippi the most favorable grazing territory of any part of the globe.

"The South San Francisco Land and Improvement company is now engaged in the inauguration of industries, the erection of abattoirs, stockyards, packing-houses and canneries on its premises in South San Francisco, where, for all time henceforth, will be found a permanent and steady market, not for sheep alone, but for all classes of live stock, horses, mules, cattle, sheep and hogs.

"This plant will be able to consume all the cattle and sheep sent to it. All the beef and mutton not needed for home consumption can readily be canned and shipped to France and other parts of Europe for use in the armies of those countries, where there is great demand for them. Furthermore, lambs raised in this State for the Christmas market, and also for sale during the months of January and February, will always find a good and ready sale at the South San Francisco Stockyards, as that company will have its own patent refrigerator cars in which to ship this class of meat to the markets of the East, where, during the winter months, it has a great demand—the Eastern farmers not being able to supply the demand during those months.

"The demand for hog products on the Pacific Coast has become so great that over 35,000,000 pounds of lard, hams, salted and smoked meat were shipped from the packing-houses of the East during the past year to San Francisco, and proportionate amounts shipped to other prominent points on the coast.

"In addition to the hog product, large quantities of canned beef, potted meats and beef tongues were shipped from the East to San Francisco, Los Angeles and other points during the same time, say to the extent of several million pounds.

"In view of the fact that enough cattle, sheep and hogs can be profitably raised in California alone to supply the stockyards and packing industries of South San Francisco, to say nothing of the cattle and sheep raising capacity of Arizona, Nevada, Oregon and other neighboring territory, it ought not to surprise these people that we, G. F. Swift, P. D. Armour and myself, who were the promoters and are, as individual companies, the owners of the chief part of the packing-house industries of Chicago, St. Louis, Omaha and Kansas City, should join hands for the purpose of fostering and developing the animal food products of this coast by the use of methods in vogue in our Eastern plant, and which are most modern, cleanly and economical in character, thus bringing to a speedy ending the very filthy and crude manner of preparing animal foods for the supply of the home market now in force not only in the enterprising city of San Francisco, but at every other important coast point.

"If our South San Francisco plants are appreciated by the farmers of this and adjoining States to the extent of being furnished with a full supply of cattle, hogs and sheep properly fattened for market, its brands of canned meats will soon be as well and favorably known in all foreign markets as are the brands of the Chicago and St. Louis plants.

The conditions at South San Francisco for preparing and handling animal food, economically, being, as they are, as favorable if not, in a general sense, more modern than at either Omaha or Kansas City, and for the more important fact that the markets to be supplied with the products of South San Francisco being as favorable, if not more so, as to prices to be obtained than the markets that Omaha can supply, we can assure the farmers and stock raisers of California, Oregon and Nevada that they will at all times find the market at South San Francisco as steady and as good as to prices daily the year round for live stock, sold live weight, as obtain in Omaha.

"The fresh meats furnished by the packing-houses of South San Francisco will be treated in exactly the same manner as is done in the great Eastern establishments by the same owners. It will be stored in extensive cooling rooms, constructed for the especial purpose, chilled to the marrow, and put into condition for shipment in especially designed patented refrigerator cars, then shipped, regardless of the conditions of the weather, to any part of the country that desires to be supplied with superior fresh meats just as it is now shipped from Chicago to London, Eng., and distributed over the continent of Europe; and it will be in equally as favorable condition when introduced into the kitchens of San Francisco."

"It is generally understood that the extensive slaughtering and packing houses now in course of erection in South San Francisco, when completed, will have a daily capacity for handling and preparing for market 800 head of cattle, 1000 head of hogs and 1500 head of sheep. Have you any doubt as to the ability of this and adjoining States to furnish a daily market with so great a number of animals?"

"In reply," said Morris, "I will say that the subject of the supply of live stock was duly considered by myself and associates before the land on which the works are located was purchased. Had there been any doubt in our minds as to an abundant supply ultimately of cattle, hogs and sheep, you can rest assured that the purchase of the 3400 acres would not have been made.

"A careful investigation of this question of supply during my present sojourn in this State prompts me to say that cattle-raising in California is in its infancy, hog-raising in its decline and sheep-raising is nearly at an end. But our observation during the past 35 years in the East as to the influence on stock-raising of permanent steady markets, such as now exist in Omaha and Chicago, convinces me beyond doubt that the inauguration of the stockyards in South San Francisco will not only give fresh impetus to the stock-raising industry throughout a great extent of country, but in other ways of material importance it will contribute to the prosperity of the farmers of this coast by enabling them to maintain the fertility of their lands.

"California barley and also Egyptian corn are exceedingly nutritious, and, containing but little moisture, make excellent feed for both cattle and hogs. Egyptian corn is not only more easily eaten than Indian corn by cattle, but it makes firmer meat."

Discouraged Breeders.

It is truly lamentable, says a writer to the *Iowa Homestead*, to see not only the apathy, but almost disgust of our farmers for pedigreed cattle—not one class alone seem to suffer or be indifferently considered, but all. True, the cattle industry is depressed, fearfully depressed, away below paying prices. Farmers cannot raise beef from calfhood up to three years of age for the price they can sell it for to-day, or for the last three years, and this has made them heart sick. They have hoped there would be a change for the better, each succeeding year, but clouds still darken their industry, and despair is upon them. Is this wise? Is it sensible or becoming in a class of men who are the salt of the earth—the basis, the foundation of all other kinds of business, of whatever nature? Yea, more, they are the progenitors of the law makers of our country, as a rule, as well. Seldom do you find a man of this country more than three generations removed from the farm ere his progeny returned to it again. Hence, of all classes of men, the farmer should be sensible. Their misfortunes or mistakes effect every other line of business, and the prosperity of every country is in their hands; hence, whatever our farmers do in their line, the act is of interest to everybody in the country. If a farmer only destroys his buildings, and kills his stock (a right he has) he not only lessens his own property, but that of the county, State and nation as well; there is less property for taxation and the support of man. We know all cattle are not alike, or of equal value for practical purposes. Some mature much earlier than others, and will make much more flesh from the same amount of food, or assimilate food to flesh in greater proportions, and in a more perfect manner. We claim, and everybody who has given the subject due consideration will agree with us, that a well-bred Shorthorn is better than a scrub. They mature earlier, assimilate food more perfectly, and are more reliable as good breeders. The most despondent breeder will agree with me as a rule, though he may say, and truly, that he has seen some of such breeding, scrubs. Now let us come to the point. Heretofore our country has been filled with good herds of thoroughbreds. The common beef breeder was particular about the bull he used, and would have none but the best. Now how is it? Ah, we see a marvelous change. Many farmers who had good herds a few years ago have sold them to the butcher, and installed in their place a common and varied lot of scrubs, for cattle of some kind they must have to consume the roughness of their farms. This varied lot fatten irregularly, if at all, and at much greater expense than the thoroughbreds, and when fat they are inferior, common beef, consequently bring an inferior price in market. Has not this man not only lessened the production of his farm, the value of his stock, the same as if a part had been killed, as well as the value of the property of the country? He has less money to lay by or spend and has reduced the production of the country and its business in the same ratio of his loss. Many of the heretofore good breeders are now quite indifferent as to the bull they use, and a grade or scrub suits just as well, giving as an excuse that cattle are so cheap it will not pay to be particular. How unreasonable is this idea, for if good cattle will not pay if they net a loss, and I will admit they do in some cases—how is it that poor cattle costing more in feed, and selling for less in the markets, can possibly be considered profitable? Is not this absurd as well as unreasonable? When an article is cheap, the best costing little, can man afford to buy, or keep an inferior thing? Is not this the time to build up and improve herds instead of letting them run down? Does it profit anything to become discouraged in a line of business you must follow, in some form, and dispense with the good and put in its place inferiority? All kinds of business have their periods of depression—have their ebb and flow, and is it reasonable to expect cattle breeding to be an exception? I myself have been looking for better days in this business for more than a year, yet it comes not, up to date, but it will come sooner or later, and those who have held fast to it and improved their stock instead of lowering the standard will reap a rich reward.

SHEEP AND WOOL.

The Progress of Wool Manufactures.

Our wool-growing readers will be interested in an account of the wool manufacturing industry of the country, as disclosed by the census of 1890. We have just received a copy of Census Bulletin, No. 169, which deals with this subject and presents introductory remarks by Superintendent Porter, and a most carefully prepared statistical report by S. N. Dexter North, the well-known secretary of the National Association of Wool Manufacturers. We have known Mr. North personally for the last 27 years and can commend his accuracy and intelligence in statistical inquiries in which he enjoys well-earned eminence. We can present the elaborate tabulations of the bulletin, but we shall set forth deductions therefrom which will give a general idea of the progress in this important line of industry:

Total Capital in Wool Manufacturing in U. S.	$320,417,304
Total amount paid in wages	76,768 871
Cost of materials used	203,768,642
Value of products	338,231,109

The number of establishments reported for 1890 as engaged in the manufacture of "woolen goods" proper, when compared with the number reported for 1880, shows a decrease of 678. The number reported for 1880 for this branch of the industry showed a decrease of 901 establishments from the number reported in 1870. It is explained that this continued decrease in the number of establishments is principally due to the disappearance of the custom or neighborhood carding mills, which formerly carded wool to be spun in families. The number of fully equipped woolen and worsted mills in the United States has considerably increased since 1880, as well as their aggregate machinery capacity.

It is stated that a great reduction has taken place in the market value of the products of the wool industry. The true measure of the progress of the industry is therefore the quantity rather than the value of the product.

The following are the amounts of materials used in the years named:

	1890.	1880.
Domestic wool, lbs	258,757,101	222.991 511
Foreign wool	114,116,612	73,200,698
Shoddy	61 626,261	52,163,926
Camels hair and noils	7,689,801	1,523,119
Mohair	2,136,244	159 678
Other animal hair	16,865,764	6,335,169
Cotton	75,638,865	48,000,857

Concerning the materials included in the above summary and their relation to the total product of the country, Mr. North remarks as follows:

While the bulk of the wool reported was in grease, much of it was washed, and some of it scoured. In making his return of the wool manufacture for the census of 1880, Mr. Geo. Wm. Bond of Boston, the special agent in charge, said: "It is estimated that from 10,000,000 to 15,000,000 pounds should be added to the domestic wool reported, and from 2,000,000 to 3,000,000 pounds to the foreign to reach the true consumption." The habit of buying scoured wool has become more general during the last 10 years, and the present special agent estimates the allowance now necessary in both domestic and foreign at 25,000,000 pounds in order to reach the true consumption of wool as it originally came to market.

Camel's hair, mohair and alpaca are regarded in the trade as the equivalents, the first of Class III, or carpet wools, and the others of superior grades of Class II, or combing wools. The quantity of camel's hair and noils consumed has increased from 1,583,119 pounds in 1880 to 7,689,804 pounds in 1890 and of mohair and noils from 159,678 pounds in 1880 to 2,136,244 pounds in 1890. The alpaca has been lost in the "hair of other animals," which is in the main an adulterant, and the consumption of which has increased from 6,335,169 pounds to 16,865,764 pounds.

The table as presented takes no cognizance of wool contained in the imported yarns consumed by American manufacturers, the value of which is included in the amounts reported under the head "All other materials." The quantity of woolen and worsted yarn entered for consumption in fiscal year ending June 30, 1890 (contemporaneous with the census year) was 3,229,777.83 pounds, valued at $1,844-849.15, an average of 57.1 cents a pound, and may be accounted the equivalent of 9,000,000 pounds of greasy wool.

Adding all these items to the 373,000,000 pounds of foreign and domestic wool above shown, we have an approximate consumption of 434,000,000 pounds of wool in the grease. Similar additions must be made to the consumption reported in 1880 to institute an exact comparison and per cent of increase.

The Department of Agriculture estimated the wool clip of the year preceding the census year at 265,000,000 pounds. The foreign wools entered for consumption in the fiscal year ending June 30, 1890, were 109,902,105 pounds and in the prior year 126,181,272 pounds. The commercial estimate of the domestic clip of the year preceding the census year was 295,779 479 pounds. The census figures of consumption tend to show that the actual clip is above the estimate of the Department of Agriculture and below the commercial estimate.

THE HOME CIRCLE.

Shared.

I said it in the meadow path,
I say it on the mountain stairs—
The best things any mortal hath
Are those which every mortal shares.

The air we breathe, the sky, the breeze,
The light without us and within—
Life, with its unlocked treasuries,
God's riches—are for us to win.

The grass is softer to my tread
For rest it yields unnumbered feet;
Sweeter to me the wild rose red,
Because she makes the whole world sweet.

Into your heavenly loneliness
Ye welcomed me, O solemn peaks!
And me in every guest you bless
Who reverently your mystery seeks.

And up the radiant peopled way
That opens into worlds unknown,
It will be life's delight to say:
"Heaven is not heaven for me alone."

Rich through my brethren's poverty—
Such wealth were hideous! I am blest
Only in what they share with me,
In what I share with all the rest.

—Lucy Larcom.

Mattie's Soupbone Week.

In Two Parts--Part II.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

Mattie was transfixed. She had put away her sewing and had taken brush and comb from a certain corner of the kitchen arranged specially to accommodate Tom when he wished to make a hasty toilet. Who had been telling him anything? From his teasing tone he evidently would as lief as not hurt her feelings. For a moment Mattie's mind was filled with words that would show her vexation—resentment—show her ready even to meet him half way in a quarrel. Then one of Miss Hetty's stories about the Arabian woman and the charmed water came to her mind, and Miss Hetty's closing words, "Men will be cantankerous at times, my dear, so women must try and take them at their best; when they try to quarrel, not encourage them, but just think 'That's the *he* of it,' and never mind."

So, instead of answering back, instead of saying anything for a time, Mattie came and took the lounging, teasing fellow's head in her lap, and began to brush his hair, smiling down at him as he looked up quizzically at her.

Presently Tom, "What's that you're going to tell me?"

Then, with prettiest persuasiveness, Mattie told Tom all about how she had interviewed Miss Hetty, and all her new plans at culinary economics. And frankly, with wittiest detail, she also told him about her investments of the past week at Baston's closing out sale, ending thus:

"Now, Tom, you may scold me if you want, but everything I got is really a bargain—nothing useless—something will help in our clothes, bedding and the table. I know it pinches in this week, but if you can get along I shan't care, for it's roused me to study cooking more than I have. Though I shall feel awfully sorry, Tom, if you miss your steaks and roasts too much. But really, Tom, mamma put me through a great training about bargains; showed up all the foolishness of the typical bargain-hunter the newspapers crack their jokes about. She had one for a neighbor once. And so, Tom, I really *do* think you can trust me pretty well. I'll do just the best I can; and, Tom, you *may* scold me if you want to, and oh!—you big baby, just turn on the other side; there's a spot I can't get at as you are. There! it shall have its poor head brushed. Ha! ha! ha! I haven't told you the funniest part of it all. When I was in the store, Susie Bowers was in there too. You know her mamma is one of those bargain fiends—they both are; get bargains on trust, too, and then sometimes bring them back. Makes the merchants so mad. Well, Susie was in such a rush, specially after a certain bargain in flowered pongee she'd seen some one have who'd been there the day before. And there she was, pestering Mr. Baston himself, and talking so every one in the store could hear her. Baston told her that the pongee was all sold out, but that there was some of the batistes and muslin and other things left. Oh, he was as smooth as oil, and called Sharp to wait on her. I was so disappointed to hear that pongee was gone, but, while Susie was shouting at Sharp, Mr. Baston called me aside quietly, and took me back behind a pile of ginghams, and showed me the loveliest remnant of madras, and all that was left of that very figured pongee I wanted, and a certain shade of batiste—all just what I wanted to finish off that upstairs bedroom—and he offered it all to me as cheap, *as cheap!* My! Said he was away when I was married, and he wanted to do something for me—you know he's been in town ever since I was a little girl—and he *gave* me a red damask tablecloth and set of napkins to match, and *half a box of gloves*, assorted colors, just my size! And I got some toweling and some half-bleached damask at *such* a bargain. But, oh! I must laugh. Susie pounced upon us, just as Mr. Baston was doing up my things. And she fairly screamed, 'There's that stuff—just what I wanted. What did you say it was all gone for?' And Mr. Baston very quietly said, 'Excuse me; most of this order was engaged by Mrs. Bailey yesterday.' And Susie just *glared* at me. Ha! ha! ha! Tom, she'll *never* forgive me for getting you."

All this time Mattie was chatting, she, with deftest, softest touch, brushed and combed Tom's hair. It was his weakness, his greatest delight, from a child, at any time, but specially when tired or headachy, to have some one brush his hair, if they would, by the hour. Mattie found this out when he was courting her, and, like a wise little woman, resolved to pet him about it—*advantageously*.

And Tom, well, he turned and turned about, in one comfortable position after another, on the big, easy, high-backed bench, cuddling his head in his wife's lap as she brushed and brushed, feeling rested, soothed, conciliated, abashed, charmed, repentant—in short, *tamed* to Mattie's sweet will.

When he did speak, he said: "Go ahead, little woman, and try your experiments. I'll try and be good and not grumble. And don't mind me if I do. I'll be ashamed enough of it afterward. And as for steaks, well, I have a weakness for meats, I know; perhaps I'm too fond of it—eat too much. Anyhow, Dr. Allen was in yesterday—had me order two new surgical instruments for him—and he said, looking me over, up and down, sharp (you know the way he has), 'Young man, keep yourself in good fighting trim, and beware of the fleshpots,' and, I declare, it's just come to me what he meant. My! your supper was dainty and filling enough to-night. Go it, Mattie. Ah! yes, you're the girl for me, every time."

* * * * *

It was part of Mattie's soupbone that Tom smelt cooking the evening described above—the *bone* part, with a bouquet of sweet herbs, two cloves, three peppercorns, three little onions, and a carrot and turnip. Of course, as an eminent French professor has said, one must have only a certain proportion of bone to meat in soup, "the less bone the better;" but Mattie has found that where one "needs must," a very good stock for a variety of soups can be made from "a very bony shin of beef."

For breakfast the next morning Mattie had the Hamburg steak made of the best of the lean meat cut from the soupbone, an omelette Miss Hettie had shown her how to make, mashed potatoes, quick muffins and coffee. Tom couldn't bear mushes of any kind, and oatmeal was his special abhorrence. Muffins and pancakes he approved of. As to the omelette, Miss Hetty had told her when she wanted one egg to seem like two, or two like four, and so on, to make an omelette this way: Take two eggs, heat the yolks well, add two tablespoons of rich milk to them, pepper and salt to taste, then the whites, beaten stiff and lightly stirred in. Have an agateware frying-pan, not too hot on the stove; put in a tiny bit of sweet butter, just enough to grease the pan; pour the omelette into the frying-pan, let it spread all over the bottom, and brown delicately; then fold over on itself, till 'tis shaped like a half moon, and put in the oven for a little to "set." Or the omelette may be divided, a little at a time put in the slightly greased pan, and folded, or rolled over and over, as it cooks.

Well, this was Mattie's first breakfast under the new regime. Tom praised everything, eat heartily, and went striding to his work, whistling jollily.

This same forenoon, Mattie put the rest of the lean meat from her soup bone into her "Berlin," and set it to stew gently, seasoned with salt, pepper, a dash of curry, and a heaping tablespoonful of Chili sauce. The meat thus cooked was deliciously flavored, tender as chicken, the long, slow cooking, never allowing it to boil violently, leaving the "gristle" so it would melt in your mouth like jelly. About a third of this meat, made into a meat pie, with a light biscuit crust and plenty of gravy, was the *piece de resistance* of her evening meal. It was preceded by soup "a la Julienne," and accompanied by potatoes and a salad of chopped celery and onion (left over from the vegetables used for the soup). For dessert, when she made the crust for her meat pie, she made more than enough. This extra dough she patted out into a pie tin and baked for a shortcake, the fruit for which was furnished by one of her bottles of canned peaches.

Shall I weary the reader with details? Let me try and be brief in telling of the new points of view opened up to Mattie this week in her role as economical cook. Miss Hetty (dear, modest, reserved Miss Hetty, who was always surprising every one who long knew her by her really encyclopedic knowledge of all matters pertaining to that which makes this life more worth the living), was as a "bright and shining light" guiding Mattie's footsteps in these new paths of housewifely lore.

All Mattie had known how to cook was good, so far as it went. She could broil a steak, fry ham and eggs pretty well, make light baking-powder biscuit, and her silver-layer cake, with "caramel" filling, was always called for at the "teas" and "socials" given by her church. Tom, who had "roughed it" in the foothills after deer, and hence had often made himself a cup of tea or coffee, had taught her to make these two beverages in a way to suit him. Let me tell you, *sub rosa*, that the first time Mattie made a cup of tea for herself and Tom, she put in half a cup of tea into the pot for two, and carefully boiled it for half an hour. As the sensational novelist would say, I draw the curtain over Tom with that cup of tea.

But Tom was very much in love with Mattie, and Mattie was very much in love with Tom, and she was a bright, determined little creature, too; so the vicissitudes of this week acted as a stimulus and left her victorious.

To her soup-bone order of Monday was added on Thursday ten cents of steak (for Tom), and on Saturday, a thirty-cent rump roast (well hung). That used up the sixty-five cents for meat. The liquor from her first soup bone lasted her nearly all the week, and she never made the same kind of soup twice. She had a cool cupboard on the north porch of her house, made mostly of wire-netting, in which her cold meats, broth, etc., kept nicely, though of course she watched them so as to reheat when necessary.

Her method of procedure was this: Each morning she went to Miss Hetty and told her what she had in the house, and how much of it. Then she and Miss Hetty planned the meals, Mattie making notes and writing the necessary recipes and instructions. Usually before Tom came home in the evening, Miss Hetty stepped over to see how Mattie's "dinner-tea" was progressing. Luncheon was made an easy affair. Tom had so little time for it that he readily agreed to be perfectly satisfied with such simple dishes as a cup of coffee, bread and butter, or toast, with fruit. Sometimes there were warmed potatoes, and cake and cheese, or a piece of pie.

Miss Hetty was forever talking to Mattie of the "leftovers" and of "cold-meat cookery." And Mattie would pout and say, "There won't be any 'leftovers' with the little I have, nor any cold meat; it'll be a 'and-between-them-both-they-licked-the-platter clean,' and a 'kiss-the-cook' business with me all the week through. Tom's already at his jokes; says he's weighed himself and is going to tell me at the end of the week how much he's lost, and wants to know if I can 'take in' his Sunday suit if it hangs like a shirt on a beanpole at the end of the week."

But Mattie found there were "leftovers" that she could utilize most advantageously. I am most tempted to give her bill of fare for the week, but the different dishes would require so much explanation, the most indulgent of editors would "shut right down" on me, as taking too much space for so humble a subject. But I will tell some of the things Mattie learned, and began to learn.

The making of scolloped dishes was a revelation, not only as to attractiveness and variety, but as to use in completely disguising the "leftovers." Raw or cold boiled potatoes, sliced thin, laid in layers in a buttered dish, each layer seasoned well, and a little flour dredged on, with plenty of bits of butter, or slices of bacon on the top layer, and the dish filled with milk or broth, then baked slowly in the oven from half an hour to an hour and over, according to whether the potatoes were raw or not, was the plainest of these dishes she was initiated in. Then there were scollops of minced meats of any kind, "layered" with bread or cracker crumbs, or broken biscuits, or remnants of meat pie, sometimes seasoned, besides the usual salt and pepper, with grated or chopped onion, and wet with milk, water or broth, or thinned gravies, or white sauce, according to occasion. Sometimes the layers of crumbs or crackers alternated with bits of cheese, and strained tomatoes were poured over the whole, then baked; or, a custard of eggs and milk was poured over, making a sort of "ramakin," with which name she quite electrified Tom. But generally she made Tom laugh by calling all her dishes "Olla-Podrida" and "Pot-pourrie."

Then she had "O-*everything*-don't-ask-me-Tom" salads. These last caused Tom to get up a conundrum: "When does the *Omniferous* and the *Omnivorous* meet? When a fellow eats one of Mattie's soup-bone meals."

She also found Tom very fond of the many dishes she learned to make with toast as a basis—hash on toast, or spicy stews of meat and vegetables, or various omelettes—cheese omelettes, or omelettes "stretched," as Mattie phrased it, with milk and flour and bread crumbs, or seasoned with minced meat, or onion, or parsley, etc., etc.

She also learned a dumpling rule for pot-pie, which "never went back on her," and which "hit" Tom in a particular "right spot." I will give the rule: One teacupful of flour, one teaspoonful of baking powder, and sweet milk (or water) enough to make a soft dough. Roll out thin and cut in squares, or drop from a spoon. Lay carefully on your boiling meat, cover close, and cook 10 or 15 minutes.

Then she learned how to use the quick biscuits, she already knew how to make, in such a variety of ways, notably, crust for meat pies and for fruit puddings. "Duffs," Tom called the last, and he highly approved of them, and liked them cold for his luncheons with sugar and cream, or some pudding sauce.

Then there was a "pilau" of rice—of all dishes cheap, appetizing, and easy of digestion, which fitted into her culinary economics most aptly, just rice boiled in liquor that meat of some sort had been boiled in (it may be thinned, but *must* be very highly seasoned), boiled hard till the grains swell and the whole mass is light, then the liquor drained off, if any extra, and rice steamed in the oven in the colander for a little. The extra liquor can be used in soups, and the rice left over from one meal be made at some future meal into dainty "rice fritters" by the addition of eggs (one egg, whites and yolks beaten separately, to one cupful of rice), a little flour added if rice is too thin, and a little milk if too stiff, season highly and drop from a spoon.

Then Mattie learned that eggs could be cooked in different ways—so many of them—a different way every day in the week, and almost every day in the year.

Then she learned two new cake rules—plain, cheap, quickly-made cakes, that served her ever after, in various capacities, more satisfactorily, more creditably, than richer varieties. The first she called "Sudden Company Cake." Proportions: Four eggs, one and one-half or two cups of sugar, one-half cup water, two cups flour, pinch of salt, flavoring to taste. Beat sugar and yolks together, first. If hard, coarse, granulated sugar is used, have the water hot and pour slowly, stirring continually on the beaten sugar and yolks. Then add the flour, with the baking powder sifted through it; lastly, the whites of the eggs, beaten stiff. Bake in a rather quick oven. May be baked in a loaf, or in layers, with jelly or custard between, or cut in pie-shaped pieces and passed warm, with jam or preserves, at the tea-table, or used as a cottage pudding, with a sauce, at a dinner dessert.

The other cake she called "Guess Again Cake," because her lady friends never could guess exactly what class of cake it went with, always taking it to be much richer than it was. Proportions: One cup sugar, two eggs, three tablespoons melted butter, one-half cup sweet milk, one cup flour (rounded), two teaspoons baking powder. Sift the baking powder into the flour; pour melted butter on the sugar and cream them together; then add the yolks, well beaten; then the milk, and beat all well together; lastly, add flour and whites, alternately, quickly; flavor to taste, and bake in a loaf or layers in a rather moderate oven.

But, more than all, Mattie learned, during these days of wide-awake effort, how much it is, the little things that count; how much women's wit and ingenuity, practically applied, can help her "other half" in the home-making which husband and wife both owe each other to make the first duty of life.

[*Concluded next week.*]

A WISE and good man says: "Don't make your minds sponges, saturated with the putrid waters of the goose-pond of gossip. Hear as little as you possibly can to the prejudice of others; believe nothing of the kind, unless you are forced to believe it; never circulate or approve of those who circulate loose reports; moderate, as far as you can, the censure of others; always believe that, if the other side were heard, a very different account would be given of the matter."—Interior.

"From Jest to Earnest."

There was a timid knock on the door of my law office the other day, and in response to my loud summons to come in, there entered the most forlorn-looking man I ever laid my eyes on. He had a scared, hunted look on his face, and kept glancing back over his shoulders, as if he expected to see a detective appear to arrest him at any moment. He dropped into a chair with a sigh of relief and said:

"You're a lawyer, aren't you?" I assented. "Well, I just want to tell you my story, to sort of relieve my mind, and perhaps you may be able to give me some advice.

"You see, last summer I was staying at the seashore at one of those newspaper-joke hotels, where there is only one man to every 26 girls. The best of it was that the girls at this place were of the most entertaining sort, so on the whole I had a very agreeable time. They read to me, fanned me, made me pillows, sewed on my buttons, and did their best to make my time pass pleasantly. But, as you will see, I paid dearly for it in the end.

"One day I took six of the prettiest girls out for a little sail on the bay. Everything went smoothly for a time. The girls were just adorably frisky, the lunch was good, and the chaperone went to sleep.

"We didn't notice how fast the hours went, and by the time we got back to the hotel the tide was so low that we stuck fast in the mud about a hundred yards from the beach. We had no small boat with us, and all our shouting brought no one to our aid. The water was too deep for the girls to wade ashore, so there seemed no way out of the difficulty except that I should carry the whole party to the beach, one by one, in my arms. I suggested this plan to the girls, and, in fun, said that in order to make such a proceeding perfectly proper, I would formerly propose to each girl and become engaged to her. They laughingly agreed, so I plumped down on my knees before each one in succession, chaperone included, and proposed and was accepted in due form. Then I carried them ashore.

"I left them on the piazza and went to my room, congratulating myself on my originality and large head. That night I dreamed of carrying perishing maidens around in my arms; sometimes they had blue eyes and golden hair, and sometimes their eyes and hair were dark, but they always clung closely to me and put one soft arm lovingly about my neck.

"Rather late the next morning, as I strolled downstairs into the hall, Brown, one of the three men staying at the hotel, came up to me and said:

"'Well, old man, I congratulate you; I know you can't be very sorry.'

"'Why, what's up?' said I in astonishment.

"'Read that and you'll see," Brown replied, handing me a Philadelphia paper of the evening before. I took it from his hands and read:

"'Mr. J. T. Chubb, one of the oldest and wealthiest business men of the city, died suddenly from apoplexy while at his breakfast Tuesday morning. . . . The deceased has no near relatives, and his property, as there is no will, will go to his nephew, Mr. Thomas Cheever.'

"Good gracious! That was my rich, old Uncle Jim; he was worth $500,000 at least. There had never been much love lost between us, and really I couldn't cry. Just think of it! I was a rich man; I wouldn't stay at that infernal hotel another day; I would take the train straight for B——, and tell dear little Dora that we needn't wait any longer, that I was now a rich—

"'Good morning, dear. Did you sleep well after yesterday's excitement?'

"I jumped out of my chair as if shot. There was Miss B——, one of my sailing party, standing before me.

"'It was sad about your poor, dear uncle, wasn't it? But then,' she said, blushing sweetly, 'I will try my best to console you.' I bolted for the stairway, but ran plump against little Miss L——, another of the sailing party.

"'Why, Tom,' she said, 'I suppose I ought to call you Tom, now,' looking bashfully down at her toes, 'where are you going so fast? I was just about to hunt you up and tell you how sorry I was to hear of the death'—I tore away from her and fled to my room. This was horrible! Those girls had read the notice in that paper and they meant business; they were going to make me keep to my engagements. Just think of it, seven breach-of-promise suits on hand, including the chaperone's, and there was dear little Dora patiently waiting for me at B——.

"I thought of suicide, but was afraid to try it. I locked my door and tried to sit down and make some plan of escape. It was useless—I couldn't think. The girls kept knocking at my door and sweetly asking after my health, suggested gruel, rice water and hot bottles. I became desperate; after nightfall I took what money I had, dropped out the window, and walked to the railroad station. Since then, I have lived in constant terror. I have changed my name and grown whiskers, but still I know if I ever meet one of those girls again, she will fling her arms around my neck and claim me as her own."—Percival Hall, in the Harvard Advocate.

Young Folks' Column.

Pranks.

Written for the RURAL PRESS by DUANE MORLEY.

"Speaking about boys and their many pranks reminds me," said a friend of mine, "of a family of my acquaintance in Los Angeles in the earlier or less recent days of that city. Winans was the name, and the boys were Jackson, Tiffany, Jared and William—or 'Little Will,' as the latter was often called. Of course Jackson was called 'Jack;' Tiffany, 'Tiff;' and Jared, 'Jed.'"

The family place was on San Pedro street, not far out, where they had considerable acreage, a good, substantial brick dwelling, and a large unused barn—save as 'twas improvised into a sort of a theater by the boys. Stately palm trees fronted the place along the street side, and a pair of them, called "The Twins," of great height, loomed up near the back door of the house.

"Father, what makes this wall sound so hollow?"

"Keep quiet, Tiff, and wait your turn to talk."

"Yes, but I must know," insisted the boy.

"Built that way, doubtless, to save the rooms from dampness," was the farther's answer.

"Yes, but it sounds hollow right here, and nowhere else.'

It was evening. Tiff's chair was tilted against the wall and he was in it, half the time listening to his father's stories to a curious neighbor about old Mexican times, and the other half sounding the wall with his strong-handled pocket knife. Many a time had the father answered the boy's anxious questions, but never to the boy's perfect satisfaction.

One day the parents were gone on an all day visit, and Jack and Jed on their horses to look after stock in the Calmenga pass, while Tiff and little Will were left to keep the home-place during their absence.

"I expect that Tiff will tear the house down while we are away," said Winans to his wife, after they had got some distance out upon the road.

"Not so bad as that, I hope," said Mrs. W., "though Tiffy is strangely curious about that hollow wall."

"I'll tear it down myself, wife, pretty quick now, just to get rid of the boy's everlasting questions," was Winan's remark.

At home, Tiff and Will played about a bit; plucked some old ripe oranges, leaf-hidden in the treetops; rendered a mock tragedy on the boards of the barn theatre; and finally, Tiff began to sound the walls of the old brick house with the face of his father's hammer—not only all around the back and ends of the building, but the front also, where it abutted closely against the street.

"Only here does it sound hollow," said Tiff, as he completed the inspection, "just here, Will, at the back, and I'm going to break it in."

"Don't, Tiff," pleaded Will in alarm; for, young as he was, he feared his father's anger in the event of the breaking in of the wall.

The wall was almost irresistible; but Tiff got an iron maul and a huge wedge his father had, and, with these, finally made a small opening some feet from the ground in the outer wall—for it was really hollow—and he enlarged it by prying loose the under courses of bricks down to the ground.

"It doesn't look larger 'n mother's china closet," said Tiff, as he first looked into the cavity, and when fully exposed, it really was not. On a pile of rocks at the base lay a roll or bundle of skins, as shown when dusted.

"Now we've found something," exclaimed Tiff gleefully. Sure enough, they had; for when unrolled, the bundle proved to contain a pair of rusty, old-fashioned pistols, several dirks, and a leather sack full of something heavy and closely enwrapped in strips of rawhide. Dragging it into the kitchen and severing the strips, out rolled a large quantity of Mexican dollars, a double handful of Spanish doubloons, and several other foreign coins. While the gold coins were strange to Tiff, the Mexican dollars were familiar; for he already had similar ones in his cabinet.

The boys stacked the coins up in regular bank fashion on the kitchen table, laid the old rusty dirks crosswise on the piles; and then on guard, playfully swaggered about with the pistols in their hands. This exercise they varied with lunching, and an anxious peering up street for the return of their parents, or down street for the coming of their brothers. Finally the parents appeared in sight, several blocks away, and Will started to meet them.

"Don't say a word about the money," enjoined Tiff, as Will hurried away. Nor did Will mean to broach a word, but his constrained silence was noticeable, and he was so closely questioned about how things were that he blurted out:

"Tiff's broke in the wall," and immediately after, "He's got lots of money."

When the parents arrived, the find proved to be several hundred dollars worth, actual value; so, of course, the prank—if I may call it that—was easily forgiven. And Tiff's share of the spoils bought him a driving horse and a light, strong, buckboard wagon.

"Your sugar, Mrs. W., has little force; I've supplied my cup twice already, and yet I get no taste of it. Is it the beet variety, Mrs. W?"

I was taking tea with the family that evening, and the boys were ranged on the opposite side of the table, eying me closely. When Mrs. W. said in reply that it was not beet sugar, the boys burst out laughing and fled from the room, shouting:

"Sold, sold. We've sold Mr. Lord this time."

They excused themselves, as far as I was concerned, by saying that the sell was projected, not against me, but the dressmaker, who had, unknown to the plotters, been called away. The substitute was marble dust, placed when the cook's back was turned.

Eventually, in cutting the place into lots, several rows of orange trees were removed, and the trunks saved to be sawed into plaques or slabs. The work was mine and from the sawing—done while the boys were at school—a fine lot of sawdust, much in appearance like yellow meal, was had. As I, too, was boyish, I saw a way to return the compliment of the marble dust prank, and so formed a conspiracy with Mrs. W. and the cook. One evening, knowing looks were exchanged by the seniors at the table, as they lingered long over the course of plain food. Soon the boys called out:

"Mother, can't Mary serve us the dessert?" The permit was given, and a plate of brown cakes was set before the boys. Even culinary art had given them a certain tasty odor. Jed and Tiff took a cake apiece, sampling them ravenously, but immediately spitting out the mouthfuls, regardless of the lack of manners.

"They're not hot, are they?" asked Jack. With that he took one and tasted it, but instantly ejected the mouthful, suspecting the hoax. Then he left the table, followed tumultously by the other boys, all of them chagrined over the way they had been fooled, but confessing that it was a fair return for the marble-dust sell.

Mrs. W. was soon afterward left a widow, and the boys, grown more mature, cared for the stock, besides looking out for all home interests. In the midst of one of the dry seasons—as the summers are called—the boys planned a trip overland to the Gila River country in Arizona. As the boys were nearly men grown, and as Tiff was very importunate, Mrs. W. finally gave her consent, but with many words of caution about carefulness. At first, readily finding water along their route, they finally grew careless, and while crossing the desert their supply gave out, and they suffered. Changing their course somewhat, they came alongside the railway, which pushes its way eastward to Yuma and beyond.

"Now," said Tiff, "we'll have water."

"How?" the boys chorused.

"I'll show you," said Tiff. Unhitching the horse, the boy overturned the buckboard across the rails of the railway, and then, mounting it, he waved their crimson dust cloth at an advancing train.

"What does all this mean?" asked the train hands as the locomotive slowed up, its nose against the obstruction.

"We're out of water and must beg some of you," was Tiff's answer. Water was given them, their proper route designated, and, the obstruction removed, the train sped on. Finally the boys reached the Gila river country—the river just before them.

"Now for a bath," they cried in chorus, and, soiled and dust covered, no wonder they proposed a bath. And careless Tiff bestrode his horse as grandly as a Spanish cavalier, and urged him through the waters to a bank in the center of the stream.

At that point the boy stood erect upon the horse and made a pompous speech, closing it with something about "more worlds to conquer." Then he shouted:

"Now for the other side."

The current was deep and strong, and poor Tiff was swept from the horse's back. As the horse climed the opposite bank riderless, Jed looked up and exclaimed:

"Why! where's Tiff?"

"Sure enough!" said Jack. Then, hurriedly turning his gaze down stream, Jack saw the boy swept onward and downward like a feather, one bare white arm held up imploringly. Strong Jack only secured Tiff's lifeless body after severe battling with the torrent of waters. It was Tiff's last prank. A telegram to Mrs. Winans from the nearest station, preceded their own speedy but sorrowful trip by rail.

Domestic Economy.

To Make Tea.

The delicate leaf of tea should never touch metal. It should be kept in paper, wood, glass or porcelain. To make it, put a small quantity in a porcelain cup, fill the latter with boiling water, cover it with a porcelain saucer and let it stand three minutes.

Then, if you desire to be an epicure, drink only the upper layer of the golden liquid, throw the rest away, rinse the cup, and begin drawing *de novo*. Never use sugar any more than you would sweeten Chambertin or pour molasses into Mumm's extra dry. Do not use milk. It ruins the flavor of the tea and the combination injures the stomach.

Above all things do not boil tea. The heat drives off the perfume, spoils the flavor and extracts the tannin, the astringent principle. If the boiling be done in a tin or iron pot, the tannin attacks the metal and makes the liquid black.

Never let the tea stand except in a tightly closed porcelain pot. Standing changes it from a delicious, wholesome beverage into an ill-tasting and bitter liquor. Better make it in small quantities, and make it often. In summer sip the tea boiling hot, with a slice of previously peeled lemon, or, nicer still, of orange without the rind, floating in it.

Beware of green tea! It is the unripe leaf, and bears the same relation to the real article that the green does to the ripe peach. The green tea of commerce derives its color from being cured, or rather killed, on dirty copper pans, from being mixed with weeds and shrubs, from being stained with indigo and chrome yellow, from being colored with verdigris, grass juice or chlorophyll.—From Consul Bedloe's Report to the State Department.

TO COOK A YOUNG CHICKEN.—Scalding water is too hot for young chickens. Put in a pint of cold water to half a gallon of hot. When scalded, pick the chicken clean, taking off all the pin feathers. Put it in a pan of cold water and wash off what feathers remain; then hold it over the flames and scorch off the hairs. When ready to fry, put in the pan two spoonfuls of lard and one spoonful of butter. When hot, have the chicken cut up and well drained; salt and pepper, and roll the pieces in flour, and brown them well on both sides, being careful not to burn them. Cover tightly, and place on the back of the stove, with a very little water, to steam a few minutes. Have ready one pint of cream or milk, in which one spoonful of flour has been smoothly mixed. Take out the chicken, and put the pan over the fire. Stir in the milk and flour, and this makes good gravy.



PATRONS OF HUSBANDRY.

NO reports have reached Grange headquarters in this city relating to the Grange canvass during the past week. The Worthy Master has not been in the city since last report, and the Worthy Secretary left on Monday for the central part of the State, to be absent a week. All the news from the field that has been received is embodied in the notes given below.

LECTURE APPOINTMENTS.—Past Masters D. Flint, Wm. Johnston and Hon. Thos. McConnell were to speak at Elk Grove last Saturday; B. F. Walton at Pennington, May 2d, and at Gridley, May 3d.

NATIONAL GRANGE MEETING.—It was left with the Executive Committee to decide by May 1st at what place the National Grange session shall be held, and Patrons all over the Union are interested to know whether Concord or Manchester, N. H., Rochester, N. Y., or Washington, D. C., will get it.

WE have been informed that we incorrectly stated in last week's RURAL that Past Master Steele was in attendance at the meeting of Carpenteria Grange on the forenoon of April 9th. Past Master Overhiser was the only representative present.

CORVALLIS GRANGE, Or., May 7th, will discuss "Corn in Domestic Economy." Mrs. Mary Stewart and Miss M. Small will lead in the discussion. Mrs. S. L. Shedd will read an essay. May 21st, "How to Waken Public Interest in Schools" will be treated by J. B. Horner and Fred Yates; reading by Mrs. J. B. Horner will follow the discussion.

NATIONAL GRANGE LECTURER.—Mortimer Whitehead, who has served so long and popularly as Lecturer of the National Grange, resigned some time since to take a place as an Inspector, with special reference to its work for the farmers of the United States, in the National Weather Bureau Service. We are sorry, indeed, to have Bro. Whitehead even lessen his labors for the Grange. It would seem as if his place could never be really filled. We believe he did faithful and excellent service in the Census Bureau. That he may be as successful in his new position as in his former services for the welfare of the farmer, is the wish of numerous and true friends.

COL. J. B. ARMSTRONG, who made the magnificent donation of the 100-acre Redwood Park near Guerneville, Sonoma Co., is an old Patron of Husbandry. We would suggest that he deliver an address on forestry at the coming session of the State Grange at San Jose.

CHAIRMAN HATTIE S. JONES, of the State Grange Committee on "Woman's Work," requests that the Subgrange Committee's reports shall be forwarded to her not later than September 1st, in order that she may give the status of the work of the current year in her annual report to the State Grange.

A. T. DEWEY, Sec'y, started for a week's visit to Tulare county and vicinity on Monday last after penning the foregoing notes.

Children's Day.

The following communication from the undersigned is just received by the State Secretary:

DELTA, O., April 25, 1892.

To the Patrons of Husbandry of America:—In accordance with a resolution adopted at the 22d annual session of the National Grange, I hereby announce Saturday, the 4th day of June, as "Children's Day," and I hope every member of our Order will earnestly cooperate to make it an occasion of pleasure and profit, not only to the children, but to every member of our Order. Committees should be appointed at once to arrange program and make necessary preparations for the occasion.

It has been suggested that "Flora's Day" be held in connection with "Children's Day," and I see no objections thereto.

State Masters are requested to supplement this proclamation and lend all their influence to interest all in the exercises of the day. For good and sufficient reasons, State Masters may select some other date within their jurisdiction. Fraternally,

J. H. BRIGHAM,
Master of National Grange, P. of H.

The Graham's Grove Picnic.

The Grange picnic at Graham's Grove, near Sacramento, is said to have been one of the most successful ever given in the State. The weather was not perfect, but the threatening skies seemed to have no terrors for the people, who came out in immense crowds. Fully 2000 people assembled, and the day was in every way a complete success. There was a series of prizes for athletic sports, and speeches by Worthy Master E. W. Davis, Assemblyman Gillisdoty, and State Lecturer J. D. Huffman.

Popular Election of Senators.

OFFICE OF MASTER,
NATIONAL GRANGE, P. of H.
DELTA, OHIO, March 21, 1892.

To the Members of the Order of Patrons of Husbandry:—The National, State, Pomona and subordinate Granges of our country have repeatedly endorsed the policy of electing U. S. Senators by a direct vote of the people. The amendment, providing for it, will be submitted to the various State Legislatures in the near future, and be ratified by those bodies, if the *people* do their duty.

But why wait for this change in the Constitution? We need this reform *now!* The people should have more live men in the Senate, who are in close touch with them. There are several members of that body who should be retired to enjoy the wealth which was the means of their elevation to an important position, for which they had no especial fitness.

These men never would have been chosen by popular vote. We should do the next best thing to a direct vote under an amended Constitution, which is to insist upon the nomination of candidates for U. S. Senator, in States which will elect this year, by the various political parties with which our members are connected.

If we will agitate this matter sufficiently at once, political parties will hardly disregard the wishes of the people. If we will move, others will join us, and the movement will become irresistible. The farmer fills a larger space in the eye of the shrewd politician than ever before; and now is the time for action. A few weeks more and it will be too late for this year.

We should also take a lively interest in the nomination and election of Representatives. It is of no use to petition to men who turn a deaf ear to our cries. Nominate friendly men in your party conventions. *Elect friendly men at the polls*, and then all your reasonable demands will be granted. Retire every "People-be-damned" man, in convention if you can, at the polls if you fail in convention. Ballots are even more effective than bullets. If the people fail to make proper use of the former, the time may come when the latter must be used to "Keep the Jewel of Liberty in the Family of Freedom."

No more important campaign was ever entered upon by a patriotic people, than the one just before us. The people must learn to distinguish between sound argument and sophistry. They must not mistake the railing of the demagogue for the inspired eloquence of the true patriot and honest citizen. No order or organization has done more to qualify farmers to make wise use of their political power, than that of the Patrons of Husbandry. We are proud of our past, intensely earnest at the present, very hopeful of the future. Fraternally yours,

J. H. BRIGHAM.

Pomona Grange.

We find the following account of the meeting of Pomona Grange in the Sebastopol *Times:*

At the meeting of Pomona Grange in Two Rock Hall the 20th inst., the various towns of the county were well represented. Messrs. G. N. Sanborn and Martin Litchfield represented Sebastopol Grange. Reports from the Grangers showed prospects good for grass, grain, fruit and hops throughout the county. After the usual order of business a harvest feast was partaken of, which was elegant and bountiful. It was decided to have a grand three-day's picnic at Dillons beach, near Tomales, commencing Thursday, July 7th. The exercises will be held Friday, July 8th, and great preparations will be made for the affair, which will be known as Children's Day.

WRITING to the State Secretary from Edna, San Luis Obispo county, Mr. G. W. Steele says: "About the middle of May we are to hold a joint picnic of the Grange and Alliance at Arroyo Grande. I have just returned from a trip across the mountain into the eastern portion of this county. Am sorry to say crops look poor in that section. Much of the wheat in the Cholame Valley will make nothing. About Creston crops look better; wheat will make about half a crop."

A MAN or woman who is fondest of picking flaws in other people, is so because he or she has a larger than usual proportion of them, and is kept busy in this way in trying to apologize for them.—W. C. Gray.

A PURE heart at the end of life and a lowly mission well accomplished are better than to have filled a great place on the earth and have a stained soul and a wrecked destiny. J. R. Miller.

THE question is not, "Art thou in the nobility," but, "Is there nobility in thee?" Anon.

FARMERS' ALLIANCE.

Senator Peffer on the Currency.

The Chicago *Inter-Ocean* of April 26th has the following letter from Senator Peffer addressed to the editor:

Replying to your request under date of the 5th inst. in relation to the supplying the place of National Bank circulation, I have to say that in my own judgment the best substitute is what the people of Kansas favored 14 years ago, namely, United States notes, commonly called greenbacks; for, as you know, National bank notes are redeemable in United States notes. I think it would be well to abolish the whole system of bank note issues. No banking institution should be permitted to issue anything which is to be used as legal tender money unless the issue is supported by the power and the credit of the Government, and the material used, whatever it may be, should not be redeemable in anything. It ought to go out to the people as money, full-fledged, ready for duty, without any weight or impediment or conditions of any sort whatever. What we use as money should be absolutely free from all conditions, so that there could be no "runs" on banks in time of stringency, and no panics because debtors are unable to obtain legal tender money. I believe that the time has come to nationalize our money. We took one long step in that direction when we adopted our national banking system. We taxed State bank notes out of existence, substituted a national currency for a purely local currency, and it was only a short time after embarking in this new enterprise until we discovered that the bankers of the country were masters of the financial situation. We find that instead of serving the people, they served themselves. In 1872 there were $358,000,000 of bank note circulation. Since that time about $240,000,000 of it has been retired, not because the people did not need the money, but because the banks realized a great profit from the sale of their bonds at a premium, the bonds that they had deposited as security for circulation. Our experience and that of other nations has been that banking corporations are private schemes for profit to individual persons, and our observation has taught us that there is only one safe way to avoid the dangers to which that sort of financial management subjects us—that is, for the nation itself to prepare its own money, every dollar of it. Issue it to the people directly through Government agencies, wholly without the use and intervention of banking corporations or other private agencies.

You understand, from the foregoing, that I would not only substitute United States notes, or Treasury notes, if you choose, for national bank notes as they are being retired, but I would substitute that sort of money for all bank issues; and I would even do more than that. I would not make money out of a promise to pay—that is to say, I would not write out a promise to pay money and call that *promise* money; but I would use a piece of paper just as we are now using a piece of gold or a piece of silver, and make that money, providing in the law what its functions shall be. That puts the influence, the credit and the power of all the people behind the money. Then we will have gold and silver and paper at par one with the other, and that, if we will reduce rates of interest down to the level of profit on labor, so that men can make as much money farming or blacksmithing or carpentering as they can by lending money, will give us a safe currency, a sound financial system, and no more money panics.

Yours truly, W. A. PEFFER.

The Alliance and Prohibition.

At its last meeting Valley Center Alliance adopted the following preamble and resolutions:

WHEREAS, The call from the State People's Party Executive Committee to the County People's Party Convention held at Escondido on April 12th demanded election of delegates upon State platform; and

WHEREAS, Said platform is not in accord with the National, as endorsed at St. Louis, by its adoption of the woman's rights and temperance planks; and

WHEREAS, We believe that our Alliance brotherhood will be thus burdened in its infancy by too much of minor details, to the injury of our cause in matters of so much more weight and importance, and that the State and National platforms should conform to each other. And, further, that we recognize that California is not a prohibition State, and the adoption of a temperance plank at this crisis would be suicidal to our success, and wholly inexpedient; and further, that though these delegates were elected according to the State call, they are but the representatives of the county brotherhood and should bring about erasions or amendments in accordance with the petitions of a majority of their constituents; therefore be it

Resolved, That we, the Valley Center Citizens' Alliance, do earnestly and respectfully petition our delegates to do their utmost to have our State platform conform to that of the National, by discarding the above two planks, particularly the latter.

Letter From Mr. Dore.

FRESNO, May 1st, 1892.

TO THE EDITOR:—I notice in the RURAL PRESS of April 23d. that the statement is made that I am to be the People's Party candidate for member of Congress from this the 7th Congressional District.

Please allow me to say through your paper, that I am not and *positively will not be* a candidate for that or any other office at the coming election. Very Truly Yours,

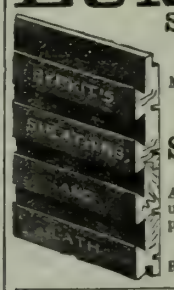
JOHN S. DORE.

An Object Lesson in Stock Jobbing.

In an address at an Alliance meeting at Walnut Creek on April 23, Prof. Fowler of Clifton said:

That the invasion of English capitalists has cost us more money, hard times and misery than our civil war did. That Great Britain, Austria, France, Germany, Belgium and other nations, have a governmental system of telegraphy, while we are compelled to pay to the Western Union Telegraph Co. an annual dividend of from 350 to 420 per cent on its capital for the use of its lines for both public and private purposes. In 1858 this company started with a capital stock of $317,000. In 1866 its dividends were over $17,000,000. In 1870 its dividends were $41,000,000. In 1891 its capital stock had been watered up to $100,000,000. Under a governmental system of telegraphy, a message of ten words could be sent to any point in the United States for five cents.

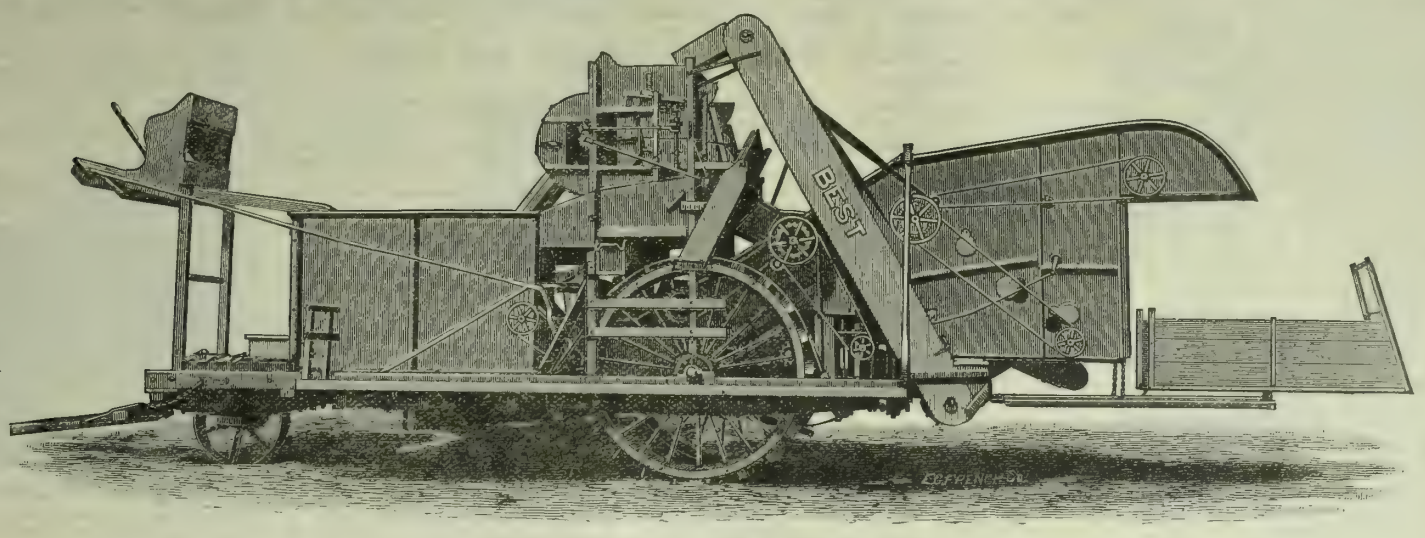
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AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

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FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

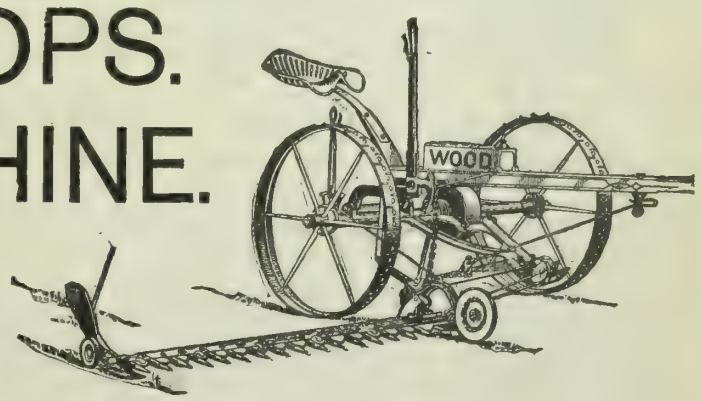
And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

DON'T WASTE CROPS. USE A GOOD MACHINE.

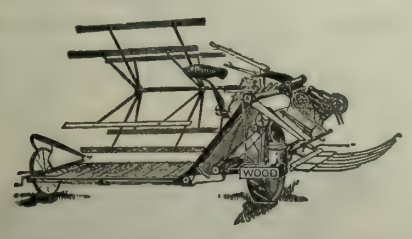


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THE ONLY PERFECT BINDER.

ROHNERVILLE, CAL., Jan. 28, 1892.

MESSRS. FRANK BROTHERS, DEAR SIRS:—In regard to your binder I would say it is **the only perfect binder that I have ever seen; the elevation cannot be excelled by any machine.** The first time that the binder bought by Mr. A. Leach was hitched up, we took it into oats as high as my head and very heavy; it went right along without a skip. There were three men besides myself and they all said it was the only binder that they had ever seen run in such growth; we went through the oats all right and then Mr Leach took us into a piece of wheat that was very heavy and full of big mustard, some of the mustard stalks were one inch through and there were lots of them. **I thought when we got into that mess it would be all day with the binder, but it walked right through just as well as could be and they all said it beat anything in a machine they ever saw.**



Yours truly, C. H. BREWER.

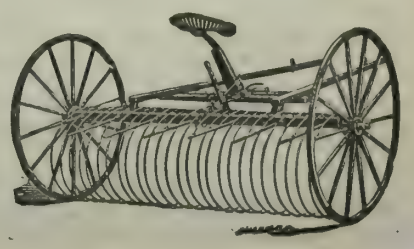
Mowers in Four Sizes.

CYCLONE MOWER CUTS 6 FEET.

Spring Lifts, Tilting Bars, Right Gearing, Right Draft, Correct Construction.

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For '92, the strongest and best steel Rake Wheel yet designed. Shafts may be changed to a pole. The Wood Rake is built to work and work right and any one can work it. It is built to last and does last. It is built to excel and there is nothing better.



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World's Fair Queries.

Answers to Questions Propounded at the Recent Convention.

Answers in brief to the questions submitted to the California World's Fair Commission by delegates to the convention which was held in this city on April 20th and 21st, have been made as follows: The State commission will pay railroad transportation from all terminal points in California on exhibits for the California building that are accepted by the commission. All shipments will be made at the risk of exhibitors. Exhibits will be returned to exhibitors free.——All works of art, if accepted, will be by classification only, and will be exhibited in the California building.——The proposed plan for the California building has practically, but not officially, been accepted by the authorities at Chicago.——In the General Classification Department the California commission will furnish tables, platforms, etc., for the use of exhibitors. Application blanks for space in the California building will be prepared at an early date. Facilities will be given in this building for preserving, preparing and repacking exhibits. In the matter of cold storage for perishable fruits, no decision has yet been reached.——As to how much land at Chicago has been allotted to California for an outdoor display of horticultural, viticulture, and other exhibits, J. M. Samuels, chief of the Department of Horticulture, under date of April 12th, advises the State commission that the proposition is still open to California to use five acres for ornamental trees, shrubs, semi-tropical trees, etc., provided the State commission will indicate to him in detail what is wished to be exhibited thereon. It will be impossible for him to secure five acres in one body. Mr. Samuels writes that the grounds must be arranged with regard to harmonious effect as a whole.——After due consideration the State commission has decided to recommend what is known as the museum glass jar for preserving fruits. Intending exhibitors may correspond with the secretary of the State commission for sizes, styles and cost. Exhibitors must furnish their own jars. The California World's Fair Magazine for April contains an article from Prof. Hilgard on preparations necessary for the preserving of fruits in their natural state. Preserved and dried fruits can be sold at the World's Fair only on orders. No delivery will be permitted from the State building. The mining exhibit, while at Chicago, will be in cases provided by the State commission. Valuable specimens will be enclosed in a safe. Watchmen to guard exhibits will be employed both day and night. All displays will be insured, but the State will be liable only for the amount of such insurance. Special arrangements will be made with exhibitors of minerals in cabinets or specimens of great value. Counties are expected to aid in making collections of minerals.——Each county is expected to make an exhibit of its products at the proposed World's Fair exhibit of California in the Mechanic's Pavilion at San Francisco this fall. The State commission will select exhibits from this preliminary display, store them, and, at the proper time, transport them free to Chicago. It is not compulsory on the counties to submit displays for this preliminary World's Fair exhibit, but the State commission earnestly requests that such display be made.——The State commission hopes to secure concessions from the authorities at Chicago for the sale of California curios, woods, etc.——No literature, giving special features of any county, can be sold in the California building. The State commission will issue gratuitous literature. Free distribution of pamphlets will be permitted when of proper character, but copy should be submitted to the commission for approval. All literature should be attractive. It is possible that sales of California products may be permitted in the cafe, but no concession has yet been granted.——It is desirable for each county to prepare an exhibit of floriculture. ——The Women's exhibit in the California building will be catalogued.——The State will arrange and care for exhibits in the California building during the exposition.——Although an appropriation for a general exhibit of the natural flora of the State has been made, it is desirable for each county to assist in making this exhibit a complete one. ——There will not be a competitive department in the California building.——Powder or other explosive articles for display are prohibited by general rules. Acids and chemicals, not of an explosive nature, may be exhibited.——County associations may take charge of exhibits placed in department buildings for competition, subject to the rules of the national commission. No premiums will be offered for displays in the California building.——Counties will be allowed to carry out their accepted design in the arrangement of exhibits, but at their own expense and risk; this, however, to be subject to the rules of the State board.

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It is particularly gratifying to consumers to know that the baking powder which they have so long been accustomed to using, the Royal, has invariably gone through the official analysis not only without a reflection against it of impurity or unwholesomeness, but each time more emphatically endorsed as the superior of all the baking powders of the market.

The health authorities of a number of States have recently made exhaustive examinations of this character, and with the uniform result of finding the Royal superior to all others. The United States Government Chemist, after an examination for the Indian Department, made the emphatic statement that "The Royal Baking Powder is the purest in quality and highest in strength of any baking powder of which I have knowledge." The authorities of Canada have been making an elaborate study of the baking powders sold there. The official analyst of Ontario says as the result of his investigation that he "finds the Royal Baking powder far superior to the others," and goes so far as to recommend its use in preference to any other. Likewise a series of over five hundred tests for strength made by public analysts and other chemists of prominence throughout the country show it to produce an average of twenty-five per cent more leavening gas than any of its competitors.

A company that maintains this high standard for its product against the temptations of the enormously greater profit that would accrue from the use of the cheaper materials employed by others (for the alum baking powders are produced at a cost of three cents per pound) is entitled to this public commendation and endorsement.

What One Man Can Accomplish.

Los Angeles and surroundings, it is well understood, are in possession of nearly everything worth having from the standpoint of an enthusiastic horticulturist. It was natural, therefore, that in such a country there should spring up up a demand for equally superior breeds of domestic animals. Excellency in the orchards was soon seen to be incomplete without corresponding superiority among the denizens of the barnyards.

Among the leaders of this line of effort in Southern California is William Niles Esq., of Los Angeles. The interests represented by the business he has developed are now consolidated under one general firm, William Niles & Co., incorporated 1891, capital $50,000, with headquarters on East Washington and Maple avenue, only two miles from Los Angeles business center, reached easily by either horse or electric street-car system. The Home Place comprises 15 acres, subdivided into meadows, walnut and orange groves. Passing through the latter, one reaches an assembly of the barnyard aristocracy. They are ideal representatives, as it were, of the "Four Hundred" in the poultry world. Golden polish and their fashionable relations gaze at the visitor with an air of being strictly "at home" and here to stay.

Poultry raising is, however only one branch of the business. Mr. Niles has made the rearing of thoroughbred live stock a special, scientific study for years. That he has succeeded, numerous orders from abroad testify. Mr. Niles' "Home Ranch" is supplemented with two additional ranches in the surburban district of Los Angeles. These breeding farms are the homes of first-class families of Holstein-Friesian and Jersey cattle, Improved Berkshire, Poland-China pigs, etc. The widely known Ashantee, Coomassie, Alphea and other well-tested strains are represented in the Jersey herd, while among the Holsteins are choice representatives of the Netherland, Aaggie, Artis, Clifden and Neptune families. No expense or pains is spared in the obtainment of superior blood.

The established reputation of the company of which Mr. Niles is president is matched by the personal traits of the head of the firm which makes it a pleasure to have any dealings with the establishment.

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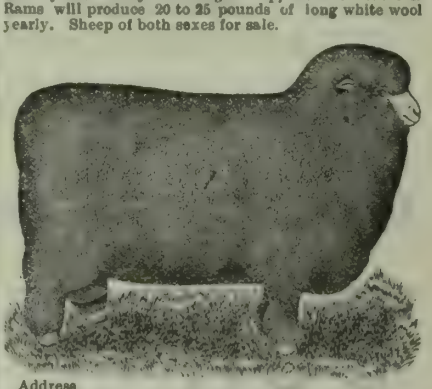
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Schools of Science.

The State University at Berkeley announces its intention of repeating the courses of instruction in chemistry offered to the general public during the summer of last year under the denomination of "summer school," and also of offering for the first time a summer school of biology. The school of last year, though very little advertised, was well attended and successful. The authorities wish to make it known to more people this year that all those interested in the science may avail themselves of the opportunity to study it. The chemical laboratories have just been completed and equipped in such a way as to offer as good facilities for chemical work as can be found.

The characteristic features of the course will be the opportunity for practical work in the laboratory. Each person taking part in the course will have a desk and the necessary reagents and apparatus at his disposal and will receive such personal assistance and guidance as may be necessary. The course is intended primarily for the teachers of the State, especially for those who wish to prepare themselves as teachers of chemistry. Special attention will be given to points connected with the successful conducting of experiments before classes and to the precautions to be observed. In a word, it is intended to make this a training-school for teachers. Applicants are requested to state their preparation, whether elementary or advanced. Advanced students, who do not require such direct and personal supervision, will be allowed to carry on such lines of advanced work as may be agreed upon. Certificates of proficiency will be given to those members of the class who distinguish themselves by their daily work and who pass a satisfactory examination at the close of the term. This examination is not required, save from those who wish certificates.

No tuition will be charged, as all the University courses are free, but a deposit of $10 will be required, $5 of which will be retained for the chemicals used. The cost of the apparatus that may be broken will be deducted from the remainder and the surplus will be refunded to the student. The session will begin on Wednesday, June 22d, and will be under the personal supervision of Professor E. C. O'Neill, one of the most popular instructors at Berkeley.

The summer school of biology will be of a slightly different character. Professor Ritter, who is now in charge of the department of biology, wishes to accomplish some permanent results in contributions to science. To that end he intends to devote the work of his summer school to marine biology. The ocean along the California coast contains many varieties of marine life that are to be found in no other region accessible to scientists, and it is very important to the science of evolution that these varieties should be thoroughly worked up. No one has ever undertaken the work and Professor Ritter wishes to gather a number of earnest students to assist him in beginning it this summer. Adolph Sutro has offered the use of his new and splendid aquaria at the ocean beach in San Francisco to Mr. Ritter, which will make it possible to preserve and study the organisms as they live and move in their own element. Elaborate collections will be made from Monterey and, possibly, Santa Barbara bay, and transferred to Mr. Sutro's aquaria. The work will begin some time in July. Further announcements will be made next month. Meamtime inquiries should be directed to Professor W. E. Ritter, Berkeley.

Artificial Diamonds.—Mr. Streeter, in his book on "Precious Stones and Gems," says that a good deal was heard at one time of the experiments of Mr. J. B. Hannay, of Glasgow, in making artificial diamonds. The philosopher's stone, it was said, was at length discovered. Then the subject was allowed to drop. Here is the sequel. The so-called diamonds were found to crumble to pieces when placed on the wheel for cutting. Worthless as these gems proved to be, they were not obtained without much labor, expense, and above all, risk to human life. A peculiar mixture of paraffin and certain metals and minerals was put in a strong wrought-iron tube, and subjected to the heat of a reverberatory furnace. In most of the experiments the tubes exploded, and, in some cases, the assistants were injured in consequence.

Flour Paste.—To make a paste that will "stick like grim death," heat some water to boiling, then stir in flour, keeping it free from lumps. The best way is for one man to stir the water while another drops in the flour through a sieve. The stirring is continued until the paste is as thick as desired, then continue a little longer to make sure that there are no lumps of flour left in the mixture. Care should be taken that too much flour is not sifted in, or the paste will become too thick, as it takes a little time for the last flour put in to affect the rest of the paste. The paste may be strengthened by adding to the flour one-sixth its weight of powdered resin. To make the paste keep for months without souring, add a few drops of oil of cloves. A little carbolic acid will do as well, but it does not suit the nose as well, by a good deal.—*Blacksmith and Wheelright.*

Electricity in Agriculture.

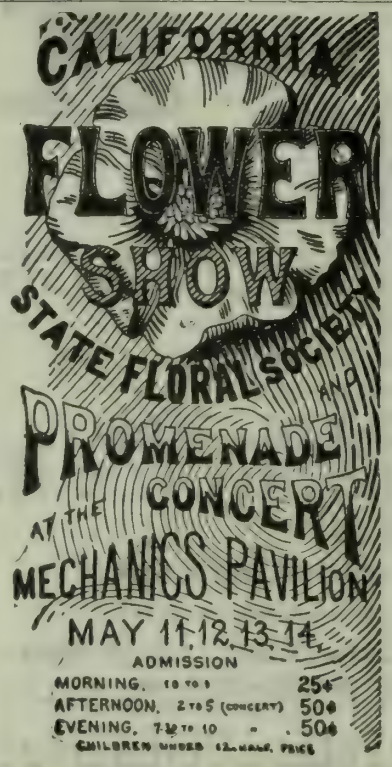
The recently awakened interest of the more advanced section of the farming community in the subject of the utilization of electricity in agriculture, lately alluded to in the *Western Electrician*, was exemplified by the action of the United States Senate when, on motion of Senator Peffer, a resolution was adopted requesting the Secretary of State to obtain from our consuls abroad information as to the application of electricity to the propulsion of farm machinery and to the propagation and growth of plants. The Kansas senator explained that it was understood that electricity had been applied in Italy to the compression of hay and also that electrical influences had been successfully used in the vicinity of Paris in the propagation of cabbages, and there was a desire on the part of the farmers to obtain definite information on these subjects. Much valuable information can doubtless be collected in this manner, as many scientists, and practical agriculturists both at home and abroad, are now studying this problem. The publication of the consuls' replies will be awaited with interest.

That there is a growing demand for information of this sort is shown by the fact that in many sections of the country experiments are being conducted on this line. A press dispatch from Auburn, Ala., announces that on April 16th, cotton was ginned by electricity for the first time in the history of the world at the Agricultural and Mechanical College of Alabama. The class in electrical engineering, under the direction of A. F. McKissick, connected the generator at the dynamo room of the college with the motor at the Statum farm about 3,000 feet away, and the motor at the farm did the work of a ten horse power engine formerly used, grinding corn for cow feed and ginning cotton.

Of course as far as the electrical engineer is concerned the application of a motor to a cotton gin or any other piece of farm machinery is no startling departure. Such experiments and new adaptations as the one just referred to, however, do an immense amount of good indirectly in that they serve to bring electric power to the notice of the agriculturist. We must reiterate our conviction that an experimental station such as Senator Peffer of Kansas proposes would do an immense amount of good by educating farmers in the many advantages of electric power.

Theory of Thunderstorms.

Solids and liquids cannot be charged throughout their substance with static electricity; if charged at all, the electricity is upon their surface. But gases and vapors being composed of myriads of separate particles, can receive a bodily charge. The air in a room in which an electric machine is worked is found afterwards to be charged. The clouds are usually charged more or less with electricity, derived probably from evaporation going on at the earth's surface. The minute particles of water floating in the air being better conductors than the air itself become more highly charged. As they fall by gravitation and unite, the strength of their charges increases. Suppose eight small drops to join into one. That one will have eight times the quantity of electricity distributed over the surface of a single sphere of twice the radius of the original drops; and its electrical potential will therefore be four times as great. Now a mass of cloud may consist of such charged spheroids, and its potential may gradually rise, therefore, by the coalescence of the drops, and the electrification at the lower surface of the cloud will become greater and greater, the surface of the earth beneath acting as a condensing plate and becoming inductively charged with the opposite kind of electrification. Presently the difference of potential becomes so great that the intervening strata of air give way under the strain, and a disruptive discharge takes place at the point where the air offers least resistance. This lightning spark, which may be more than a mile in length, discharges only the electricity that has been accumulated at the surface of the cloud, and the other parts of the cloud will now react upon the discharged portion, producing internal attractions and internal discharges. The internal actions thus set up will account for the usual appearance of a thunder cloud, that it is a well-defined, flat-bottomed mass or cloud which appears at the top to be boiling or heaving up with continual movements. Electrical Age.



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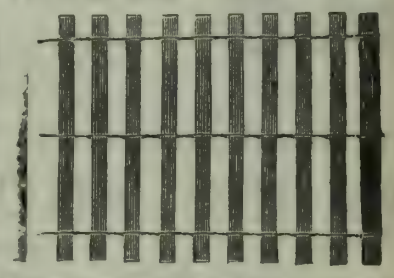
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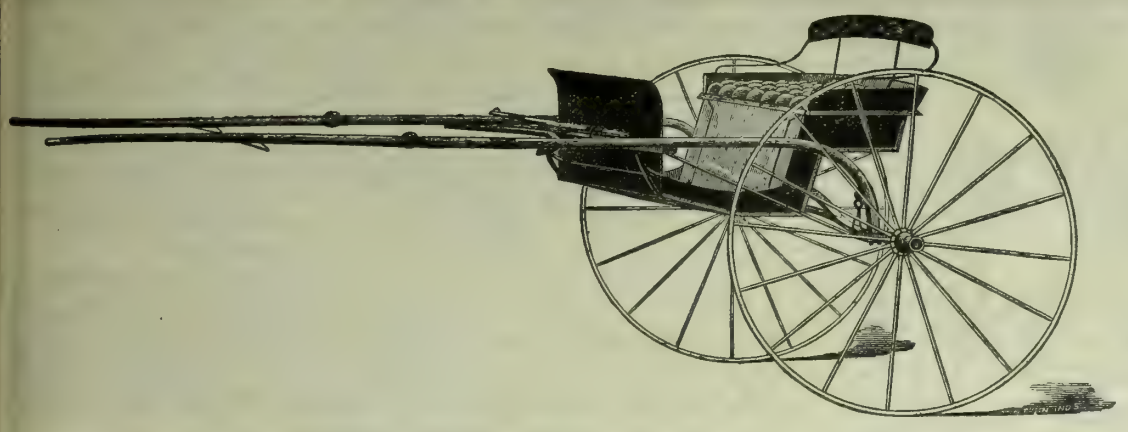
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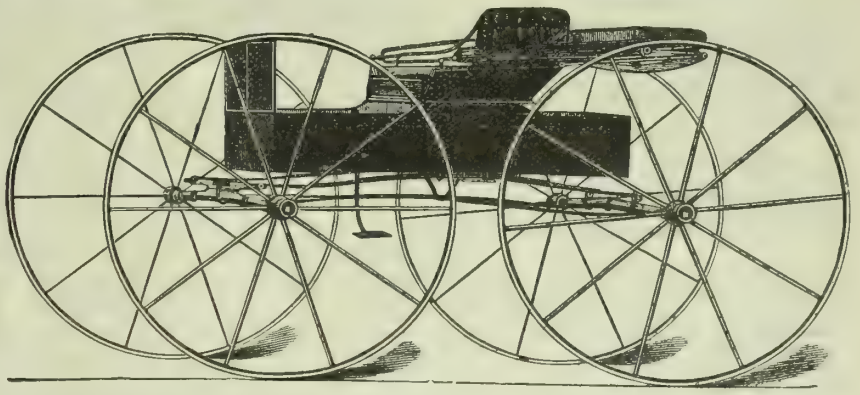
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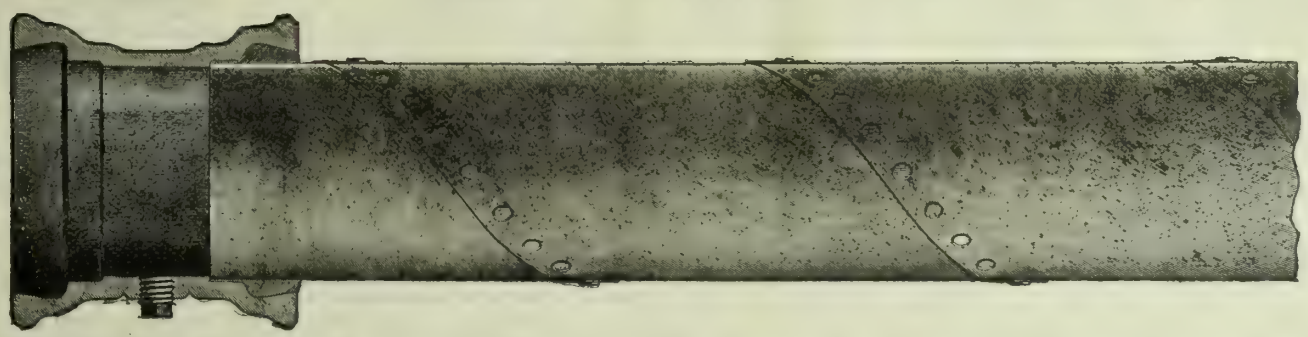
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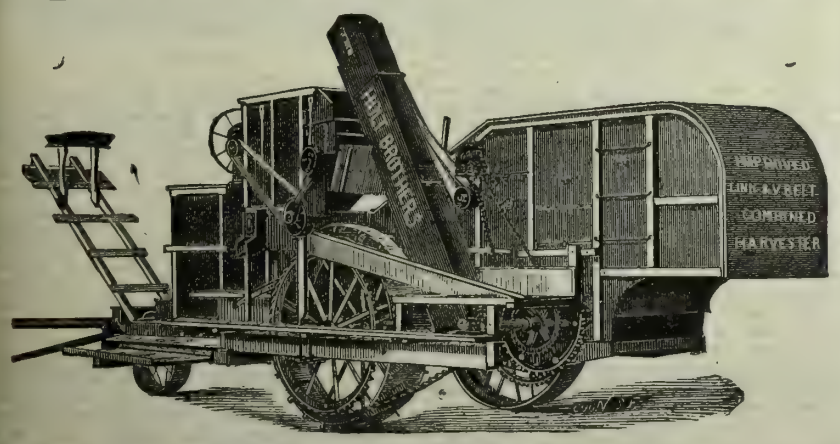
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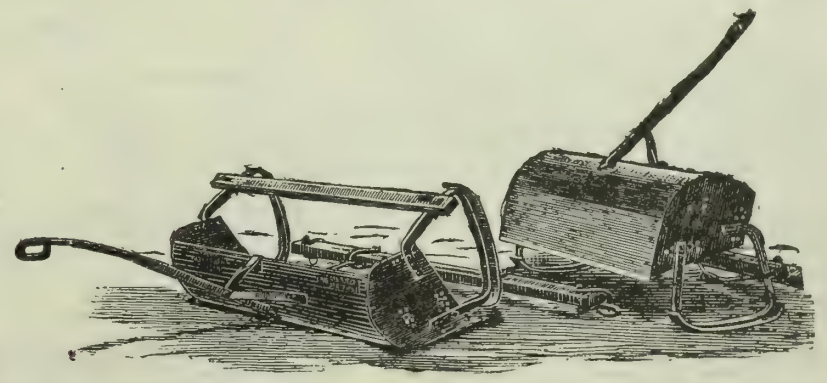
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EFFECTS OF RAIN ON GRAIN.—Oroville *Register*: Thos. Chivell of Nelson was in Oroville this week, and speaking of the late rains, said they had not benefited the adobe land but had rather injured it. On inquiring the manner in which the rain had been a damage, he said it appeared to have killed the suckers or shoots where the grain was stooling out. This left a less number of stalks to bear heads of wheat. In favorable seasons he had seen many of these from a single shoot, and in one instance he, with two other gentlemen, had pulled up a root and counted growing from it 40 stalks, each bearing a head of grain. This year he thinks the wheat crop on the adobe will lack 25 per cent of being as great as usual.

Fresno.

CROPS IN SQUAW VALLEY.—Reedley *Exponent*: The weather is fine, crops are very promising, and with one good rain there will be more than an average crop. The late frost of the 17th inst. did some damage to the fruit crop, potatoes, etc.

Kern.

SPOTTED RAINFALL.—Weldon Cor. *Echo*: The weather keeps cold and crops are backward, but stock is fattening fast in most places. The rains, however, this season have not been general, and in some districts there is little or no grass.

CROPS AROUND DELANO.—*Courier*: The cool winds which have prevailed during the past week have been somewhat drying, but owing to the absence of very much sunshine the crops have not suffered very much. With a few more showers, which we are almost certain to have, a considerable amount of grain will be harvested and there will be an abundance of hay. The grain is just now hardening, and with the cool weather will be plump and well filled out.

Los Angeles.

THE GRAIN CROPS.—L. A. *Farmer*, April 30: The rather scant amount of rainfall for this season will have its effects on the grain crops of this section. The rainy season is past and the total precipitation is only from eight to twelve inches according to locality. So small an amount of rain would result in an utter failure of all crops anywhere outside of this peculiar State. Here it will mature excellent crops of all kinds, excepting grass and grain on the drier mesa land, and even here the crops will be good where the land was well tilled and the land put in early in the season; so that the whole proposition resolves itself down to this: The man who loses his crops has only himself to blame. If one were to go over the section, he would find a great many fields of excellent barley and wheat. Wherever the grain was sown in January it is excellent, and wherever it is sown in an old corn or potato field which was well tilled last year it is good, even though sown at a later date. There is an important lesson to our farmers in this season. *The farmer who plowed deep and put his crop in early will get an excellent crop of grain.* As it is, there is a vast acreage of land under seed, on which the straw will be short and not very heavy; still we expect to see a good deal of grain of superior quality threshed next fall. The crops of hay will be peculiarly sweet and clean, and will make good feed. A ton of short straw with pretty well filled heads is better than two tons of long, coarse straw with very little grain in it. Then there are the damp and irrigated lands which will have their "innings" this season, where large crops of alfalfa hay and of corn will be grown.

GREAT OLIVE SECTION.—E. S. Penny of Sacramento in Pomona *Progress*: You may say with all truthfulness that Pomona is the greatest place in the production of young olive trees. I have been interested in olive growing for years and have traveled in Europe with the view to inform myself as to the olive oil industry there, and I do not know of any locality in America or Europe that sends out half as many olive trees, suitable for orchard planting, as Pomona.

TREE PLANTING.—*Progress*: The acreage of citrus fruits planted in and about Pomona since January 1st, has been about 500 acres, and the area of deciduous fruit orchards here has been increased by about 275 acres. Prunes and olives have been the popular deciduous fruits for new orchards.

FRUIT AND IRRIGATION NOTES ON HOLT AVENUE.—Pomona *Times*: E. P. Cooley, who owns the Lockwood place, has put in 1000 feet of redwood fluming for irrigation purposes, 10x12 and 7x10 inches, with capacity for 100 and 70 inches respectively. Farther along, the Crawford Brothers have just put in 110 acres to citrus fruits. These gentlemen, too, have put in a lot of redwood fluming, 120 rods along the avenue and about 40 rods running at right angles to it. Water is to be received from the P. L. & W. Co.'s artesian system. Messrs. Brady, Hewitt and Morehead have 120 acres adjoining Ontario set out mostly to oranges—a few lemons. This gives evidence of being one of the best improved tracts on the avenue. The land all lies between Holt avenue and the railroad. There is a domestic and irrigation water pipe conducted along the tract in separate pipes. One and one-half inches of water goes with each ten acres. The water is received in pipes far enough up Mountain avenue to give a 56-foot pressure. The irrigation water is delivered in a four-inch pipe, and there are two hydrants to each row of trees—one on each side of the row. The water for domestic purposes is delivered in a two-inch pipe, and both pipes run the length of the tract on Holt avenue. The domestic system has four turnouts in each ten acres. A cypress hedge, to act as a windbreak, is planted around the entire tract, and each ten acres is separated by a hedge of cypress. There are 50 lemon trees, 40 deciduous trees of different varieties and 990 orange trees to each ten acres. One-half the oranges are Hart's Tardiff and Mediterranean Sweets and the other half Navels.

Napa.

JACK FROST'S WORK.—St. Helena *Star*: Never in the history of viticulture in Napa county has the frost played such havoc as it has the past month, and should cold snaps continue for another month, there could not be a great deal more destruction wrought, as the vines are nearly all gone and there will be very few grapes this year. The first frost to do much damage was the morning of the 31st of March. Since that time cold waves have swept over the valley every few days. Sunday morning a heavy frost visited many portions of the valley, leaving only stumps of vines stripped of their verdure. Tuesday morning there was an exceptionally cold snap, and it seemed to visit every vineyard not already destroyed, and when the sun had cleared away the frost, the scene was one of desolation, not only all over Napa valley, but in Conn and Chiles valleys, and even many vineyards on the side-hills and on Howell mountain. We have interviewed many of our grape-growers and there has not been one but who has said that fully three-fourths of the prospective crop of 1892 has been wiped away. Captain Amesbury said before the last frost that he had visited many sections of the valley and had found at least one-half of the crop destroyed and now fully three-quarters must be gone. In conversation with S. P. Conner, that gentleman informed us that he had seen a number of vineyards which the owners thought had escaped, but on close inspection the leaves and buds were seen to be badly frosted, although they had not turned black. J. M. McPike says he is confident that the crop of 1892 will be fully three-fourths short. His own vineyard, which escaped the heavy frost of March 31st, is now fully one-third destroyed. R. H. Delafield, of La Feld Rancho, above Calistoga, was in St. Helena Wednesday, and said, when speaking of the damage done by the late frosts, that the vines at Healdsburg, Santa Rosa and Glen Ellen are mostly gone. It can be readily seen from the reports, which have all been gleaned from reliable sources, that the valley vineyards are nearly three-fourths destroyed, while on the mountains and hillsides fully one-third of the prospective crop has been destroyed.

FRUIT CROP PROSPECTS.—Napa *Register*: W. H. Evans, Secretary of the Napa Fruit Growers' Association, says there will be a light crop of cherries this year, both in this and Vaca valleys. A. L. Bryan's orchard is the only one in this vicinity which promises a full yield. Not more than half the ordinary crop will this year be gathered from the trees in Chapman's orchard, and the yield will be still lighter in the orchards of Messrs. Evans, Tool and Butler. This shrinkage is attributed to excessive dampness in the blooming season. The apricot crop here will be light; the peach crop heavy. Prune orchards will pretty generally fall behind last year's yield. The vineyardists of the valley report the continued presence and spread of phylloxera and frosts, that will cut the crop of grapes down to one-half what it would be under ordinary circumstances. Supervisor Deweese says that Brown's valley would produce extra large crops this year, both of fruits and cereals. From recent investigations made, he thinks that there will be an immensely heavy yield of Bartlett pears, as they have set very thick. Some varieties of peaches will probably not give as big a crop as last year, while apples are too thick in the trees; cherries are bearing rather light.

San Bernardino.

NINE MILES OF PIPE.—Cor. Los Angeles *Express*: The South Riverside Land and Water Company has completed its second line of pipe, some nine miles long, water being secured from artesian wells in Temescal valley, on the company's own land. Water was turned on Wednesday, and as soon as satisfactory tests are completed, a grand celebration with excursions, will be given. The company owns some 15,000 acres of fine lands.

San Joaquin.

WOODBRIDGE CANAL OPEN FOR IRRIGATION.—Stockton *Mail*: The Woodbridge canal has been filled with water for the purpose of irrigation. The head-gates are open, and hundreds of acres of parched land are being saturated with water. It being the first practical irrigation in San Joaquin county, great enthusiasm among the people of Lodi and Woodbridge and the surrounding country is manifested. Hundreds and hundreds of acres will be made green with alfalfa, and many orchards will be made vigorous through irrigation this summer, when heretofore the country has been parched with heat and made unbearable by dust. The people feel as if they had cause for rejoicing.

GRAIN AND FRUIT NOTES.—Stockton *Mail*: Farmers say that there are more weeds growing in the fields now than there have been before for 20 years. The cause of so many weeds this spring is to be found in the fact that the season opened very early and then frosts followed the warm weather. The frosts didn't hurt the weeds, but it retarded the growth of the grain, and in that way gave the weeds the start of it. If it had not been for the cold weather, the wheat would have got the best of the weeds and kept them down. W. L. Ashe, who is in town now, and who has been traveling extensively through this region during the last few weeks, says that thousand-acre fields of poppies may be seen. But it is not alone the weeds that are doing damage; the soil needs moisture and the wheat is thirsting for rain. Singularly enough, cold has a drying effect on the ground. One would naturally suppose that the earth would retain moisture better in cold weather than in warm, but the opposite is the case. Crops on sandy soils are in worse condition than those on adobe tracts, because sand, containing as it does a great deal of rock, is comparatively a good conductor of heat. It warms up much more quickly than adobe in hot weather, and cools much more quickly than adobe in cool weather. In consequence of the long "spell" of cold weather, the sandy lands have been so cold that the growth of grain has been stopped. Should warm weather come soon, with copious showers of rain, the sand would heat up and the wheat would grow wonderfully fast and produce some sort of a crop, but probably not so much as 12 bushels to the acre. From Stockton southward to Fresno the wheat looks very bad. From here to New Hope it is in better condition. On the black land it is also in better condition. Around New Hope, on the low-lying land, a fair crop will be raised, in Mr. Ashe's opinion. Near Clements the prospects are for a crop, but the yield will not be, by any means, what it should be. It is reported that frosts have done great damage to the grapes. Moses Marks, who has a vineyard of 27 acres in the Lodi region, says that the vines, which were looking all right three days ago, have turned black. It is feared that the young watermelon vines in the Lodi region have been injured by the frosts. The heavy hail which fell some weeks ago did more damage than was appreciated at the time. Pear trees, which were then in bloom, were stripped of their flowers, and as a consequence, the yield of pears this season will be small. Joseph Hale informed J. D. Peters, the other day, that the pear trees in the Hale orchard on Roberts Island will not yield more than 2000 or 3000 boxes this year. Had it not been for the hail, the yield would have been 8000 boxes.

San Luis Obispo.

GRAIN CROP PROSPECTS.—Paso Robles *Moon*: The dry north winds which have been blowing for the last week, up to April 29th, have not provided the sort of weather that was necessary for developing a grain crop that was already suffering for moisture. Prospects were bad enough before, but it is now a foregone conclusion that the wheat crop will be shorter than for a number of years. Probably not one-half as much wheat will be turned off as last season.

Solano.

THE FRUIT OUTLOOK.—Vacaville *Enterprise*: Generally, apricots will not make more than half a crop in this neighborhood. Cherries are very light, running from a tenth of a crop to a half. As with apricots, however, some ranches will have a good deal of fruit. Plums and prunes are very light, also. The pear crop will be better than originally thought, though by no means good. Peaches will average better than anything else. Grapes have been injured on some ranches, but generally will do well.

THE GRAIN PROSPECT.—Suisun *Republican*: In certain localities the Hessian fly is doing considerable damage to growing grain. In the hills this side of Vallejo the ravages of the fly are great, entire fields are completely destroyed. Contra Costa county, in certain sections, is also badly affected. The grain fields in this section, Montezuma hills and about Dixon and Elmira are not affected by the pest and are all in prime condition, and unless something unforeseen and unexpected happens, a most bounteous harvest can reasonably be expected.

Sonoma.

FRUIT NOTES.—Santa Rosa *Republican*: The first strawberries to show up in the Santa Rosa market this year were grown by Robert Mather of Bennett valley. Mr. Mather has two acres of Longworth's Prolifics and they keep him very busy. Strawberries came in about two weeks earlier this year than they did last. They are said to be of better quality than the crop of 1891. The cherry crop will be rather light, according to some reports. It is also reported that in some parts of the country the peach and apricot crops will be below the average. Mr. Philpot of Windsor will have 13 acres of raspberries next season. He has made arrangements to put out a few orange trees for next year. The Santa Rosa *Democrat* says: M. Fallon of Forestville reports that, in his opinion, the peach crop in that section is generally light. The prune trees which bore heavily last year have now a very light set, and the light-bearing trees of last season have only a medium crop. Taken as a whole, the fruit crop will be below an average. The cherries will yield well and the promise of the apple crop is very fair. Willis Gauldin reports his prune crop as very light, he thinks not more than one-third as heavy as last year. He attributes the shortage to the heavy showers which fell just as the fruit was coming out of the bloom and before the fall of the flower. At this critical period he says there is a light flower dust on the newly formed fruit which seems to nourish it until it is able to draw its sustenance from its parent stem. A heavy shower at this time washes off this dust and much of the fruit will fail to mature. He attributes the light set to this cause, and infers from it that the crop will not be nearly so heavy as last year. D. D. Philips reports the prune crop of Mendocino township as very light, he thinks not more than half a crop, for which there are two causes; one, the unusual yield of last year, and the other, the heavy rains during the bloom season. There is no indication of any injury to the grape crop in Dry Creek valley, by frost or otherwise.

Siskiyou.

FERTILE MOUNTAIN VALLEYS.—Yreka *Journal*: Travelers on railroads through the mountain sections do not get a view of the country as in the valley sections, from the fact that in order to obtain grades for easy hauling the uninhabited canyons of streams are utilized for the most economical railroad building. Back from the C. & O. R. R., on either side, are large, fertile and productive valleys, not seen by those traveling through the county on the main line, hence many through travelers no doubt think our entire county is composed of nothing but rocky mountains and dry plains, when there is really no region more productive of varied resources to make Siskiyou county one of the richest in the State, which fact is demonstrated more fully by its going ahead of Shasta and other counties south in the rapidly increasing population, without any exertion in the way of a boom to attract new comers. Our county contains many beautiful valleys locked in by mountains to render them delightful retreats for residence and productive in the way of crops and fruit. The mountains are covered with dense forests of timber of great value.

Santa Cruz.

THE STRAWBERRY CROP.—Watsonville *Pajaronian*: The strawberry shipments have gone upward with a boom and growers are feeling good over the prospects of the season. The crop is going to be large, and prices have held up very well thus far. The quality of the Pajaro strawberries was never better than it is this year. They are large in size, beautiful in color, and firm meated.

INCREASED CAPACITY OF THE BEET FACTORY.—*Pajaronian*: The work of doubling the capacity of the beet factory has been commenced. But a small addition will be made to the factory buildings, as the present structure will hold most of the new machinery. Sixty carloads of the machinery are now in San Francisco.

Sutter.

AN EXTENSIVE NURSERY.—Yuba City *Farmer*: On James T. Bogue's home place, which comprises over 100 acres, the nursery stock has given way largely to orchard, which is as thrifty as any in the state. About 30 acres are yet in general nursery stock from the seed to two-year-old trees. Below Starr Bend, Mr. Bogue has rented 320 acres, and now has planted 55 acres in nursery of general varieties planted from the seed-bed since the first of the year. In neat rows one-half a mile long the young trees, a few inches apart and from 6 to 12 inches high, presented a very pretty sight, and when one considers the number of acres that will be planted from this nursery of over a million of trees, the magnitude of the business strikes very forcibly. The budding season will be a busy one there, as it will require over 40 men a month or more to go over the same.

THE LADY BUGS.—Yuba City *Independent*: The Australian lady bugs which were placed in the orange trees on the premises of W. H. Lee in Yuba City, are increasing rapidly. They are now in the larva state. The cool weather has retarded them to some extent, but as soon as it grows a little warmer it is expected they will wipe out the scale. If any one in the county has cottony cushion scale on trees of any kind, he can procure a supply of the lady bugs on application to the County Horticultural Commissioners.

Tehama.

ORCHARDS AND VINEYARDS.—Corning *Observer*: The orchard of R. Hurlburt is receiving a thorough cultivation and presents a very handsome appearance. The trees have made a splendid growth and should produce an abundant crop of fruit this year. W. H. Stewart's vineyard, in his ten-acre lot of the Fair View Colony, is now showing up pretty well. The vines are growing lovely, but he keeps constantly working the earth around them and not a weed to be seen in the whole patch. The newly planted orchard of Mr. Rolling, just a short distance west of town, also presents a beautiful appearance. The trees have all made a good growth so far, and not a weed nor brush is to be seen in the carefully tilled field. The vineyard and orchard of A. B. Aitken is doing splendidly. Mr. Aitken has 40 acres of choice land just south of the town limits, and has some 20 acres of the tract planted to grapes of the choicest shipping varieties, the whole of which will come into good bearing this year. Mr. Aitken also has a few acres planted to olives, almonds, figs and deciduous fruits, and the trees are all thrifty and strong, and in a few years this place should yield a handsome revenue.

Ventura.

GRAIN AND FRUIT CROP PROSPECTS.—Ventura *Democrat*: The season is so far advanced that little or no rain may be expected, and the crops will have to struggle with the moisture at present in the soil. Whether there is enough to produce beans and corn is a question on which there is difference of opinion. Doubtless in some localities, fair bean and corn crops may be raised, particularly the former; but a general yield is out of the question. Barley, in a large degree, will also be a comparative failure, though on land planted last year to corn and beans, the barley crop never looked finer in any previous year, hence a great deal of that cereal will be produced in any event. Much of the lighter grain will also make very fair hay, and in view of the probable shortness of dry feed, next fall, very little of it, likely, will be permitted to go to waste. The apricot yield, from present appearances in the county, will be twice as large as that of last season, and a good crop of all other classes of fruit seems, from all accounts, to be assured. It is a little too early to form an accurate opinion of the walnut crop, but the present signs are very good for a full average yield.

OREGON.

HOP CROP NOTES.—Eugene *Guard*: Hop men report that up to within a couple of weeks ago hops made a rapid and hardy growth, but the past two weeks they have grown very slowly owing to the damp, cold weather. They expect them to come out all right, however, and the prospects at present are that hops will command a good price next fall. They are now quoted as being worth 35 cents. Most hop raisers believe that the hop lice are going to be numerous this summer and many of them are already preparing to do a large amount of spraying.

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Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

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Fine farming and stock raising country.
Land ready for cultivation when you buy.
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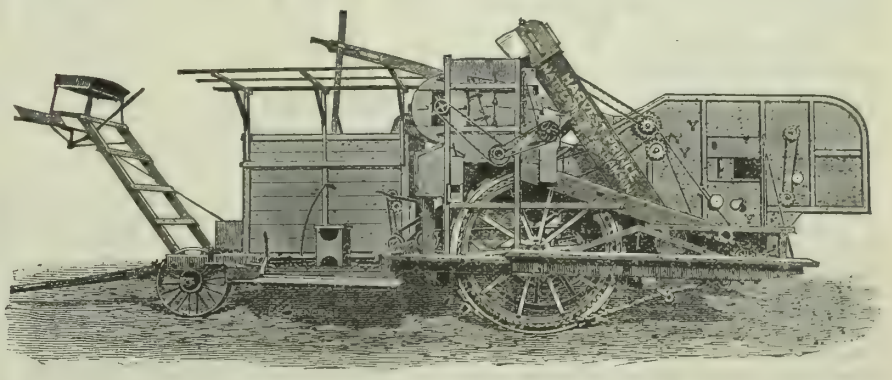
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OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

STOCKTON, CAL.

GOOD HEALTH.

CHRONIC ARSENICAL POISONING.—A good example of chronic arsenical poisoning on a large scale occurred in County Asylum, Berrywood, and a short account of it may be both interesting and instructive. In the endeavor to make the wards of an asylum bright and cheerful, and to do this at as little expense as possible, it is not improbable that the nature of the coloring materials used may be overlooked, and that some of the gastric and intestinal disorders which disturb the peace of mind of medical superintendents may be cases of arsenical poisoning. For a long period the nurses here were in poor health. First one and then another was laid down until, within a few months, nearly every nurse on the staff had been, or was, under medical treatment. Headache, neuralgias, gastric derangements, loss of appetite, constipation or diarrhœa, irritation of eyelids, anæmia—these were the chief symptoms complained of. Drugs did not appear of much avail, but a holiday had a marked effect for good. At last one nurse had the eye symptoms in a more pronounced form, and suspicion was aroused. In each nurse's room was a green baize curtain, used as a covering for dresses, etc. A portion was taken and examined. It was found to be impregnated with arsenic to an astonishing extent. These curtains were removed; the rooms freely ventilated; medical treatment was stopped; the symptoms disappeared, and, though some months have elapsed, have not returned. The baize was similar to that used for covering doors, etc., and was obtained from two manufacturers.—W. Harding, M. B., in the Lancet.

SOPORIFIC PROPERTIES OF LETTUCE.—Although preparations of lettuce have from very early times had a reputation in medicine for their soporific properties, the narcotic constituent of the plant has never been ascertained with any certainty. Various neutral, fatty, and waxy bodies separated from the milky sap of different species of Lactuca have been from time to time described as compounds of medicinal value, but on the other hand it has been denied that the dried milk-sap, lactucarium, in spite of its narcotic odor, possesses any sedative action, and in fact, this preparation is no longer officinal in England or the United States. It is, therefore, interesting to learn in a communication from the Research Laboratory of the Phaamaceutical Society, read recently before the Clinical Society, that Mr. T. S. Dymond has established beyond doubt the presence of hyoscyamine, the principal alkaloid of belladonna and henbane, not only in the cabbage and Cos varieties of the common lettuce, *L. sativa*, but also in the wild lettuce, *L. virosa*. The amount in the young plants is certainly very minute, but in the official green extract, which, according to the directions of the "British Pharmacopœia," is to be prepared from the flowering herb of *L. virosa*, the mydriatic alkaloid occurs to the extent of 0.02 per cent.

THE BEST MOSQUITO REMEDY.—Mr. C. H. Russel, of Bridgeport, Conn., has recently communicated to us the following interesting fact: A very high tide recently broke away the dike and flooded the salt meadows of Stratford, Conn. The receding tide left two lakes, nearly side by side, of the same aize. In one lake the tide left a dozen or more small fishes, while the other one was fishless. A recent examination showed that while the fishless lake contained tens of thousands of mosquito larvæ, that containing the fishes had in it no larvæ. An English gentleman living on the Riviera, according to a correspondent of *Nature*, having been troubled by mosquitoes, discovered that they bred in the large tanks kept for the purpose of storing fresh water, which is rather a rare commodity at this Mediterranean resort. He put a pair of carp in each tank and succeeded in this way in extirpating the insect pest. The utilization of fish in this way is an old suggestion, and a very practical one under some circumstances. Many people suffer from the mosquito plague when the insect breeds in a circumscribed and easily accessible place, and where it could be destroyed by some such method as that used by the level-headed Englishman.—Insect Life.

"No form of vice, not wordliness, not greed of gold, not drunkenness itself, does more to unchristianize society than evil temper. For embittering life, for breaking up communities, for withering up men and women, for taking the bloom off childhood, in short, for sheer gratuitous misery-producing power, this influence stands alone." Henry Drummond.

To Sail for England.

Mr. W. A. Shafor of Middletown, Ohio, the importer of Oxford Down Sheep, sails for England on May 13th and will return in July. Mr. Shafor has already booked sufficient orders to warrant him in increasing his importation by one-third, his usual number being 200 each year, while this year he will import 300 of the best English product. This breed of sheep is said to be peculiarly adapted to California and Oregon climate and conditions. A good plan for those interested would be for neighbors to combine and purchase a carload, and make a saving on freight. Orders should be in early, as a large portion of this year's importation is already sold.

NATURAL GAS AT STOCKTON. — The female department of the State Asylum was lighted last week for the first time with natural gas from one of the State's wells. One hundred burners were lighted and gave a beautiful illumination of the large buildings. After the lights were burned one hour there was no lowering of the gas reservoir over the well. Heretofore the gas lights were extinguished in the asylum at 10 o'clock, but the supply of natural gas is so large that attendants will not be restricted in its use. In addition to lighting the buildings, natural gas from this well will be used to run the engines for pumping water and sewage, and also for operating the big laundry at the asylum. Work is progressing on a larger well, and when that reaches a depth of 1700 feet, which is the depth of the well at the female department, the saving to the State will be above $250 a month in light and fuel expense.

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92



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3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

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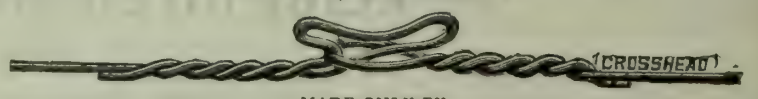


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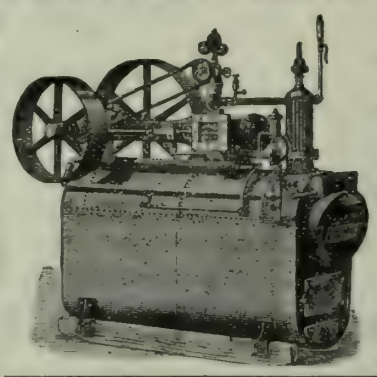
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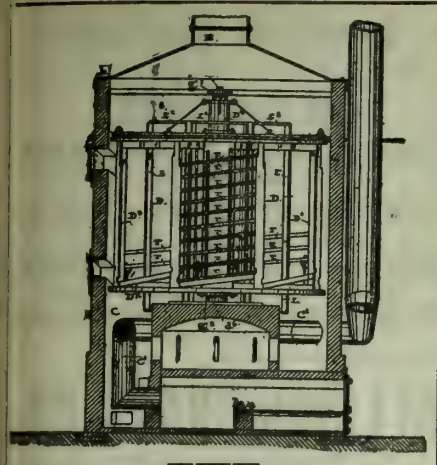
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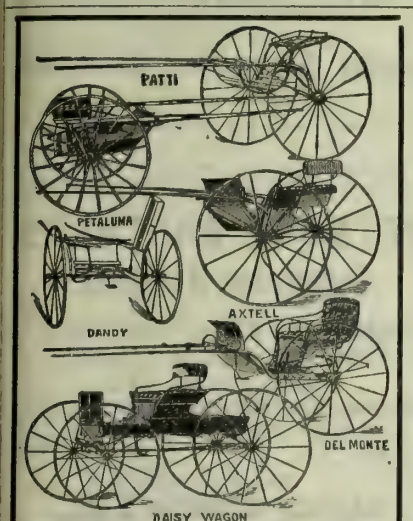
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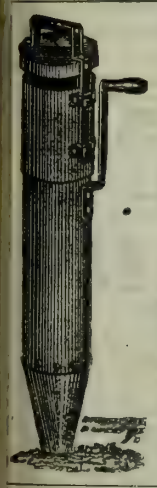
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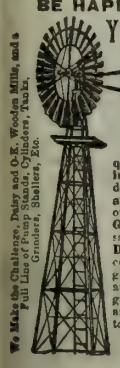
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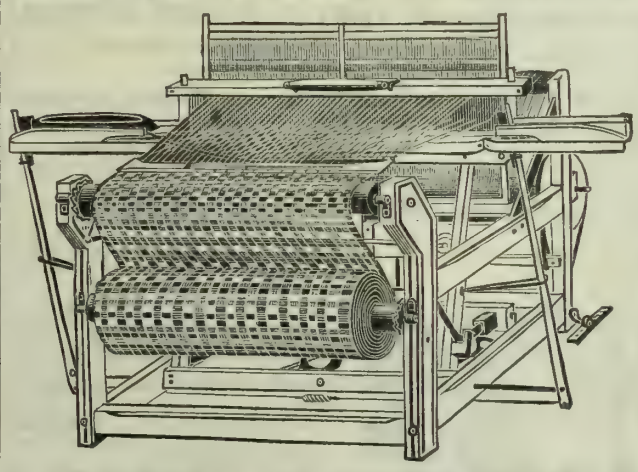
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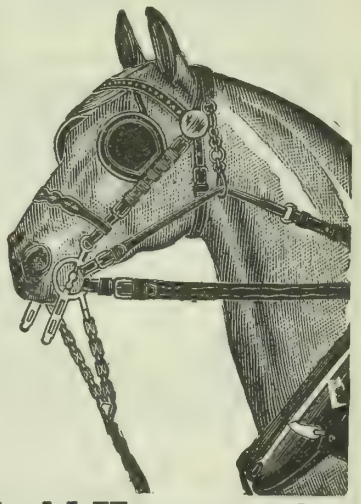
Send for sample, which we mail free, and taking two separate quarts of new milk; into one put ¼ of a teaspoonful of Preservaline; put nothing into the other, and set them side by side so that the temperature of the milk may be the same. See which keeps sweet the longer and which raises the more cream.

Preservaline is the only genuine preservative that has ever been discovered. It is the cheapest, because it is not only the BEST, but because, at the same time, it is Harmless, Tasteless, Odorless, Simple, Economical, and, above all, absolutely Effective.

Send for circular giving full directions, also prices.

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3 & 5 Front St., San Francisco, Cal.
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BUY YOUR HARNESS AT WHOLESALE PRICES.



Liebold Harness Co.

110 McAllister St., San Francisco.

Elegant Hand-Made Buggy Harness. All Styles of Harness on Hand.

Send for Descriptive Price Lists.

THE KEYSTONE HAY LOADER



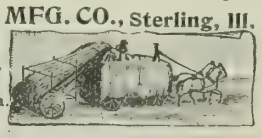
Is a marvel. Saves Time—Labor—Hay.
An economical remedy for scarce help.
Will Load a Ton of Hay in 5 minutes.
Gathers the Hay clean. Loads loose Grain.
Loads Green Clover for Silo use.
Strong, Light, Easily Hitched to Wagon.

—Over 14,000 in use.—

Send for circular "What Farmers Say."

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GALE CHILLED PLOWS

BAKER AND HAMILTON
SAN FRANCISCO-SACRAMENTO

BEST TREE WASH.

"Greenbank" 98 degrees POWDERED **CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

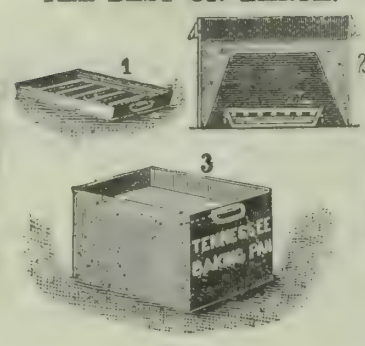
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Manufacturers' Agents,
104 Market St. and 8 California St., S. F.

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BAKING PAN

THE BEST ON EARTH.

NO BURNING!



NO SCORCHING!

PATENTED.

Positively Unequaled for Baking Meats Fowls, Fish, Puddings, Etc.

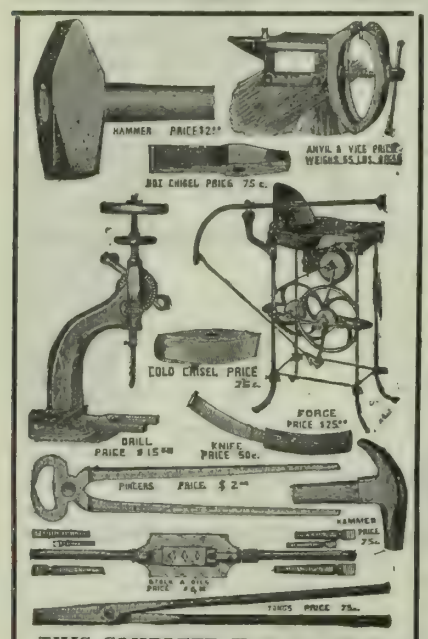
SELF-BASTING—Any article cooked in it RETAINS ITS JUICES AND FLAVORS, thus making it MORE PALATABLE AND NUTRITIOUS. MORE JUICY AND TENDER, than if cooked in any other way.

NO PARBOILING. It bakes Bread, Cakes and Puddings. Try it thoroughly, and you will never use any other.

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No. 312 Pine Street.....San Francisco, Cal.
Sole Agent for the Pacific Coast.

RELIABLE AGENTS WANTED.



THIS COMPLETE KIT OF TOOLS Only $25.

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MOTIVE POWER

HERCULES Gas and Gasoline ENGINES

Have fewer parts, and are therefore less likely to get out of order than any other gas or gasoline engines now built. Just light the burner, turn the wheel, and it runs all day.

MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark.

For Simplicity it Beats the World.

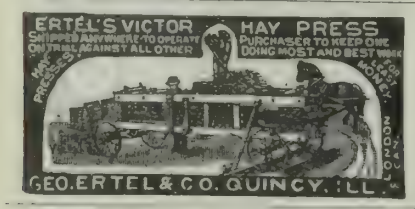
It Oils itself Automatically,

No Batteries or Electric Spark.

It runs with a Cheaper Grade of Gasoline than any other Engine.

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PALMER & REY, MANUFACTURERS,
San Francisco, Cal. and Portland, Or.



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CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,
INCORPORATED A. D. 1864. **San Francisco.**

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901|10

THE GIANT POWDER COMPANY,

— PATENT OWNERS OF —

NOBEL'S DYNAMITE, NOBEL'S EXPLOSIVE GELATINE, NOBEL'S GELATINE-DYNAMITE, AND THE JUDSON IMPROVED POWDER.

Best and Strongest Explosives in the World.

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The only Reliable and Efficient Powder for **Stump and Bank Blasting.** Railroad Contractors and Farmers use no other. **As others IMITATE our Giant Powder, so do they Judson, by manufacturing an inferior article.**

BLACK POWDER.

The Giant Powder Co. having built Black Powder Works, with all the latest improvements, at Clipper Gap, Placer County, known as **THE CLIPPER MILLS,** offer this powder and guarantee it the best.

CAPS and FUSE at Lowest Rates.

THE GIANT POWDER COMPANY, 30 California St., San Francisco.



THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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Pacific Manufacturing Company,

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Manufacturers and Jobbers of Windmills, Pumps, Tanks, TUBULAR WELL TOOLS, Pipe, Fittings, Etc., Etc.

GRANGERS' BUSINESS ASSOCIATION,

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OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.
Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E AN EVERY, Manager. A. M. BELT, Assistant Manager.



SURE DEATH To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

Ongerth Liquid Tree Protector,

The only effectual remedy in the market. Indorsed by the University of California.

When Grafting or Budding use our Liquid Grafting Compound.

Send for circular with testimonials to

Ongerth Grafting Compound Co.

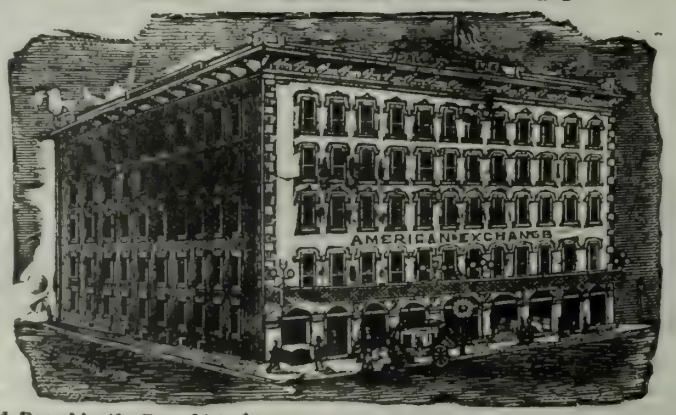
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AMERICAN EXCHANGE HOTEL,

SAN FRANCISCO.

CLEANLINESS AND HOME COMFORTS.



OUR AGENTS MEET YOU ON ARRIVAL AT SAN FRANCISCO.

Rooms and Board by the Day, $1 to $1.50; by the Week, $6 to $10; by the Month, $25 to $40.
Good Rooms and Elegant Table. Meals, 25c. Single Rooms, 50c. Free 'Bus.

Commission Merchants.

DALTON BROS.,
Commission Merchants
—AND DEALERS IN—
CALIFORNIA AND OREGON PRODUCE
Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
Advances made on Consignments.
308 & 310 Davis St., San Francisco
[P. O. Box 1936.]
Consignments Solicited.

ALLISON, GRAY & CO.
501, 503, 505, 507 & 509 Front St.,
And 300 Washington St., SAN FRANCISCO.
GENERAL
COMMISSION MERCHANTS
GREEN and DRIED FRUITS,
POULTRY, EGGS, GAME, GRAIN, PRODUCE AND WOOL.

MOORE, FERGUSON & CO.
WOOL, GRAIN, FLOUR
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Members of the San Francisco Produce Exchange.
Personal attention given to sales and liberal advances made on consignments at low rates of interest.

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GREEN AND DRIED FRUIT, NUTS, PRODUCE, POULTRY, EGGS, HIDES, PELTS, ETC.
CONSIGNMENTS SOLICITED. PROMPT RETURNS.
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COMMISSION MERCHANTS,
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SAN FRANCISCO, CAL.
SHIPPING ORDERS A SPECIALTY.

EVELETH & NASH,
COMMISSION MERCHANTS
And Dealers in Fruit, Produce, Poultry, Game, Eggs Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223 225 and 227 Washington St., San Francisco.

GRANGERS' BANK
OF CALIFORNIA,
SAN FRANCISCO, CAL.
Incorporated April, 1874.



Authorized Capital	**$1,000,000**
Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders...	**720,000**

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1892 A. MONTPELLIER, Manager.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.

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ATTORNEYS AND COUNSELORS AT LAW,
No. 530 California Street,
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WELL SUPPLIES
All Kinds. Water, Gas, Oil, Mining, Ditching, Pumping, Wind & Steam Mach'y. Encyclopedia 25c.
The American Well Works, Aurora, Ill.
21-23 S. CANAL ST., CHICAGO, ILL. } Branch Houses
ELM STREET, DALLAS, TEXAS. }

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, May 4, 1892.

rading in farm products continues light. The ge in the weather has been of great benefit to ing crops, and gives reasonable assurance of an age yield of cereals to the acre. Cold, rainy ther keeps back the fruit crop, and may possibly onsiderable damage to the more mature fruits. local money market continues easy, with no par- ar inquiry for accommodations from any source.

Grain Futures.

Liverpool.

e following are the closing prices paid for wheat options tl. for the past week:

	May.	June.	July.	Aug.
sday.....	7s01 d	7s00½d	7s00½d	7s01½d
ay.....	7s00½d	7s00 d	7s00½d	7s00½d
rday.....	7s00½d	7s00 d	7s00 d	7s00½d
day.....	7s00½d	6s11½d	7s01½d	7s00½d
day.....	7s00½d	7s00 d	7s00½d	7s00½d

. 2 Red Winter are quoted and not No. 1 Californian.

e following are the prices for California cargoes for off , nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
sday..	36s6d	36s3 l	36s3d	Held higher. Cold, wet.
y.....	36s6d	36s3d	36s3d	Cold.
rday..	36s6d	36s3d	36s3d	Quiet but steady.
day....	36s6d	36s3d	36s3d	Firmer. Wet and cold.
day....	36s3d	36s d	36s d	Quiet but firm.

day's cablegram is as follows:

VERPOOL, May 4.—Wheat—Firm, but not active. Cali- a spot lots, 7s 5d; off coast, 36s 6d; just shipped, 36s; y due, 3:s 3d; cargoes off coast, firmer; Mark Lane t, steady: French country markets, very quiet.

New York.

following shows the closing prices of wheat for the week:

	May.	June	July	Aug.
sday.....	150¾	150⅝	150⅝	149⅛
y.....	151	150⅛	15⅜	150
day.....	150⅝	150¼	150⅝	149¾
ay.....	150½	149½	149½	149⅛
ay.....	150	150¼	150⅛	150

following are to-days' telegram:

W YORK, May 4.—Wheat—90½c for May, 90⅝c for July, 90½c for August, and 9.½c for Sep- er.

CAGO, May 4.—Wheat—81⅛c for May, and 81¼c for

San Francisco.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer Aug. H.	Buyer Aug. L.	Seller 1892. H.	Seller 1892. L.
day.....	152	151½	143½	142⅝	143½	142⅝
y.....	151⅝	151	....	....	143½	142½
day.....	151½	151½	....	....	143½	143½
ay.....	151½	150¾	145	145	142½	142½
ay.....	150½	147⅝	....	....	140½	140

following are to-days' recorded sales on Call.

at—Morning—Informal Session: Buyer season—500 $1.48; 100, $1.48½. Seller 1892—100 tons, $1.40⅝; 400, per ctl. Regular Session: Buyer season—200 tons, 300, $1.48¾; 100, $1.49; 600, $1.48¾. Seller 1892—2300 $1.41½; 900, $1.41½; 200, $1.41⅝; 200, $1.41⅝ per ctl. Af- n: Seller 1892—900 tons, $1.41½. Buyer season—100 $1.48½; 100, $1.48⅝ per ctl.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	June. H.	June. L.	December. H.	December. L.
day.....	102⅝	102⅝	....	....	....	....
y.....	102¼	102	104	104	105	105
day.....	103¼	102¼	....	....	....	....
ay.....	102½	102	....	....	....	....
ay.....	99¼	99½	100½	100¼	....	....

following are to-day's recorded sales on Call:

ay—Informal: Seller 1892, new—600 tons, 99½c per ctl. ar Session: Buyer season—300 tons, 99½c; 100, 99¼c, Seller 1892, new—200 tons. $1.00½; 200, $1.00⅝; 40 per ctl. Afternoon: Seller 1892, new—100 tons, $1.00½; 300, $1.00½. Buyer season—100 tons, 99¼c. Seller new—100 tons, $1.02½; 100, $1.02 per ctl.

Markets by Telegraph.

Eastern Wool Markets.

W YORK, May 2:—The tone is something more ant, but is not affecting general quotations; in the slow response to London quotations amazed large Eastern operators. Part of this is at- table to the low condition of remaining stocks, he strongest feature is the cautious speculative g after the bad pan out of many of last year's res. Few buyers have gone to primal points t. Sales foot up of domestic 991,000, including half a million of unwashed pulled, and 588,000 n on private terms. Sales at Boston: 1,515,000 tic, including 195,000 spring California; 770,000 n unwashed wool is down to a light quantity. hiladelphia had several active days, helped by the nce of New England buyers.

Eastern Hop Markets.

W YORK, May 2.—Quiet attends the late strong s. Brewers have placed some of their reserve le, evidently as a "bluff" to break prices, but well-founded confidence in the statistical posi- Holders of choice lots maintain full views, 24 for '91's. Closing option prices: May (bid and l), 26@27c; June, 25@27½c; July, 26@28c.

Eastern Fresh Fruit Markets.

ICAGO, May 3.—Sales by auction to-day were as ws: Purple cherries, 5-lb boxes, $3.50; Rockports, boxes, $4.50; Earliness, 5-lb boxes, small, $2.10.

Miscellaneous.

W YORK, May 2.—Lima Beans—Buyers are now supplied; nominal are $1.65@1.75, the latter re- d. Mustard Seed—Steady.

Wool.

e market is more active, but at no better prices, s we except special clips bought for special pur- . F. P. McLennan & Co. and other large scourers ar to be running to full capacity. Manufacturers heir buying agents appear to give preference to ed wools. Receipts of wools are very heavy.

Live Stock.

llocks are barely steady. Those received are rally in excellent condition. When of proper so as to cut up with little wastage, slaughterers slight advance. Mutton sheep and lambs are Hogs are irregular. The lower prices ruling utton sheep are against block hogs.

General Remarks and Statistics.

Cereals.

ndon cables, May 3d, report as follows: Wheat flour on passage to United Kingdom, 2,943,000 Continent, 1,320,000. Imports of wheat into the d Kingdom during the past week, 201,000 qrs.; 168,000 bbls. Indian shipments of wheat during ast week: United Kingdom, 90,000 qrs.; Con- t, 95,000.

thin the past few days, crop prospects in this have been greatly improved, owing to cool and ery weather. By referring to the Agricultural Department in this paper, it will be seen that rly as last Friday the improvement had set in in ly all parts of the State. The rains and cool her have been just the things wanted to bring the berry out plump and insure a larger yield to the acre. What is now wanted is fair and moderately warm weather.

The local wheat market hangs around former quotations. Trading in the sample market is very quiet. The low price of silver has enabled English importers to contract for the delivery of Indian wheat at English sea ports at very low figures, which is against farmers in the United States. The stock of wheat in this State is said to be less than ever before known in this month, but the near approach of new crop season encourages the bears. Trading in futures on Call is as yet light. It looks as if monthly options will be largely dealt in, which may prove beneficial to the trade.

The large disengaged tonnage in port and large list of vessels on the way are calculated to keep wheat charters within reasonable figures.

The barley market exhibited considerable strength up to Monday, when a weaker tone set in which resulted in lower prices yesterday. The unfavorable turn to holders is due to better crop weather and encouraging advices from growing crops. The feed demand for ground and rolled barley continues free, notwithstanding natural feed was never better at this time of the year in the central and northern counties of the State. Receipts from up north are light.

Oats are firm. Receipts are lighter, while the demand holds good. Crop advices are uniformly favorable in this State and up north. The stock here is only fair.

Corn, after making a slight advance under a free export demand, shaded off toward the close, owing to a falling off in the demand.

Rye is weak and nominal.

Geo. A. Abel, official grain inspector of the San Francisco Produce Exchange Call Board Association, has prepared the usual monthly statement for May 1st, showing the stocks of grain in all Call Board warehouses, as follows:

	Feb. 1.	Mch. 1.	Apl. 1.	May 1.
Wheat, tons	2,648	1,068	2,182	2,475
Barley	16,768	13,837	12,718	10,978
Oats	4,334	3,709	2,566	2,097
Corn	2,434	2 564	1,893	2,091

The stock of wheat in Port Costa warehouses is 19,069 tons, and in Stockton warehouses 31,039 tons, making the total in all Call Board warehouses 52,583 tons, as against 82, 013 on May 1, 1891. The receipts at this port during April and the preceding months are shown in comparison as follows:

	Jan.	Feb.	March.	April.
Barley, tons	5,650	4,436	10,837	8,691
Oats	1,232	2,069	1,340	1,797
Corn	986	1,229	460	1,087

Feedstuff.

Ground feed continues in good demand. Bran and middlings are steady, but ground barley shows signs of easing off. Feed meal is barely steady.

Hay is firmer. Rains the past week will cause many fields which would have been cut for hay to be harvested for grain. There is a diversisy of opinion regarding the crop. Many hold to the opinion that the ousturn will be considerably larger in this year than it was in 1891, while others think it will be about the same. For new crop hay contracts it is hard to get correct quotations.

Dairy Produce.

The butter market shows continued strength owing to heavy packing. There is still more or less complaint of butter coming from sections where weeds have grown rank of its having an unpleasant flavor. Packers should exercise caution in putting such butter down. Natural pasturage is reported to be of the very best in all parts of the State, which gives assurance of a continued liberal output of butter.

Heavy receipts of cheese and an offish demand have caused the market to decline, closing the week weak. The grade this year is said to average better than usual.

Eggs are weak, with concessions obtainable. Receipts of both Californian and Eastern are very large. The cool weather is in favor of holders, several of whom are disposed not to sell except at full asking prices, but others are selling as fast as consignments are received.

Fruit.

The berry market has held steady throughout the week. Cold and unseasonable weather has retarded the growth, but it is claimed that in the end it will result favorably. There is a good home and shipping demand.

Cherries are making a better show, but as yet the fruit is generally small-sized and poorly flavored. The crop, taking the State as a whole, will be a full average. In several localities the yield is very light, but in other sections it is large, with more trees in bearing.

We are not advised of any contracts for tree fruits. It is said that buyers' views are below those of sellers. It is claimed that the market is cleaning up on canned fruits, the bulk of which are not A 1.

In dried fruits and raisins there is nothing new to report. The market is said to be working into good shape for handling the 1892 crop.

In citrus fruits, limes and lemons are in oversupply, causing low prices to rule. The supply of frosted oranges is heavy. Sales are hard to make. Choice oranges from Redlands and Highlands in San Bernardino county are wanted.

Vegetables.

In garden truck there is very little to note. Asparagus is weaker, but rhubarb is firmer. Peas are stronger under moderate receipts. Canners are not in the market, and probably will not be until lower prices rule. String beans are in freer receipt, as are summer squash.

Old potatoes are barely steady, but well-matured new are in request at an advance. The demand is chiefly for shipping eastward. The home demand is good. It is claimed that heavy frosts in last month killed many acres of vines in the lowlands, which will necessitate redropping.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 2, '92, were as follows:

Flour, qr. sks	42,047	Bran, sks	6,076
Wheat, ctls	8,957	Buckwheat "	....
Barley, "	17,158	Middlings "	2,019
Rye, "	1,137	Chicory, bbls	25
Oats, "	676	Hops, "	9
Corn, "	3,176	Wool, "	5,526
Butter, "	1,533	Hay, ton	1,121
do bxs	1,178	Straw, "	128
do bbls	....	Wine, gals	194,880
do kegs	39	Brandy, "	3,440
do tubs	11	Raisins, bxs	763
do ½ bxs	267	Honey, cs	....
*Cheese, ctls	952	Peanuts, sks	....
do bxs	195	Walnuts "	12
Eggs, doz	50,330	Almonds "	36
do " Eastern	61,050	Mustard "	25
Beans, sks	2,565	Flax "	....
Potatoes, sks	7,493	Popcorn "	....
Onions, "	1,354	Broom corn, bbls	....

*Overl'd, 221 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to May 2, '91.	July 1, '91 to April 30, '92.
Flour, ½ sks	335,505	410,701
Wheat, ctls	1,349,376	1,249,549
Barley, "	268,512	51,533
Oats, "	319,927	397,708
Wool, bales	6,041	6,172
Hops, "	443	431
Rye, sks	210	3,359
Potatoes sks	98,067	128,964

(*Continued on next page.*)

BAIN WAGONS.

Over 75,000 Have Been Sold on This Coast.

WHAT IS SAID ABOUT THEM:

Merced, March 4, 1892.

Messrs. BAKER & HAMILTON.

Gentlemen:

I bought a Bain wagon of your agent at Merced, eighteen years ago and it is a good wagon yet.

F. HANFORD.

Gertrude, March 4, 1892.

Messrs. BAKER & HAMILTON.

Gentlemen:

The Bain wagon I got of you six or seven years ago was a good one. The tires have never been reset, and everything is solid.

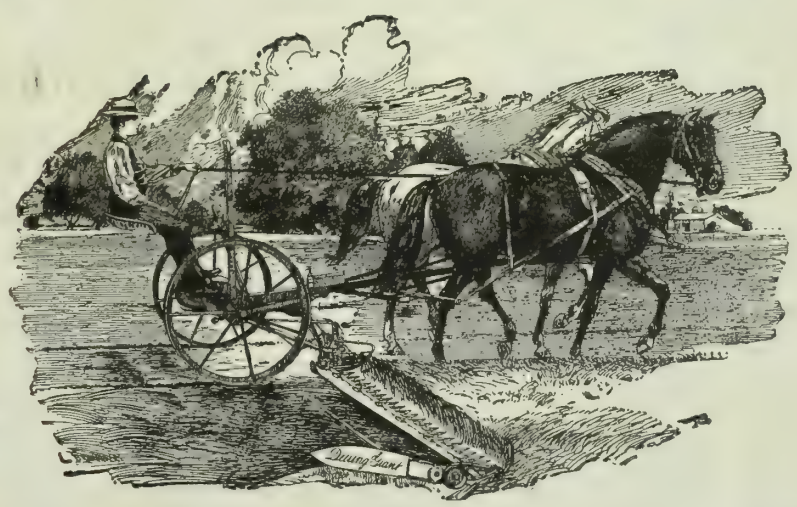
Yours respectfully,

FRANK FEMMONS.

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San Francisco. BAKER & HAMILTON, Sacramento.

Deering Mowers.



STRONGEST CONSTRUCTION, LARGEST WHEELS, WIDEST TREAD, SUPERIOR CUTTING APPARATUS.

LIGHTEST DRAFT. LARGEST VARIETY OF SIZES.

BETTER THAN EVER BEFORE. BETTER THAN ANY OTHER.

Call on Deering Agents for Deering Mowers and Deering Repairs.

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And other new and old varieties.

GUAVAS!

5 and 6-Year-Old Bearing Shrubs.

ALOHA NURSERIES, Penryn, Placer Co., California.

FRED C. MILES, Manager.

Market Reports.

[*Continued from preceding page.*]

Miscellaneous.

From reliable advices up to April 20, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	205,775	276,390	*†144,023	71,796
San Diego	15,247	15,607	4,967	.....
San Pedro	1,571	6,807	.....	13,305
Oregon	24,455	22,870	15,045	
Puget Sound	14,119	31,402	.....	
Totals	261,167	353,076	164,035	85,101

*Engaged for wheat, 1892, 15,542; 1891, 63,914 †For new crop loading, 6,803

The statistics of produce exports from this port from July 1st to April 27th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,388,172	11,964,902
Flour, bbls	917,453	1,053,500
Barley, ctls	994,616	273,196

Poultry is generally strong. The demand is fair, while receipts are moderate.

Beans are stronger, with an advance obtainable for several kinds.

Old hops are scarce and held above buyers' views. For new crop, bids are made at around 17½ cts.

Honey is in light supply. It is said that the crop this year will show a decided increase over that in last year.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 4, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 80
Red	2 15	@	2 40
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 20	@	2 40
Fld Peas, blkeye	1 30	@	1 50
Do green	1 50	@	2 00
Do Nlles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, ₺	14	@	—
Do good to choice	16	@	—
Do Giltedged	—	@	19
Do Creamery rolls	—	@	19
Do do Giltedge	—	@	19½
Eastern	—	@	—
CHEESE.			
Cal. choice mild	—	@	9
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Young America	—	@	11
EGGS.			
Cal. ranch, doz	18	@	—
Do do selected	—	@	20
Do store	16	@	—
Eastern	16	@	18
FEED			
Bran, ton	17 50	@	18 50
Feedmeal	26 50	@	28 50
Gr'd Barley	22 00	@	23 50
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt.	7 50		
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@	15 00
Wheat and Oats	10 00	@	13 50
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 50
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC			
Barley, feed, ctl	90	@	—
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 35	@	1 40
Yellow, large	1 33½	@	—
Do small	1 35	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 25	@	—
Gray	1 25	@	—
Rye	1 42½	@	—
Wheat, milling.			
Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@	1 57½
HOPS.			
1891 Choice to Ex.	26	@	—
Fair to Good	22	@	—

FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. ₺	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	14
ONIONS.			
Silver Skin, Choice per ctl	1 50	@	1 75
Fair to Good	75	@	1 25
Cut	50	@	—
New Reds	65	@	1 05
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling,	50	@	70
Do do Oregon	60	@	1 05
Do Humboldt	40	@	75
River Reds	30	@	45
New	80	@	1 05
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	5 50
Do large	6 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@	9 00
Geese, pair	1 75	@	2 00
Goslings	2 25	@	3 00
Turkeys, Gobl'r.	17	@	19
Turkeys, Hens.	19	@	21
Manhattan Egg Food ₰ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, ₺	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	[illegible]	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'v & F'th'll.	14	@	17
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def.	10	@	12
Nevada (State).	15	@	17
HONEY.			
WhiteComb, 2-₺	8	@	11
do do 1-₺ frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, ₺	25	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 4, 1892.

Limes, Mex	2 00	@	3 00
Do Cal	—	@	—
Lemons, box	50	@	2 50
Do Sicily	5 00	@	—
Oranges, Seedlings			
Redlands	1 75	@	2 25
Riverside	1 50	@	1 75
Los Angeles	1 25	@	1 50
Do Navels—			
Redlands	3 00	@	4 00
Los Angeles	2 50	@	2 75
Riverside	2 50	@	3 00
Duarte	2 50	@	3 00
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	8 00	@	13 00
Sharpness	6 00	@	7 00
Gooseberries, ₰ drawer	40	@	50
Raspberries, bkt	35	@	45

Cherries, box.			
Black	1 50	@	2 25
White	1 00	@	1 25
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, ₺	15	@	—
Parsnips, ctl	—	@	1 00
Peppers, dry, ₺	10	@	—
Do green	—	@	—
Turnips, ctl	50	@	—
Cabbage, 100 ₺s	40	@	—
Garlic, ₺	2	@	4
Squash, Mrfn, tn	12 00	@	15 00
Do Summer, box	2 00	@	2 50
Tomatoes, box.	2 50	@	—
Asparagus, box	50	@	—
Do choice to ex.	1 50	@	—
Peas, green, sk.	75	@	—
Do sweet	1 00	@	1 25
Rhubarb, box	35	@	1 25
String Beans	4	@	10
Cucumbers, doz	75	@	1 25
Mushrooms	10	@	30
Egg Plant, ₺	20	@	30

Live Stock.

BEEF.			
Stall fed	6	@	—
Grass fed, extra	6	@	—
First quality	5½	@	—
Second quality	5	@	—
Third quality	4½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	5	@	—
Do light	6½	@	—
Dairy	7	@	—
MUTTON.			
Wethers	7½	@	—
Ewes	7	@	—
Do Spring	8½	@	—
HOGS.			
Light, ₰ ₺, cents	5½	@	—
Heavy	4½	@	—
Feeders	3½	@	4
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	7½	@	—
Do, June-July	7½	@	—
Wool Bags	36	@	38

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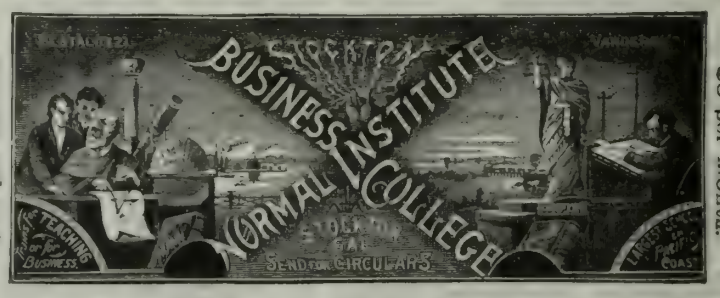
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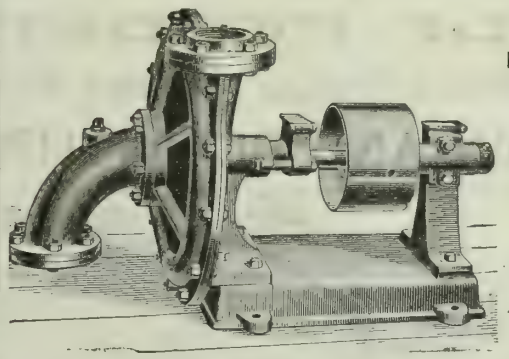
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EARLY CRAWFORD, FOSTER, MUIR AND ORANGE CLING **PEACHES!**
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PORTABLE
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The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels
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DON'T FORGET
—THAT THE—
PECOS VALLEY
THE FRUIT BELT OF NEW MEXICO,
Offers better advantages for persons desiring to engage in fruit culture than any other place on the continent.

Note the following table showing growths made by various fruit trees, shade trees, grape vines, etc., during the past summer:

Name of Grower.	*P. O. Address.*	*Tree or Vine*	*Growth in feet.*	*inch.*
Witt Bros.,	Eddy N. M.,	Raisin Grape,	16	9
"	"	Apple,	4	9
"	"	Pear,	4	8
"	"	Plum,	5	9½
"	"	Cherry,	1	9
"	"	Crab Apple,	1	8½
"	"	Mulbberry,	1	8
F. G. Campbell,	Eddy, N. M.,	Black Locust,	8	7
G. W. Blankenship,	Eddy, N. M.,	Apple,	3	11
"	"	Apricot,	5	8
"	"	Peach,	3	9
"	"	Box Elder,	6	1
"	"	Mulberry	7	8
"	"	Lombardy Poplar,	6	2
"	"	Castor Bean,	8	4
Jas. Hogg,	Seven Rivers, N. M.,	Peach,	7	2
"	"	Cottonwood,	16	3
R. M. Gilbert,	Seven Rivers, N. M.,	Osage Orange,	14	7
"	"	Native Willow,	16	5
"	"	Pecan,	6	2
"	"	Black Walnut,	4	11
"	"	Plum,	8	1
"	"	Mulberry,	6	4

Witt Bros. have several cottonwoods, 9 years old, that are 62 to 64 inches in circumference and over 60 feet high. Mr. Hogg has a peach tree 3 years old from the seed that is 3½ inches in diameter and 17 feet 5 inches high. He has a cottonwood 4 years old that is 28 inches in circumference. Mr. Gilbert has a pecan tree 6 years old that is 24 inches in circumference and 22 feet high. He has a black walnut tree 3 years old from the seed that is 12 inches in circumference, 11 feet 10 inches high, and that bore several walnuts this year. Maynard Sharpe, of Eddy, has two peach trees, 2 years old from the seed, that bore and matured 7 peaches this year. He has 1 apple tree 2 years from the seed, that bore 3 apples the past season.

Apples, Peaches, Pears, Apricots, Nectarines, Figs, Prunes, Almonds, Muscat, Tokay, Muscatelle and other varieties of Grapes now in successful bearing in this Valley. Over 1000 acres of Muscat Grapes being planted this year.

Send for maps, illustrated book, etc.

PECOS IRRIGATION AND IMPROVEMENT CO.,
EDDY, NEW MEXICO.



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NEW "ZIG-ZAG" CULTIVATOR,

(STEEL FRAME.)

FOR ORCHARD AND VINEYARD.

TWO SIZES, FIVE & SIX FOOT.

The "Zig-Zag" Cultivator, with Wood Frame, as manufactured last year, met with such great success, that it has encouraged us to build a much larger number for the trade of 1892. We are using on our new Cultivator a Frame constructed of Channel Steel, which is the strongest light material to be found.

The axle has been lengthened 16 inches, which makes it run level and steady.

The Standards for "Duck Foot" Shovels will be sharp on the front edges. This cuts the soil and materially lightens the Draft. The new Standard Clamps will have nuts on each end and will be made from heavier stock.

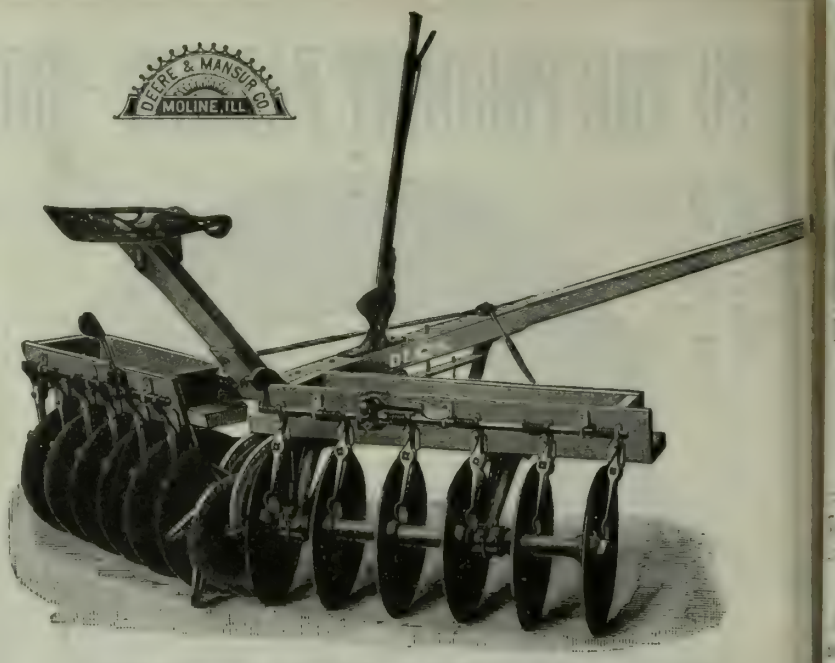
While we consider the "Duck Foot" Shovel superior to any for fruit cultivation, we are prepared to sup.ly the "Oval Reversible," Diamond Point," or "Mole" Self-Sharpening Shovels.

The "Mole" is 3½ in. wide and similar to the "Duck Foot," but is chilled in such a way that the natural wear has a tendency to keep the point sharp. Sub-Soil cultivation is fast superseding the old top cultivation, which throws the moist earth to the surface to be dried by the wind and sun.

The "Zig-Zag" has the lowest Frame of any Cultivator yet on the market, and for that reason is the best for young orchards or vineyards.

The Cultivators may be ordered with or without Weed Knives.

DEERE & MANSUR CO.
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THE "DEERE" DISC HARROW, WITH MIDDLE BREAKER.

4, 5 and 6 Foot, FOR ORCHARD!

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The 4 and 5 Foot Disc Harrows are Especially Adapted to Vineyard Work.

Except in number and size of discs, all are similar in construction. They have two independent gang discs operated by a hand lever, a high Spring Seat, Flexible Scrapers that can be operated lightly, or w th a st spring pressure, by pedals within easy reach of the driver's foot, and a Middle Breaker, by which the ridge le other harrows between the track of the gangs is cut out.

PRICE LIST, WITHOUT DOUBLE TREES OR NECK YOKE.

No. 1.—4 ft. 16-inch Discs, 330 Lbs.	$38 00		No. 10.—4 ft. 20-inch Discs, 382 Lbs.	$4
" 2.—5 " 16 " " 365 "	40 00		" 11.—5 " 20 " " 435 "	4
" 3.—6 " 16 " " 394 "	45 00		" 12.—6 " 20 " " 479 "	5

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DEERE IMPLEMENT CO., 305 & 307 Market Stree

SAN FRANCISCO, CAL.

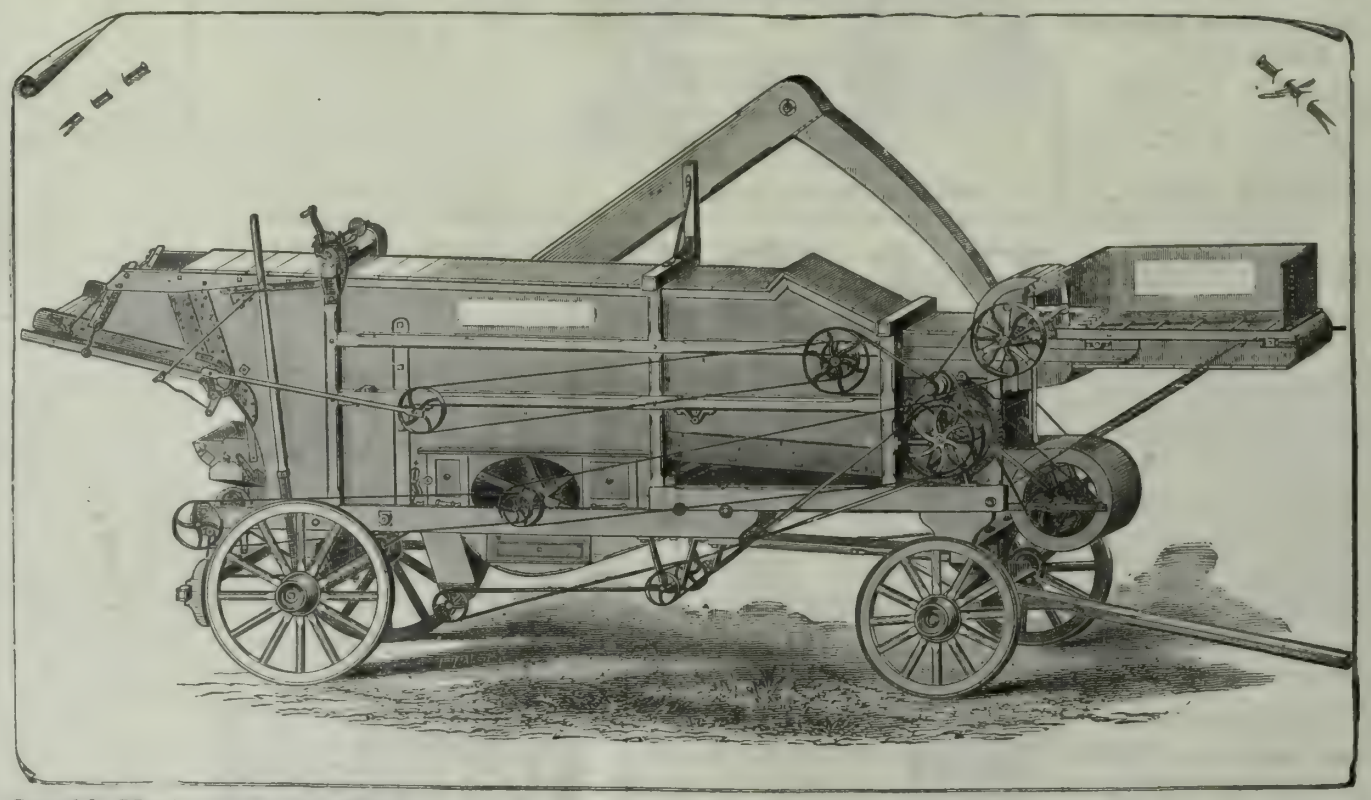
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PACIFIC RURAL PRESS

Vol. XLIII. No. 20. SAN FRANCISCO, SATURDAY, MAY 14, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Contra Costa County Courthouse.

For illustration this week we have selected the courthouse of Contra Costa county, one of the oldest in the State, and a building famous in the annals of the law. It was built in 1853, and at that time represented a very ambitious spirit on the part of a new community. When new, it was deemed an architectural wonder, and to this day it remains an ornament to the pretty town of Martinez.

The courthouse, as it appears in the picture, is perhaps not more interesting than the glimpse of its surrounding grounds and of the rolling landscape in the background. Both are characteristic of California and of Contra Costa county, which, though very near to San Francisco, has been, comparatively, a neglected district. There are signs, however, that this interesting country will soon come into more general notice. A public highway will soon be opened via Chabot reservoir in Oakland township, over a favorable pass through the Contra Costa hills to Moraga valley, connecting with roads to Lafayette, Walnut Creek, Danville, and farther eastward. This will give a drive from Oakland into a section of country whose bland air and beautiful scenery afford especial attraction to visitors. A great part of Contra Costa county consists of beautifully rolling country; it is rich in all the potential elements of soil and productive without irrigation. Nearly all the fruits, nuts, vegetables and cereals commonly grown in California are successfully cultivated.



THE CONTRA COSTA COUNTY COURTHOUSE.

Contra Costa county is peculiarly available for country residence by those who do business in San Francisco or Oakland. When it shall be covered, as it must be before a great while, with a system of electric railroads, a very large part of its area will be brought within thirty minutes of Oakland and the State University. There is no better community in California than that of Contra Costa county. Having no large city, it follows naturally that its people have few vices. They are in the main well-to-do, honest folk, and have, from their special advantage of situation, all the good that comes from country life, and all the benefit that comes from proximity to the metropolis.

The care and skill displayed in the order of the courthouse grounds shown in the picture, and even more pleasantly manifest in the picture of the Brentwood schoolhouse, printed last week, bear evidence of public taste and refinement.

An Opening for Jack Rabbits.—The rabbit drive is to have an ally. It is recorded in one of the city dailies that one hundred pairs of rabbits of the jack species were sent north on the steamer Bertha, which sailed for the Pribyloff seal islands last Saturday. They will be placed on St. George's island, where it is anticipated they will breed fast enough to furnish food in winter for the white, blue and gray foxes on the island. For several years the foxes have been getting scarcer, owing more than anything else to the lack of food. There was at one time a great number of rabbits on St. Georges's island, but the foxes have nearly exterminated them, so the experiment is being tried of introducing a new lot of rabbits in the hope of remedying the want of a food supply. Fox skins are becoming more and more valuable each year. If the rabbits sent up prove a success others will follow.

Hop Roots Must be Separately Assessed.—On another page of this issue is given a report of a meeting of hop growers at Sacramento, at which it seems to us a strong case was made out against the assessment of hop roots in addition to the assessment of the real estate in which they grow. It seems, however, that the showing has availed little thus far, for on Tuesday of this week the committee sent by the hop growers appeared before the State Board of Equalization and asked that body to rescind its alleged action in directing County Assessors to add $15 an acre to the assessments on hop and alfalfa lands. The Board of Equalization informed the committee that it had simply called the attention of the County Assessors to the law which requires them to assess such things separately and specially. The board declined to alter its action.

Dandelions.—Italian women on the outskirts of New York gather enormous quantities of dandelions at this season. They go forth wearing great aprons and armed with small, strong kitchen knives, and return home laden with as much as half a bushel each.

The Flower Show.—The spring show of the State Floral Society is opening as we go to press, on Wednesday. It is the greatest display of flowers and ornamental foliage plants ever gathered on this coast. The show will close Saturday evening, May 16th.

Hounds for Wolves.—The stockmen of South Dakota have recently imported from Tennessee a number of Russian wolf hounds to help in the extermination of wolves, which have of late been killing numbers of calves and colts.

The Canal Discussion.

Deeming the Nicaragua Canal question the most important subject now before the people of California, and that it is especially related to the interests of producers, the Rural Press has invited letters in representation of every shade of opinion, with the hope of bringing out all the arguments on all sides of the question.

We have printed communications from Mr. Pool and Mr. Berwick on one side and from Mr. Doyle and Capt. Merry on the other. We hope others will follow, giving such arguments as they may consider important. We have written to President Marion Cannon of the Farmers' Alliance, who represents the extreme opposition to the bill now pending before Congress, inviting him to fully state his position, and hope to have his answer in time for next week's issue. When this answer comes, we shall present it to ex-Senator Warner Miller, the President of the Canal Company, who is about to visit San Francisco, and we hope to have direct from him a statement of the plans and purposes of the Canal Company. The purpose of all this is to give to the readers of the Rural Press a full and fair statement of all sides of this great question, entirely free from the bias of partisan interest and political motive which seems to influence all discussions in the daily political press. A question of this sort ought to be considered apart from politics, from an economic standpoint and wholly upon its merits. There is no other way to approach subjects in which the interests of the State are bound up.

More Trees Under Condemnation. — The State Board of Horticulture is proceeding vigorously against the importation of pestiferous trees. It is announced from Los Angeles that another suit has been filed against the Fairmount Land and Water Company. The suit prays to condemn 12,000 peach, apricot and plum trees alleged to be infected with black aphis and the peach borer, and asks that they may be destroyed. These trees are of the same lot as was shipped into the Antelope valley from Delaware, and which was a short time ago in litigation, but not the identical trees. These trees were planted upon land owned by the Fairmount Land and Water Company before the authorities got hold of the other trees. The suit differs from the other in that it is not alone for an injunction pending litigation, but a straight proceeding to condemn the trees and destroy them.

Ponce de Leon in the Dark.—A Georgia man has in his possession a palm-oil lamp made in Madrid, Spain, in 1604. It was dug up in the woods some time ago, and is supposed to have been lost by Ponce de Leon.

Kansas City grain merchants are at war with the Burlington road and charge gross discrimination.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 50 cents.

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Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 14, 1892.

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[NEW THIS ISSUE.]

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Agricultural Implements—Baker & Hamilton.
Agricultural Implements—P. P. Mast & Co.
Agricultural Implements—Allison, Neff & Co.
Agricultural Implements—Frank Brothers.
Agricultural Implements—Wm. Deering & Co.
Agricultural Machinery—G. G. Wickson & Co.
Fruit Driers—California Fruit Evaporating and Mfg. Co., Los Angeles.
Buhach—Buhach Producing and Mfg. Co., Stockton.
Carriages, Buggies, Etc.—Briggs Carriage Co.
Fruit Trees—H. B. Everett. Sutter City.
Farm for Sale—J. DeWitt Butts, Ashland, Or.

See Advertising Columns.

The Week.

California is now awaiting two great visitations, and to extend an old-fashioned California greeting to the visitors. Next week several trainloads of Eastern editors will enter the State at the south and traverse the greater part of our territory before returning. Formal receptions without number will be accorded in all parts of the State. It will avail us much to please these molders of public opinion, and we trust that no effort of generous and wisely directed hospitality will be withheld.

Another visitation will be by the American Association of Mining Engineers. Their interest is a little outside of our immediate field. We presume they will regale themselves largely upon rocks and holes in the ground and ponderous machinery. It is to the general interest, of course, to show this department of our resources and industries to those who can best appreciate them.

The season seems to be still somewhat out of joint. Heavy rains and light frosts so late in the season are not usual in California. Probably the trouble is that the Weather Service changes bosses so frequently out here that the elements get sorter rattled—so to speak.

Building Up the State Fair.

It seems to us an exceedingly happy result has been attained in the postponement of the "dress rehearsal" of the State's World's Fair exhibits until January next, at the Mechanics' Pavilion in this city. This is a better time for holding, for then the material will be massed at nearly the proper time for shipment eastward, or at least with just time enough before shipment to allow discriminating selection. We are glad also that relief is had from a possible renewal and intensifying of the issues between the Mechanics' Institute and the State Board of Agriculture. There should be no conflict between these bodies; both should work together toward praiseworthy ends without rivalry, except such as continued effort toward excellence makes honorable and desirable.

But the half issue which recently arose has proved beneficial in another way, and that is in stirring up people to take greater interest in the State Board of Agriculture as a part of the State Government, and in its exhibitions of industrial achievement and progress. We have urged this time and time again. The officers and members of the board have invited it, and certainly they can do better work with a fuller popularization of their efforts, and possibly an improvement such as might naturally result from a fuller enlistment of producers in their behalf.

The present occasion has a local flavor, and was perhaps engendered in part by interior interests as compared with those of the metropolis and the coast regions. This does not matter, providing it results in broadening of the popular interest and support. However, this is the reported manner of the present movement as telegraphed from Sacramento on Tuesday of this week:

Some 50 leading citizens met here to-day and formed a permanent organization, the purpose of which will be to devise special and novel features that will add interest to the State Fairs this and succeeding years.

A program embracing upward of 20 different features, including an historical State exhibit, same of the Pacific Coast, exhibits of floriculture, exhibits of mining and industrial implements, an ethnical exhibit of primitive native races and of the Mexicans, dress rehearsal, a sham battle, contests in brick laying, carpentering, etc., a military competitive drill, and various other things to please and instruct visitors was adopted. The following officers were elected: Pres., A. A. Vanvorlies; Vice-Pres., Thomas B. Hall; Sec'y, James E. Mills; Ass't Sec'y, Charles M. Campbell.

We say success to the new association. Let us see this year how much they can accomplish in the improvement of the State Fair. Possibly they will do so much that the whole State will apply for membership. This would be a consummation eminently to be desired.

Fruit Notes.

We desire to call the attention of our readers again to the work we propose in the fruit line during the next three months. We have offered prizes for letters on set subjects during all the remaining months of 1892. These prizes are: First, cash $10; second, cash $5; third, RURAL PRESS one year. The list of subjects will appear from time to time in our columns. We desire now, especially, to emphasize the awards for the next three months, the letters on the subjects named to be mailed to us on the first day of the month named.

JUNE.—SMALL FRUIT GROWING: Counting as "small fruits" everything which is commonly understood by the terms "berries" and "currants;" which are the best varieties, how to plant, cultivate, irrigate and harvest them to secure the best results.

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST.—FRUIT-DRYING AND RAISIN-CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine-evaporating each and every kind of fruit; packing and marketing of products.

We have chosen the subjects for July and August with the special design of making the RURAL useful to those who desire to know the latest and best methods of handling fruit. The times are set so that the letters will be published just before the heavy work of the season begins, so that all the suggestions may be immediately useful to our readers. So, RURAL readers, please prepare your letters on these subjects with a special view of making known the ways by which you have succeeded best in doing any one of the hundred things which minister to satisfactory work. Never mind if your information seems small and unimportant, it will help some one to know it, if it saves labor and wins money.

We cannot find room in this issue for as full reference to the San Jose Convention of last Saturday as we would wish. The reports, however, indicate movement, and are promising. It is perhaps becoming more and more apparent that our first great achievements in the line of cooperative fruit-handling will be upon the neighborhood and district plans. The neighborhoods may act first as they did in Santa Clara, and the district, including neighborhoods, follows naturally. Possibly the districts will ultimately converge in the State, or at least may act in harmony without formal association. Then there will be a degree of centralization in the fruit interest which will protect and promote. That is what is needed. We are glad that the Santa Clara people have started in this line and we wish them all success. We hope to give the plan of their organization that it may be suggestive and valuable to other districts. Including the signal results gained in Southern California during the last few years, it can be confidently claimed that cooperative fruit-handling has already accomplished much in California.

And while upon this subject, it is interesting to note the latest movement among the Florida orange growers, decided upon at a meeting held in Jacksonville two weeks ago, as summarized by the *Agriculturist*:

The orange growers agreed to pledge to the Fruit Exchange 1,000,000 or more boxes of fruit for transportation the coming season. The Exchange is to submit these pledges to the transportation companies and request bids for the transportation of the fruit. If the Exchange cannot obtain a rate of 25 or 30 cents per box from Jacksonville to New York, it will charter steamers and carry the fruit itself.

Fifteen thousand dollars is to be raised by selling stock of the Fruit Exchange, which will be used to make good any loss entailed by the Fruit Exchange in chartering these steamers; also for the purpose of putting canvassers in the field to solicit business and increase the shipments through the Exchange. It was the most representative convention of fruit growers ever held in the State.

This is a businesslike proceeding. What would California producers think of being able to give the railways a chance to bid on their service, and if the bids were not favorable throw them all out and go by water on their own bottoms. Perhaps the isthmus canal will do something like that for us, in some lines of goods at least.

Wheat Crop and Tonnage Supply Estimates.

The area in California seeded to wheat this year is estimated at 3,350,000 acres, against 3,190,716 acres seeded in last year. Persons who give close attention to crop prospects, and whose estimates of the probable outturn are accepted as fairly correct, place the yield this year at from 1,300,000 to 1,400,000 tons. But there are others who estimate the outturn at fully 1,500,000 tons, but they do so without duly considering the many sections where the crop is either a total or an almost total failure. From farmers who live in different parts of the Sacramento valley, we learn that there are more grains to the mesh this year than there were in 1891, which is accepted as proof positive that the yield to the acre will be larger this year than it was in 1891 in the grain-growing counties in the central and northern part of the State. In Kern, Tulare, Fresno, Monterey and other southern counties, the yield will probably be about the same as it was in last year, although the rains and cool weather for the past fortnight have been of inestimable benefit to the crop. This applies also to the crop in other parts of the State. The grain this year will be plump and weigh heavy.

With a crop of 1,350,000 tons, we will have a surplus for export of about 975,000 tons, without taking into consideration the probable carryover from the present season, for this will be offset by the carryover from the season of 1892–93. With an almost certainty that the surplus this year will be 975,000 tons, if not more, the tonnage situation becomes an interesting subject and should be closely watched. The present situation, without considering the engaged tonnage in port for present season loading, is quite encouraging to farmers, and with the average number of vessels which come to this port, but which are not now in the list, during a crop season there will be an ample supply of tonnage.

There are in port for new-crop loading, 9566 tons register; in port and disengaged, suitable for wheat-loading, 113,157 tons register; on passage and due to arrive (not including undesirable and also coasting vessels) between now and the middle of next October, 206,500 tons register. These give a total of 329,223 tons register, having a wheat-carrying capacity of 546,218 tons, within about 425,000 tons of the estimated total surplus from this year's crop. Of the 425,000 tons, fully 125,000 tons will be shipped in flour to countries bordering on the Pacific. This will leave 300,000 tons to be provided with tonnage between July 1, 1892, and July 1, 1893. The statistical record of this port shows that the average tonnage arrival has been over 100,000 tons register in excess of that known to be on the way at the beginning of the season, and it is only reasonable to conclude that this year will not be an exception.

While the present and prospective supply of tonnage appears ample to move the surplus wheat of this State, the supply for both Oregon and Washington promises to be considerably less than the two States will require. All advices regarding the crop prospect in Oregon and Washington point to a total yield of from 15 to 20 per cent greater in this year than there was harvested in 1891. If this be realized, then a large part of the surplus up north will either have to be shipped to this city for a market or else vessels chartered here and sent to the Columbia river to be loaded outward with wheat. The tonnage, at this writing, on the way to the Columbia river and Puget Sound ports, is fully 20,000 tons register less than it was at the like date in 1891, and with a large increase in the wheat crop the tonnage supply will fall very considerably below what will be wanted. Possibly this, to a certain extent, may be offset by heavy shipments eastward from points east of the Cascade mountains. So far this season very little has been shipped eastward, but in the crop season of 1890–91 heavy shipments were made.

In giving the tonnage on the way to this coast, there was not included that on the way at this writing, and also that which will be added during the crop season to San Pedro and San Diego in this State. The ships, not including coal coasters, on the way to the two ports have a registered tonnage of 15,832 tons, having a wheat-carrying capacity of 25,122 tons. About 8,000 tons will be required at San Diego for wheat loading, and the rest will be available for chartering for wheat loading either at this point or up north.

THE walls of the National Library building, in process of erection in Washington, are about half up. It will cost over $6,000,000.

The State Press.

Los Angeles *Herald:* "Men and brethren, would it not be a positively delightful thing if we had a State of South California? It would be the making of this section, no matter where it should be located. We presume that, geographically, the center of this ideal commonwealth would be Los Angeles, which is, and probably always will remain, the metropolis of Southern California."

San Bernardino *Enterprise:* "The tendency in this State to put up cheap buildings is a strong one. This probably is the result of our mild climate and very general freedom from cyclones, or earthquakes, but the experience of Napa valley and the loss sustained by its people by the late shake, ought to lead our people to provide against just such accidents by building substantial buildings first, last and all the time, for who can say where the next temblor will be felt?"

Sonoma *Democrat:* "Of all the forced tributes which the McKinley bill lays upon the back of the farmer, the tax on wheat bags is the most unjust, unreasonable and indefensible. This tax by itself is sufficient to revolutionize the sentiment of the farmers on the tariff question, if they would give it a moment's serious consideration. Before the wheat farmers of this State can commence their harvest, yes, before their crop is ripe in the field, they are forced to advance this tariff tax upon their crop, amounting to $1,500,000, which they do not owe and which it is simply an outrage to exact of them. This is the first toll taken out of the wheat-rancher's earnings."

Tulare *Citizen:* "In 1890 the farmers produced wealth to the amount of $2,513,402,564; manufacturers, $4,232,325,442; miners, $3,319,575,443. Of all this wealth, those who produced it received $3,380,000,000, while the exploiters absorbed the following proportions: Railroad profits, $318,125,339; Telegraph Company profits, $8,000,000; Telephone Company profits, $18,838,814; national bank profits, $142,695,019; bond olders' interest, $36,099,284; manufacturers' profits, $1,024,801,847. These are the profits admitted by these corporations in their official reports to the Government, but the farmer, who does not realize a dollar a day out of the unequal division of profits, is called a fanatic by these demagogues and the subsidized press."

The Canal Question.

A Second Letter from Mr. John T. Doyle.

MENLO PARK, May 9, 1892.

TO THE EDITOR:—I have shown in the RURAL PRESS of April 30th how a canal across Nicaragua, "built and owned by our own Government," became impossible of attainment at the present time, and will be so for about twenty years to come. Mr. Pool, Mr. Berwick, and others, who still insist on asking such, lose sight of the fact that Nicaragua and Costa Rica are sovereign States, with domestic laws and foreign alliances of their own, over which our Government possesses no jurisdiction or control. These countries have sold to this Maritime Canal Company the exclusive right to build the canal, and given 20 years to do it in. An Act of Congress can no more affect the rights so purchased and acquired than one of the British Parliament, or of the German Reichstadt. We cannot even buy out the company's rights, as suggested by Mr. Berwick, for the terms of their grant distinctly forbid the sale of it to any foreign government. All these phases of the matter have been well considered by men in Washington, much more familiar with the whole situation than we are and quite as competent to deal with it. They realize, and we may well do so, that the facts above stated cannot be changed. The canal, therefore, if we are to have it built within the next 20 years—and assuredly we are to—is to be built by this present company and under the present charter. I repeat emphatically that we might as well wish for the moon as for anything else. Shall we then, like children, sit down and sulk because we cannot have exactly what we would have liked, or act a manly part and strive boldly and promptly for the good tha is still attainable?

I trust Mr. Cannon, Mr. Pool, and the gentlemen of the Farmers' Alliance, will all be of one mind on this question, for to us producers of California, having food and luxuries of the highest order, sufficient for millions abroad, and only needing cheap transportation to secure for them the markets of the world, it is a necessity. No railroad facilities possible can compete with it, for the reason that water-borne freight does not cost a tenth of that carried by rail and is always reducible to a minimum by unlimited competition. Here, then, is the situation. This Maritime Canal Company has secured from the Government of Central America the right to build the canal, and they have a charter of incorporation from Congress. They have spent somewhere between five and six million dollars on the work and are prosecuting it steadily. They have 20 years to complete it in. *So far, they have borrowed no money* and are subject to no consequent entanglements abroad or at home; but it will not be always, nor will it even be so long. Already we hear rumors of their negotiating a loan in Europe, and if it is not true this year it will be next year, or the year after, for the work will be constructed mainly with borrowed money, as such things always are, and the lenders demand always the best terms they can get. All this is common knowledge. It is certain, too, that the cost of construction will practically regulate the rate of tolls, for they must be made high enough to produce a sum equal to the cost of management, maintenance and repair, together with interest on the cost, which last is of course the largest item of all. I do not myself see how management, maintenance and repair can cost as much as a million a year, but it is quite clear that if the construction costs a hundred million dollars, borrowed at six per cent, it will call for six millions per annum in tolls to cover interest, and, if, in ord r to raise that hundred millions in cash, bonds for a hundred and thirty-three millions have to be issued, eight millions per annum must be raised for the same purpose. Hence it is our interest that the company shall borrow the capital it needs, at the lowest possible rates, for the interest has to be paid out of the tolls, and *we pay the tolls.* That is a fact never to be lost sight of. We, the farmers, fruit growers, vineyardists, of California, have, in the form of tolls for transit, to pay the interest on the cost of the canal. A saving of a dollar, or a dollar and a half per ton on the canal tolls is equal to that much added to the price we receive for every ton of wheat, barley, wool, fish, fruit, wine, or other merchandise exported, a sum which in many instances will cover the line that divides profit from loss to the producer. If we could by any device secure for the company the hundred millions or so it needs, at three or two and three-quarters per cent, think of the difference it would make to us. Less than four millions per annum of tolls needed to defray the whole expense of maintaining the canal. The difference between that figure and the eight or nine millions to be raised if the higher rate of interest is to be paid, is what we have to pay for dear money; nor is it a sum to be paid once and done with it, but is a recurring burden year after year for the next quarter of a century.

To save this money and avoid this burthen on commerce is the purpose and scope of the bill pending in Congress. It is not a measure, devised, promoted or sought for by the canal company, nor in their interest. It was drawn by the Committee on Foreign Relations of the Senate, and substantially on the plan suggested by the Pr sident in his last annual message. It is the work chiefly, I believe, of Senators Edmunds of Vermont and Sherman of Ohio, though earnestly supported by such men as Morgan of Alabama, Dolph of Oregon, Eustis of Louisiana, Evarts of New York, etc. Its provisions are briefly as follows: The United States to endorse its guarantee on the company's three-per-cent bonds, to the extent of one hundred million dollars. These bonds are all to be deposited in the U. S. Treasury and doled out to the company in installments, to pay for the actual construction as it progresses, the amount of prog ess payments to be determined and certified by a corps of Government engineers, appointed by the President. The company is to transfer to the United States seventy per cent of all its stock as security for the fulfillment of its contract, and this stock the Government is to have the privilege of purchasing at par so long as the bonds remain unredeemed. In the meantime it can be voted on by the Secretary of the Treasury. As Nicaragua has six per cent, and Costa Rica one and one-half per cent of the stock, here are 77½ per cent of the whole stock of the company held by the three Governments, leaving only 22½ per cent undisposed of, including that already issued. Even the unsold portion of the stock is required to be held back and only parted with at a price satisfactory to the President of the United States. It is even proposed that the five or six millions already issued be replaced by bonds and retired, so that the whole stock of the corporation may ultimately be held by the three Governments mentioned, or by themselves and such others as the President of the U. S. decides to admit to coownership with them. Our own country will have a clear majority of the whole stock, with the control and direction that such majority ownership confers, and this without any infraction of our treaty obligations to Great Britain, which only forbid us to obtain or maintain any *exclusive* control. A control which the United States shares with Nicaragua and Costa Rica, and possibly with some other American State, however effectual and complete it may be, can never be termed exclusive. Meantime, with the credit of the General Government at its back, the company can get all the money wanted on its three-per cent bonds at par, and can push the work at all available points with the greatest vigor. There is no reason why the excavation on the westerly shore of the lake, the jetties at Brito, and the dams at La Flor and Ochoa, should not all go on simultaneously, and the canal be completed within even five years from the passage of the act.

Now I respectfully ask Mr. Cannon, Mr. Poole and gentlemen who have their opinions to tell us distinctly what objection to this proposal we Californians can seriously urge? Are they really afraid that with 70 per cent of the stock in the hands of the United States Government, and voted by the Secretary of the Treasury, the individuals who hold five or six per cent of it will be able to use it as an instrument of oppression? It certainly cannot be done without the distinct consent of our own Government, whose control is none the less perfect because exercised as a majority stockholder than it woul be if exercised as sole owner? If Mr. Cannon or Mr. Pool were the owner of six millions of stock in a corporation, and one of their neighbors owned seventy millions of it, would they seriously contemplate grasping the management against the wish of the majority owner, or if attempted could they hope to succeed? These enquiries scarce need an answer. The vote of a majority of the stock settles the control of the company, and that control this bill expressly secures to the Government.

The words stricken out of the memorial at the late convention are not quoted quite correctly by Mr. Pool in his letter of April 27th. They originally were: "*It should be built and owned and forever managed and controlled by the United States Government.* The words *built, owned and managed* were stricken out. The word controlled was not, for control belongs to a majority of the stock, and that we want t e U. S. Government to have. The reasons for this change of phrase I believe I have made clear. Mr. Pool refers to our bitter experience of subsidized overland railroads, as a sort of "awful warning," and intimates an opinion that to aid in building the canal will probably lead to the creation of a similar monopoly in the present case. There are two distinct and satisfactory answers to this suggestion, to which I trust he and his friends will give serious and fair consideration, for to my mind each of them is conclusive. They are:

1. Canals for transportation are merely artificial rivers; they are not new in the world's history. In modern Europe they date back 350 years, and there are plenty of them both in Great Britain and on the continent. *No instance can be cited in which one of them has become a monopoly or an instrument of oppression in the hands of private parties.* It is of their very essence to invite unlimited competition, because their revenues depend on the total volume of the traffic, not upon who does the carrying. The most conspicuous illustration of this truth to-day is the Suez canal, which is owned by a private French corporation. If any canal in the world could be used to monopolize transportation, it would surely be that of Suez, for it is the only one by which the voyage round the Cape can be saved, yet no such tendency has ever appeared or been apprehended. The tolls for passing it are two dollars and a half a ton, and are uniform, the canal being open impartially to the commerce of the world. Our people have been so terribly oppressed by railroad monopoly that they are nervously apprehensive of monopoly in every new proposal; but they should consider that it was not the ownership of the road which gives to railroad companies a monopoly of transportation, but the ownership and management of the motive power, and the cars on which alone the transportation by rail can be effected. If railroad companies were forbidden to own or run cars, and the roads made free to all who chose to use them on payment of tolls regulated by distance, weight and speed, their monopoly would cease. I have known them so managed in my lifetime, and men now living will, in my opinion, live to see them so managed again, for that is the true remedy for railroad abuses. But does any one imagine that the company owning an interoceanic canal could think of buying up all the water crafts in the world to secure a monopoly of transportation? Yet unless they do so they would have no monopoly, and when they had done it their monopoly would only last until more ships could be built. A monopoly, therefore, in canal transportation is out of the question.

2. Assuming, however, for argument, that canal transportation can become the subject of abuses of some kind or other, needing the intervention of Government to effect a remedy, have we not ample control of the whole enterprise by a vote of a majority of the stock. If, when aid was granted to the overland road, we had known as much about such things as we now do, we could, by a similar provision, have easily provided security against abuses. If, instead of reserving the right to name a small minority of the directors of the Union Pacific road, and none at all in the Central or Southern, Congress had taken from the companies aided 70 per cent of their stock as security on the redemption of the bonds, with the option to purchase it and the right to vote on it reserved to the Secretary of the Treasury, can any one suppose that the infamous scandals of the Credit Mobilier and the Contract and Finance Companies would have occurred or that we would be now taxed to death to pay interest on eighty thousand dollars per mile of stock and bonds where the roads cost only from twenty to twenty-five thousand a mile to build? If Messrs. Cannon and Pool will seriously reflect on these questions, they will see that the disposition of the stock provided in the impending bill affords an absolute security against abuses such as they apprehend.

JOHN S. DOYLE.

Letter from Captain Wm. L. Merry.

SAN FRANCISCO, May 10, 1892.

TO THE EDITOR:—I notice in the communication of Mr. Wm. Pool of Fresno an error in regard to the Nicaragua Canal so misleading that it appears a duty to correct it.

He writes: "I understand that Lake Nicaragua, which will be a part of the canal when finished, is also leased to a private company to navigate exclusively for 90 years. Now, sir, who dares to navigate Lake Nicaragua without paying for the right to do so and at the price set by this private corporation?"

My reply to this formidable indictm nt is that *it has no truth in it.* Mr. Pool is in error. The navigation of Lake Nicaragua is covered by no concession or lease afte March 17, 1895, when the present concession to A. J. Pellas expires by limitation. The canal cannot be completed by 1895, and consequently the navigation thereof cannot be affected by the Pellas concession, and there is no other. Moreover, the said concession *would not affect the canal even did it not expire in* 1895. The concession alluded to was given Pellas in 1875 for 20 years. It gives the exclusive right to navigate Lake Nicaragua and the River San Juan to the Atlantic ocean *by steam only, and is strictly limited to the 20 years, without extension.*

However, does any thoughttul man suppose that the Canal Company would accept a franchise for an interoceanic canal subject to the right of the navigation of the lake in other hands? Of course not. The Pellas contract only applies to internal navigation, anyway, but the canal concession for 198 years specially provides for the expropriation of the Pellas concession by the Cana Company, and said company could have obtained compulsory possession under the law if necessary. But the Canal Company, recognizing the value of the lake and river steamers owned by the Pellas Company for its own transportation, besides which the line was earning money in local freight and passenger business, made a purchase of the entire plant; and to keep the business separate, operating it on its merits, organized the Nicaragua Mail and Transportation Company, and this company now operates the line. *Its rights expire, as before stated, on March* 17, 1895, and the Government of Nicaragua has announced its decision to grant no more exclusive concessions for navigating the internal waters of the Republic. But the steamers will continue to run as an aid in canal construction, paying their way by local earnings.

I have thus disposed of Mr. Pool's error. If himself or any friend for him in this city will call upon me, I shall be pleased to furnish documentary evidence to prove the assertions I have made above.

It is an *inconsistency inexcusable* that Mr. Pool and, happily, a few only like himself should advocate the control of the land grant railroads by the United States Government on behalf of the people, and object to the strict application of the same principle as regards the canal! These gentlemen want the Government to own the canal! Well, let the Government buy it by buying the stock! It has the option of 70 per cent of it under the Sherman Canal bill now before Congress, and if this is not enough, let it buy as much more of the stock as it pleases! Mr. Doyle has so plainly explained in your columns why it can own it only in this way that I will not occupy your valuable space in repetition. If our Government fails to do this, the canal will go under European control by the sale of the company's stock, so far as this stock is taken in Europe, and there is no doubt that it can be disposed of there.

The Canal Company is forbidden to sell its charter to any Government. How, then, can the United States Government acquire the canal in any other way than by purchase of the stock?

An obstructionist should show a reason for his action. If that reason is proven nonexistent, obstruction should cease if it is honest. *Success only attends practicability. We want the canal! Let us then discuss only facts in connection therewith.*

WILLIAM L. MERRY.

Dishonesty in Hay-Marketing.

SACRAMENTO, May 8, 1892.

TO THE EDITOR:—I intended to squander a little ink on your hay prizes, but my engagements would not permit me to get my paper ready by the 15th of April.

There is one consolation left me, it saves being criticised, and gives me an opportunity to examine into the methods of others. Before this important subject is lost sight of, I want to call attention to the fraud that is practiced in baling hay. According to my observation, few persons ever question the weights marked on the tags. It seems but a small matter, where a person is only using a limited amount of hay, to quibble over the difference of five or ten pounds on a bale of hay, but to the person that is using, dealing or pressing hundreds of tons, it makes a handsome profit. The buyer of a load of hay should insist that it be weighed on the public scales or platform scales. If the weight holds out, the buyer can well afford to pay 25 cents to see that he gets what he pays for. If short in weight, let the seller pay for weighing, and he will learn to look to the balers to see that his hay is not overmarked. A hay dealer, a few years ago, stored his warehouses full of hay, and, during the winter, it advanced over 50 per cent. Not contented with his handsome profits, he was charged with erasing the figures with a knife and marking each bale up from 10 to 20 pounds.

I bought a car of hay last fall, and, as I was about to put it into my hayloft, I saw that one of the bales was marked 350 pounds. I got a pair of platform scales and weighed every bale. The 350-pound bale did not bring up the beam at 300 pounds. They fell short from 20 to 40 pounds. I settled for it with a shortage of 30 pounds on each bale.

There is one thing very certain about such a transaction, the hay baler must have known about this overmarking, if the owner did not. I have seen owners that seemed pleased to have their hay overmarked, saying that it was no matter of theirs. The way to get even with such dealers is to buy your hay of those that give honest weight.

During last winter, I discovered another fraud in putting up hay, in the way of dust, dirt, clods and chaff. The hay had evidently been cut in two, two or three times, by the mower, for it looked as though it had been run through a hay cutter. Stock will not eat such hay until they are almost starved. I think, from the frequency with which I cleaned out the mangers, that over 15 per cent of this hay was refuse, trash, dirt, etc.

It hardly seems credible that hay should become so foul as this without a purpose on the pa t of some one. It is a good way for a person to sell his farm, where he has another underneath better than the one on the surface.

I am a little below the grade in the city, and I have several sloughs on my farm, but I fear my posterity will not look with favor on me for filling them up with such expensive material.

DANIEL FLINT.

Weather and Crop Bulletin for Week Ending May 7th.

Lassen County.—Susanville—There were three frosts during the week, doing some damage. About all the early fruit in this section is killed. Janesville and Milford report no damage.

Siskiyou County.—Yreka—The weather has been cold; grass grows slowly; wheat getting a good stand. Warm weather will insure large crop.

Humboldt County.—Eureka—Unusually damp and cloudy weather prevailing and the temperature below the normal, which condition, if not injurious, has greatly retarded all growing crops. Clear weather and warm sunshine are the conditions most needed to insure average crop. *Hyderville*—The temperature has been slightly injurious to strawberries. *Upper Mattole*—The aphis has made its appearance in some grain fields and may do considerable damage. No corn-planting yet, and will not be until the weather is more favorable. *Phillipsville* Some snow has fallen on the higher ground. The cold weather is bad on young lambs. *Blocksburg*—Unusually cold and rainy weather prevails; all crops late; highest and lowest temperature 62° and 38.° *Arcata*—Farm work delayed by too much rain; fruit prospects good.

Shasta County.—Redding—Weather cold and backward, but otherwise favorable to grain and bad for fruit and vegetables. Heavy crop of hay and fruit outlook good. *Anderson*—Fruit crop looking well and is now out of danger from frost.

Tehama County.—Red Bluff—Temperature abnormally low; hay crop good; barley doing well; apricots not abundant and strawberries not a success.

Butte County.—Chico—Crops looking fine; dry north winds would now do good by drying out the overwet soil. *Palermo*—The rain is beneficial to the grain and hay crop; it retards plowing in the orchards.

Colusa County.—Colusa—.87 of an inch of rain and 11.02 inches for the season. With the exception of delaying the cutting of hay and lodging some grain the conditions continue favorable.

Glenn County.—Willows—The wheat and barley crops will be immense; the damage by frost highly overestimated.

Sutter County.—West Butte—Weather unfavorable for beans, melons and sweet potatoes. *Yuba City*—The rains are liable to cause rust in the heavy grain; fruit trees and vegetables greatly benefited.

Yuba County.—Wheatland—The cool, wet weather, while not injurious, has retarded growth of grain and has caused it to lodge where the growth is heavy; peaches promise an average yield; other fruits will be much below the average.

Nevada County.—Nevada City—The past week has been the stormiest of the season, 5.09 inches having fallen. Snow fell for a short time on May 1st 2d 3d and 4th—Heavy frost on the 3d; grain on the foothill ranches is hopelessly lodged; more rain will be certainly injurious.

El Dorado County.—Coloma—It has rained steadily all the week and weather quite cold. It is not yet perceptible whether the cold rains have done any damage or not to the fruit in this vicinity. Fruit crop looks well, except cherries, which will be light.

Sacramento County.—Mayhew's—The outlook for an average fruit crop is good; grapes but slightly injured by the late frosts.

Amador County.—Oleta—Rains were beneficial, because the northerly winds had dried out the ground. Apple crop fair; warm weather needed. *Sutter Creek*—Late grain greatly benefited by the rains, and if no frosts follow, crops will be good. *Drytown*—Most of the early sown grain is badly lodged by the late rains. *Willow Springs*—Farmers getting ready for having.

Solano County—Denverton—Grain crop doing well; rainfall for the season 14.53 inches. *Vacaville*—On low lands peaches are turning black at the pit from the effects of the frost. Cherry crop light and being injured by the continued cold rain; milder weather needed.

Yolo County.—Rumsey—Crops two weeks later than usual; rains beneficial to late grain. *Woodland*—Crops of all kind looking well throughout this county.

Napa County.—Napa City—Rainfall above the normal for the past week, with cold weather, which retards the ripening of all crops. *Veteran's Home*—Thunder and lightning on the 5th. Crops looking well.

Sonoma County.—Sonoma—Warm weather needed for rapid ripening of fruit. *Petaluma*—Crops doing well. *Santa Rosa*—Rainfall for season 26.75 inches. Fruit men say that sunshine is needed more than anything else. *Forestville*—Caterpillars making their appearance on fruit trees.

Healdsburg.—The heavy rains have necessitated the reworking of the already prepared corn ground. Barley and wild oats are heading rapidly, and alfalfa in bloom; fruit crop looking well.

Contra Costa County.—Cornwall—The past week has been just what farmers wanted. Cool and cloudy at times, with light showers, have benefited grain and feed.

Alameda County.—Niles—The rainfall has benefited the crops.

Santa Clara County.—Gilroy—Crops will be above the average in this vicinity. *Santa Clara*—Outlook good for abundant crops.

Monterey County.—Salinas—The rainfall has benefited the entire valley, and crops are doing finely. *San Ardo*—The generous rains have benefited grain immensely; fruit has set well. Hay that was cut slightly damaged by the rains. *Jolon*—The rain will insure a fair grain crop. Snow visible on the mountains.

San Luis Obispo County—Edna—Excessive rains slightly injured early sown grain. *San Luis Obispo*—Late grain and pastures greatly benefited by the rain. Hay that was cut is somewhat damaged.

San Joaquin County.—Lodi—Rainfall 1.16 inches during the week, which was good for grain and grass, but not for watermelons and corn. Season backward; hay crop will be short. *Stockton*—All crops benefited by the late rains.

Stanislaus County.—Modesto—Rain of great benefit to all kinds of cereals; at the same time it gives new life to the weeds which have taken complete possession of several grain fields; otherwise the outlook is promising. *Turlock*—Unless the rains of the past week make remarkable changes in the condition of the crops, they will not be as near so large as last year. Rye is looking well.

Fresno County.—Selma—The cold and drying north winds have been bad for the grape crop. A good deal of mildew is reported, and will injure the fruit crop.

Tulare County.—Visalia—The north winds and frost have done considerable damage. Grapes damaged 40 per cent of first crop; think the second crop will be fair. Prunes will be a heavy crop and first class; all other fruit good. The late rains will help the grain crop; 11.42 inches of rain for the season to date.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—The rains have greatly benefited the bean and corn land. *Santa Barbara*—The rainfall has been very beneficial to late-sown barley and most other crops.

J. A. BARWICK.

SOUTHERN CALIFORNIA FOR THE WEEK ENDING MAY 6, 1892.

Santa Barbara County.—Lompoc—The rain of the 3rd was a God-send and saved the crops generally. Some of the barley has been burnt by the winds of the week previous to the rain. Bean land is in fine condition.

Ventura County.—S. L. Mack—The rainfall of the 3rd and 4th, amounting to .92 inch, did a little damage to the early grain, but was of very great benefit to late grain and summer crops. Haying still continues. *Bardsdale*—J. R. McKee—The weather is cloudy and cool. More than one and one-half inches of rain fell on the 3rd. Being badly needed, it will prove of great general benefit, especially to late barley, pasturage and young trees, but it slightly damaged mown hay. The prospect for all later crops is unusually good.

Los Angeles County.—Lancaster—The rainfall, amounting from one to two and a quarter inches, according to locality, has been of very great value to grain, and in most instances insures a full crop; 2000 or 3000 acres which were planted late or too heavily and were given up as a total loss previous to the rain, will now make a light hay crop. *Rodeo de los Aguas Ranch*—H. H. Denker—One and ninety hundredths inches of rain fell during the storm and greatly benefited all crops. Some early grain was lodged, but most of it will come up. A little extra exertion will be necessary to dry mown hay, which was wetted by the rain, but not injured. *Palms*—W. D. Curtis—Hay and grain were slightly damaged by the rain; other crops were greatly benefited. *Verdugo*—J. C. Sherer—The rainfall of the past week, amounting to 3.15 inches, slightly injured mown hay and caused some of the heaviest grain to lodge. The general effect was beneficial, especially to corn and root crops. *Duarte*—W. W. Bliss—The rainfall of the past week was 4.51 inches, and was beneficial to all crops. Total for season 16.29 inches.

San Bernardino County.—Ontario—The rain of the past week was generally beneficial. Very little hay had been cut, so no material damage was done. *Chino*—Hay was slightly injured by the rain. The beet crop was greatly benefited and is now assured. *Alessandro*—The weather has been generally favorable to crops, though some barley hay was slightly injured by the rain.

Orange County.—Anaheim—The copious rains of the past week helped the corn, but slightly injured mown hay. *Santa Ana*—The rain of the past week injured the hay crop and lodged much of the grain. Fruit and vegetables were greatly benefited which will much more than offset the damage caused by the rain. *Tustin*—Late sown grain and corn derived much benefit from the rains. A large acreage of hay was caught out and was more or less damaged. The general effect of the rain was good.

San Diego County.—Winchester—Late grain, trees, vines and crops of all kinds were benefited by the rain of the past week, and the crops of grain and hay will be greatly augmented. *National City*—The rain, as a whole, has been beneficial and will help late grain considerably. Cut hay was slightly damaged.

G. E. FRANKLIN.

Prison Grain Bags.

In a former number of the RURAL PRESS we have printed the arguments presented to the State Board of Prison Directors by the President of the Grange Committee appointed to investigate into the price of State prison grain bags. We find an additional argument written by Senator D. A. Ostrom of Wheatland, published in a local paper of Yolo county. We quote:

We claim they should be sold direct to the farmer, and at cost to the State or thereabout. But we are not willing to lump the entire expense bill of San Quentin Prison, with its thirteen hundred prisoners, more or less, and charge it all up to the jute works, for the reason that less than one-third of that number are engaged in or about the works; why they are not all so engaged, your honorable Board is doubtless well aware, is not the fault of the farmers, for they have for several years striven for legislation which would have doubled the present output of bags.

At the twenty-eighth session of the Legislature, testimony was adduced to the effect that the cost of bags manufactured at the prison, exclusive of prison labor (for the day shift) was $4 per hundred, so that at this time, with a very heavy duty removed on raw jute, it would seem that the output at San Quentin ought to be placed within the reach of consumers at a very much reduced price from that at which your honorable Board fixed it at your last meeting for that purpose. In this connection, it is not amiss to call your attention to the very proper action of your Board of one year ago. By that action you fixed the sale of bags at 6½ cents per bag and limiting the number to any one individual to 5000. The farmers of this State believe your action at that time commendable and in the right direction, and largely prevented the formation of rings and combinations to rob the producer and consumer.

It is not for a moment to be supposed that the honorable Board of Prison Directors would play into the hands of the bag rings, yet the recent action of the Board had that effect, for at that time the price was fixed on prison bags at 7¾ cents. Calcutta bags were quoted for less money, June delivery. But mark the effect—immediately thereafter prices advanced, with a probability of going still higher, particularly if prison bags are to be still further advanced in price, as foreshadowed by a distinguished member of your Board.

As to distribution, we maintain that the number of 3000 bags should be the maximum, and none should have more. And we recommend that the Board require an affidavit to accompany each order, that the bags so ordered are for the individual use of the person so ordering. As to the number, we believe the medium or small farmer should have an equal chance with the large, more particularly as in the case where the State, through your Board, can prevent the extortions which are practiced by rings and combinations formed for that purpose.

The Brentwood Schoolhouse.

BRENTWOOD, CAL., May 10, 1892.

TO THE EDITOR:—The people of Brentwood appreciate the compliment paid in your last issue to our public school-building. It is a structure in which we feel a laudable pride, and its illustration in the RURAL PRESS has given satisfaction to us. The design of the structure was after a thoughtful consideration of our surroundings and the comfort and convenience of pupils and teachers. The wide, covered porches afford alike protection from the heat of the summer's sun and the rains of winter, and the breadth and arrangement of the grounds afford many advantages. The extension of the roof over the porches gives a low appearance to the building, but this could not well be avoided without putting the house upon stilts, which the trustees declined to do. On entering the building, however, the height and airiness of its rooms, its large windows, ample light, and spacious halls and porches, have a pleasant effect and the squatty appearance of the outside is forgotten. We had often noticed the little ones crouching in the shadow of the porchless and shadowless "box houses," and had our sympathy excited by the comfortless and unpleasant arrangements for them. To better the plan and aid in making them comfortable; to afford a pleasant place to leave happy recollection, and perhaps to stimulate their pride, were the objects to be attained, and we are satisfied with the effort, for all take delight in the Brentwood schoolhouse and grounds. The cost of the structure was about $5500.

R. G. DEAN.

—Wee Sammy—I wush, Maister Busyman, ye wid learn me hoo tae staun' on ma hauns and touch ma heid wi' my feet. Master Busyman—Dear me, Sammy, I canna dae that. Whit make's ye ask me? Wee Sammy—'Cause faither tell't mither ye wis gye thin i' the soles to' noo, and wis gittin quite bauld heided trying tae mak' baith ends meet.

—Irate Father—"I don't believe, sir, you could earn your salt to-morrow." Son—"Now what the dayvil is the use of talking like that, governor? They don't charge for salt in any of the first-clawss restaurants."—New York Herald.

THE STOCK YARD.

How to Build the Silo and Grow the Crop For It.

John Gould, Ohio, gives the *American Agriculturist* the following comprehensive review of Eastern experience:

The general verdict now is that the silo built of wood, and made durable, with seams and pores closed by some kind of waterproof paint, is not only more economical than the stone structure, but actually is a better agent in the preservation of the silage. Stone being not only porous, but a good conductor of heat, is not to be relied upon under all circumstances for this purpose. Air penetrates the walls, frost goes through the stone and precipitates moisture on the inside surface of the silo, and this moistened silage freezes into blocks of ice. On the other hand, the wooden silo is impenetrable to ordinary degrees of frost, wood being a poor conductor of heat. Waterproof paint makes the walls not only free from moisture, but excludes the air perfectly. Wood is cheaply transported and obtainnble everywhere, and the silo can be built at a reasonable cost. It may be located in the corner of a barn, a shed, built on as a lean-to, or, if furnished with a roof, may be set up as a separate building.

Just how thick the silo walls should be built is yet undecided. The fact is, both parties are awaiting the evidence as between the merits of the double-boarded silo, made of cheap, unmatched, sound lumber with a lining of tarred paper between, or the single-ceiled silo lined up with four-inch flooring, put on with the horizontal grooves upward, and filled with paint as the building proceeds. The cost is not greatly different in either case, as it is a case of a larger amount of cheap lumber against a single thickness of the more expensive matched flooring. The lathed and plastered silo promised well at the start, as a compromise between wood and stone, but the corrosive action of acid causes the plaster to lose its strength in two or three years, if not sooner. The choice is, therefore, practically between the two forms of the wholly wooden silo, made durable by a coat of paint composed of gas tar thinned by an equal amount of gasoline. The round tank silo has many friends in the West, and, built of good material, has much to recommend it, as it needs no bracing or extra strength. The foundation of the wooden silo has also undergone modification. It is claimed that a sill 12 inches square, of timber, well coated with gas tar, set in a trench and firmed in with a backing of hydraulic cement, is superior as a foundation, in most localities, to stone. Then the floor of the silo made of clay well pounded down, somewhat lower in the center, coming up a few inches on the sides of the walls, is quite as good as the stone and gravel floor, and keeps the silage just as well.

As to the crop, corn is the best adapted to the use of the silo of any plant yet used. What varieties to plant, and how, are largely to be determined by locality. Where the season will admit of a full growth, some of the large varieties are best, notably the white horse-tooth corn of Virginia. This variety makes heavy growth, and, when planted thinly and not root-pruned, gives a great yield of ears and fodder, and for keeping qualities in the silo has no superior. To grow for silage profitably, the biggest crop that will ear and mature is best, as it is not found in practice that a big stalk is superabundant in moisture, or below smaller kinds in nutritive qualities, provided it is not planted too thickly and the roots are left undisturbed, by employing only shallow culture. This corn is also noted for its saccharine quality, a great help in attaining the result of sweet silage. In latitudes where the corn-growing period is very brief, the smaller varieties are best. Pride of the North is held in great favor in most northern latitudes.

Ensilage corn is best when planted and cared for as it would be if designed for a field crop. It is best drilled in rows, three and one-half feet apart, one kernel every eight inches. If the ground is made very fine and free from rubbish, the greater part of the cultivation can be done with slanting-toothed harrows, and these followed by a good weeder, finishing up the job with one or two light workings with a Planet Jr. cultivator. Corn for silage should be cultivated frequently, but not more than an inch in depth. Corn roots run in rich soil quite close to the surface, and continual cutting them off when cultivating, checks the growth of the corn, delays the earing and so prevents storing up its full quota of nutrition. It is now, in some quarters, recommended to sow six quarts of clover after the last working of the corn, and thus seed the field to clover and gain almost a full year in rotation. The Pennsylvania Station, in a single experiment, seemed to show that silage corn, even of the large varieties, might be planted somewhat thicker, and result in a total larger per cent of food material upon an acre. Prof. Ormsby says: "On comparison I find that by the use of 20 quarts of seed per acre it gave 41 per cent more dry matter than did six and one-half quarts of the same variety on another acre. The large variety gave me 43 per cent more dry matter than the smaller variety of corn, and the large corn was three and one-half per cent more digestible than the small kinds, and that on well cared for large varieties so planted as to develop full ears, the idea that the gain in weight is 'simply wood and water,' is largely a matter of opinion and the results favor the growing of large varieties, and somewhat thicker seeding."

TRANSFERS OF BERKSHIRES.—John G. Springer, Secretary American Berkshire Association, Springfield, Ill., sends the following transfers of recorded Berkshires: Moses Z. 27,245, Esther II. 27,246 and Ruth 27,247, Andrew Smith, Redwood City, Cal., to W. M. Zeller, Hueneme, Cal.; Cora Hill 27,204, H. C. Dunn, Corvallis, Or., to T. J. Farra, Erskinville, Or.; Dick Small 27,205, H. C. Dunn to Ned Smith, Corvallis, Or.; Prince of Alameda 27,371, William Niles, Los Angeles, Cal., to G. D. Almond, Pleasanton, Cal.

THE FIELD.

Assessing Hops and Alfalfa.

There was recently held in Sacramento a called meeting of the California Hop Growers' Association, which is reported by the *Record-Union* as follows:

It was called to order by Chairman Daniel Flint, who stated that the object of the meeting was to consider the recent order of the State Board of Equalization increasing the assessment on hop lands 15 per cent, and other matters pertaining to the interests of hop growers.

County Assessor R. D. Irvine being present, he was requested to state to the meeting the facts concerning the increase in the assessments on hop and alfalfa crops.

Mr. Irvine read those sections of the law relating to "growing crops," and said the State Board of Equalization had directed him to except alfalfa and hop vines from those exempt from taxation. President Morehouse of the State Board held that lands on which hops and alfalfa are growing are far more valuable than similar lands adjoining, on which these crops are not growing. For his own part, Mr. Irvine said, he did not think it just to assess hop vines, because to his own knowledge vines had often to be renewed, and could not be considered in the category of permanent improvements. He was simply carrying out the orders of the State Board.

A number of gentlemen asked questions of Mr. Irvine, touching the latter's views as to his duty in the matter of making assessments. In the course of his remarks, Mr. Irvine stated that last year he did not specially assess hops and alfalfa lands.

Dr. Durst of Wheatland, Yuba county, remarked that he had been specially assessed on his hop lands. The value of his hop roots, however, deteriorated in value from year to year, and had to be renewed. Then, again, for the first year or two, alfalfa does not yield much revenue, and is an expensive crop to plant and bring to maturity. In the opinion of Dr. Durst, the 15 per cent increase placed on hop and alfalfa lands should be made upon all the property of the county, the revenues of which are increased by the valuable crops raised.

L. F. Long of Mendocino claimed that on the 1st of March, when the tax assessments are made, no man can tell whether his hop roots are worth a dime or not. They are beneath the soil, and no one can tell whether they will grow the ensuing season and raise a crop or whether the roots had been killed. The only way to determine the matter would be to open the hills and examine all the roots. Again, very often it costs the grower more money to raise hops than he can get for them. The farmer's burden is heavy enough at best, but it is manifestly a wrong to impose such a tax as that proposed on hops and alfalfa. In some counties the assessors did not, he understood, intend to assess hop lands, as they did not regard the action of the State Board of Equalization as imperative in the matter. Still, if hops were to be assessed in Sacramento county, they should be in all counties. He hoped the proposed action would be reconsidered.

John Rooney of Brighton said it was a shame to tax alfalfa crops, as after the fourth year the roots did not yield well and soon had to be renewed. Last year the grasshoppers ate every spear of alfalfa along the Cosumnes, and poor people who depended on their little fields for a living would not have been able to stand an assessment on their crops.

Patrick Carroll of Sutter county, E. J. Croly of Sacramento and others spoke in a similar strain. Mr. Croly held that under the law, which exempted growing crops, the State Board of Equalization had no authority to direct the levy of a special assessment on hops and alfalfa. He was informed by Assessor Irvine that the State Board regarded rooted hops as permanent property. This is absurd, as he could not tell on the 1st of March that he had any property of value beneath the soil.

Mr. Wittenbrock said that out of 18,000 hop roots planted not long ago, he had been obliged to replant 13,000, the roots having rotted out. This shows there is nothing in the claim that hop roots are permanent property.

Mr. Irvine again explained the position he took before the State Board of Equalization, and the arguments with which his objections to the order were met by the Board.

Mr. Rooney held that the assessor had the law to govern him, and should pay no heed to the special orders of the Board of Equalization.

Mr. Irvine replied that the State Board interpreted the law, and he, as assessor, was governed by their interpretations thereof.

Mr. Rooney said that if the members of the State Board of Equalization held that alfalfa and hops were not growing crops, they certainly are not farmers.

"Well," remarked Chairman Flint, "you wouldn't expect to find any farmers on the State Board of Equalization."

Mr. Long of Mendocino said the whole question was as to whether or not the State Board of Equalization had correctly interpreted the law. In his opinion, and that of the meeting, the Board had made a mistake. He therefore moved that a committee of five be appointed to wait upon the State Board of Equalization, present the matter to them, and give reasons why no special assessments should be levied on hops and alfalfa. Perhaps the Board might reconsider its action, but if it did not, he for one was in favor of resisting the order and making a test case in the courts.

The motion was carried, and the committee named was Messrs. Long of Mendocino, Durst of Yuba, Carroll of Sutter and Croly and Flint of Sacramento, with County Assessor Irvine added.

Mr. Flint suggested that if hops and alfalfa roots are to be taxed, those of asparagus should be also.

The committee was instructed to call upon the State Board of Equalization at the next monthly meeting of that body.

Some time was devoted to a discussion of the "tare" question, but there was a wide diversity of opinion on the subject. [The legal tare is now two per cent, or about four pounds per bale.]

Finally, J. E. Camp moved that the former rate of tare fixed by the association be reduced to that named in the State law—namely, two per cent. The motion prevailed.

The association then discussed the matter of securing Indians for service in the hop fields during the picking season in preference to Chinamen.

The California Blue Jay.

Our State seems to have a hobby of producing animals and plants which, though of the same species as those in the eastern part of the United States, differ very greatly from them in point of color and size. The California blue jay, while holding the same name as his eastern cousin, is very different from him in many ways. He has not the brilliant topknot and headgear of his eastern relative, but his plumage, as a whole, is much darker. His wings and tail are of a darker blue; his head is very dark, to correspond with his long, black bill. His breast is of a light blue drab, with reddish stripes running down across it from the neck.

The jay is the sassiest, boldest, liveliest, smartest, and about the prettiest little bird in our country. He is not a songster, uttering no other cry but sharp screams. But he is a very lively bird and cannot keep still a moment. When he flies he takes one long dip down and then one upward, all the time uttering his peculiar note. He is noted for his bravery, and if he is not able to drive away the intruder from his domain, he can marshal a whole army of his tribe in a short time. He is a leader among birds.

The blue jay feeds upon insects, worms, fruit, birds and their young, and, in fact, almost everything. In the fall and winter he frequents the live oak trees and feeds upon acorns.

This sly and greedy bird has received the condemnation of many a farmer and fruit raiser for his thieving habits. From the time that the earliest peach is first tinted with purple until the last apple is gathered in the fall, the blue jay is a constant visitor to the orchard. During the long summer days he rises before the farmer and flies to the orchard and commences his breakfast long before the dishes are rattling in the farmhouse kitchen. When the farmer at last emerges from the door into the pure air of the morning, the jay greets him with many a pert, contemptible bow and sassy good morning. If approached too closely he darts away, uttering many an angry cry for being disturbed, when he had just found the juiciest spot in the large, mellow peach. As soon as the farmer leaves the orchard, the jay is back to his repast in a moment. He is a model of perseverance, and will sit for hours in the top of some live oak tree and wait until the farmer has left the orchard. He steals into the chicken yard often times and breaks many eggs. But despite his bad habits, he does much good to the farmer by catching hundreds of worms and insects. Some destroy his nests and in every way try to kill the jay himself, but it is a question whether they are right. It is hard to draw the line, and would seem just to let the jay have the benefit of the doubt and let him live.

The nest of the blue jay is built about the first of April. It is constructed of coarse sticks and roots and hair. It is generally placed about ten feet from the ground in a small live oak shrub. The eggs are four and five in number, of a light pale green, spotted with greenish brown and gray. The average dimensions of six eggs in my collection are 1.08 inch in length by .82 of an inch in breadth.—W. M. J., in Arroyo Grande Herald.

The Pepper Tree.

One of the most prominent features of the thickly settled portions of Southern California, and one of the most attractive to strangers, is the beautiful growth of an exotic tree introduced from South America; the so-called "Pepper Tree," with which so many homes are beautified.

The tree has not heretofore been considered from a utilitarian point, but therein may possibly be found the material for one or more substances of great economic value.

It may not be known to many that the tree is abundantly supplied with a gum which resembles gum mastic; in fact, the leaves are so filled with this resinous or gummy matter that it is sometimes thrown off in showers, leaving spots on clothing or other substances upon which it may fall; on carriage tops the gum and our summer dust form spots which are difficult to remove.

The leaves, when immersed in water, throw off the resinous matter with such energy that the recoil gives them the appearance of being possessed with spontaneous motion. The gum from these trees makes a good dentifrice. A lotion is also made from the bark, which is said to be a good remedy for reducing inflammation and the treatment of ulcers.

It should be remembered that the tree is deleterious to the growth of other plants under its spreading branches. It is also subject to the destructive ravages of the scale insects, and every owner of these fine trees should see that they are kept free of scale and other insect pests, as it must inevitably result in their being destroyed to save other valuable plants and trees from infection.

We cannot expect to have anything beautiful or valuable in our surroundings without the exercise of a reasonable amount of care. No tree that I know of will bear the indiscriminate use of the pruning shears so patiently, but it is a mistake to denude them of their beautiful feathery foliage, just at the time of year when we expect the tide of tourists to come here to enjoy the trees and flowers which present to them such an interesting and tropical appearance. The "kodac sportsman" will hardly care to exhibit a specimen of the bare limbs of a tree to his Eastern friends.

Another favor which I would like to ask on behalf of these beautiful trees is that they be abundantly planted along our public highways, where, in a few years, they will cast a cooling, grateful shade and form lovely, arching driveways to shield man and beast from the heat and glare of the summer sun.

It takes a great deal of the unrighteousness out of poorly kept highways if trees grace the roadside, and the finest macadamized roads lack more than half their beauty and comfort if not supplemented by suitable trees.

Perhaps there is no tree which, subjected to the neglect common to roadside trees, would serve the purpose any better than the lovely evergreen tree *Schinus Molle*, with its abundant clusters of shining, bright-red berries, which form the subject of many an artist's sketch.—*Lorenzo G. Yates in the Ojai.*

Humboldt Notes.

LARIBEE, HUMBOLDT CO.

TO THE EDITOR:—Since my last, a postoffice has been reestablished at the above place, and, as it is surrounded by a rich agricultural district, with a new flourmill well under way, this section is fast coming to the front. The idea of discontinuing large stock ranges is being agitated, and where there is so much smoke there must be some fire.

So far, fruit, and more particularly prunes, have been advocated. With all due respect to those who advocate fruit ranches, and who so ably urge the adaptability of the country to fruit, and admitting that the small orchards on the different ranches have proved a success, I question if the change from a sheep ranch to a full-bearing orchard is not too great, and the necessary outlay too large, for many individuals to succeed. So far, the fruit ranches have been started by joint stock companies. This was of inestimable benefit while this section's adaptability to fruit was a debatable question, but the time has now come when the foothills of Humboldt can stand on their record in the fruit line. The time has come when the future is assured, and should be considered as well as the present.

What class of citizens does this county want—corporations, or families that control their own homes. For my part, I would say the latter. With the former, they can take a 200 or 500 acre tract and plant it in fruit, and can wait till it is bearing fruit until they need anything in return for their outlay. But let a single individual, who has funds sufficient to buy a ranch, invest the profits over and above the "living" in fruit trees. It is all that can be expected. Where are these profits and a living coming from? That is the question. Some prefer not to plant trees until the land has previously been under cultivation.

Mixed farming should pay well here. Let one raise enough hay to feed his stock well, and do more or less threshing, and he can make a living. The market for hogs, too, here is generally fair.

There is one industry that could be made profitable in the foothills, and that is dairying.

There is a large portion of the land that can be irrigated, and water assures alfalfa; and if one-half is true that is claimed for silos, the milking could easily be prolonged throughout the entire season. There are two silos now in operation in this county.

The era of the small farmer is near at hand, and I hold that the hill land of this county will double in value within the next five to seven years.

Engineers are making a preliminary survey of a route between Eureka and Red Bluff, and the report is current that the S. P. has a finger in the pie, and with the nearly compulsory sale of the Donohue system, and the probability of the purchasers extending it to Humboldt, and with the growing sentiment in favor of communication with the outside world, the chances of an outlet by rail were never brighter.

This coming season promises to be a prosperous season for this section. The increase of stock is flattering, and the outlook for a large harvest is good.

The lease of the McClellan range, with 6500 sheep, expires this June, and will be rented again. The Robertson's ranch will be subdivided and rented in separate tracts.

The outlook for fruit is good. The Fortuna cannery is assured.

Two new papers will be started in the county, one at Eureka, the other at Ferndale. The latter will be edited by Mr. Rod M. Saul, one of the most entertaining writers in the State, and I trust both papers will prove a success.

The oil well at Garberville is down about 350 feet, and Supt. Gilfillan is confident of success. An expert pronounced the find of coal near Blue lake of excellent quality.

The bonding question is bobbing up again, and if "jobs" can be kept out and the needed roads voted on, the proposition will undoubtedly be carried at the coming election.

CREAMERIES.

I remember that, in the summer of '89, when traveling for one of the county papers, I met a Mr. Stewart, who came to this section to introduce creameries. He was then in Ferndale, and was inducing numerous dairymen of means to take stock in the new venture. His efforts were crowned with success.

The first creamery was built on Salt river, in probably the best dairy region in the State, and was named in honor of the county Humboldt Creamery. That was the beginning of the creameries here, but where the ending will be I do not know. I kept track of the different creameries until there were eight in the county, but there have been several erected since, while two are under way at present.

At present the dairying is confined to the valleys near the ocean, but with the advent of the silo the dairy field must necessarily broaden. There are two silos in the county, one opposite Blue Lake, on Mad river, the other near Eureka. Both are giving good satisfaction. If I understand the principle of a silo, they are of the more benefit where the country is comparatively dry in the summer months. If silos are profitable where feed remains green the year round, they should be a bonanza in the foothills where the feed dries up in August, and where ensilage would pro-

long the milking season until the grass starts again in the fall.

The people generally think they have been given a new lease of life since the bill was introduced into Congress placing Humboldt Bar under the War Department. Many think the passage of this bill means a first-class harbor for Eureka, and, further, that a railroad is assured. Work is in active progress in making a survey of one route, and rumor has it that work is soon to be commenced on the survey of the second line.

Some interest is taken here in the Union packing establishment, which is nearing completion near the metropolis. It ought to furnish a market for a vast amount of live stock, and some predict that hogs will be the largest shipment from this county. The increase of stock in this section is far above former years.

COYOTES AND SHEEP DOGS.

In a former issue the PRESS solicited news from Mr. Coyote. There are two species of the tribe in this county, the lean kind generally belongs to some cliff or canyon; and prowls around periodically—that is, he makes his circuit every two or four weeks. The other kind, which is of corpulent form, is a domesticated cur, and is never so happy as when after a band of sheep. His home is often with the human tribe whose worldly possessions are from 10 to 17 offspring—very patriotic people, one old horse and the above sheep-killing dogs. But they say charity begins at home, so that when a sheepman finds his own cur after sheep, count his scalp No. 1. The genuine coyote is quite destructive here, and the removal of the bounty would mean a large loss to sheepmen. ED. ROBERTSON.

Summer-Fallowing in Dry Regions.

At a meeting of the Farmers' Institute held recently at Wasco, Or., John Medler read an interesting paper on "Summer Fallowing." Mr. Medler said:

When we notice the conditions that prevail in Eastern Oregon and Washington, we find that we have a rich, deep alluvial soil, capable of absorbing and holding all the moisture that may fall, but there is a very deficient precipitation, which probably amounts to 14 to 15 inches in Sherman county, which, of course, is not sufficient, with the excessive evaporation that we have, to insure good, profitable crops annually, for it must be remembered that the late spring and summer months are destitute of rain, or nearly so, and what little falls is evaporated with great rapidity.

The ground should be summer-fallowed not for the purpose of resting it, according to an old antiquated idea, for the farmer might as well talk about resting his plow by by putting it in the stable as to talk about resting his land, for it will produce good crops—and, where climatic conditions are favorable, two or three crops annually—provided you have a sufficient amount of moisture and keep up the fertility of your soil by supplying it with the necessary plant food.

But the idea of summer-fallowing is to store up the moisture of the preceding winter and spring, and thus have the moisture of almost two seasons to draw from. The way to accomplish this is to plow your land as early in the spring as possible, a good reasonable depth and harrow immediately after the plow, and cultivate during the season as much as may be necessary to prevent the growth of weeds. The effort is to retain the moisture already in the ground by preventing its evaporation, the fine, well pulverized surface acting as a mulch, and so it becomes possible in this semiarid region to raise fine crops of the cereals because they have almost two years' rainfall to draw from. Of course it is very evident that the earlier in the spring this work is done the more moisture will be retained, for the air becomes drier as the season advances and evaporation is much more rapid.

I claim that the above idea is the keynote to all successful farming in regions like ours where the soil is very deep, and the soil is composed of a large percentage of volcanic ash, and where the rainfall is deficient; for, where it is abundant, summer-fallowing, except for some special purpose such as the destruction of weeds, would be a sad waste of time. With it, however, if properly carried out, the yield in this region may be doubled and in some cases trebled, and the harvesting expenses, which constitute nearly a third of the whole, are but a little more than for an annual crop.

Now, while the most of the farmers in Eastern Oregon and Washington do summer-fallow their land, it is somewhat strange that they do not seem to grasp the whole idea with all its consequences, and carry it out to a logical conclusion. They summer-fallow for wheat, which, of course, is their main crop and is generally planted in the fall. Barley and oats are sown, and all kinds of vegetables planted on lands plowed in the spring, and often with poor results; and it often happens that the yield of wheat is very fine, while all else is a comparative failure. Now, why is this so? If the rainfall is not sufficient to grow an annual crop of wheat, and you have to resort to summer-fallowing in order to carry over the larger part of one year's rainfall into the next, to secure moisture enough to assure a good crop of wheat, why will the same treatment not hold good for everything else, whether sown in the fall or spring?

The whole idea is that of having enough moisture for all plants, not one kind alone, that by summer-fallowing ground any one can raise double as large a crop of oats, barley or anything else.

Then why not extend the system to your gardens, potato patches and truck patches in general? By taking a garden and summer-fallowing one-half one year and the other half the next there is only half the area to hand-cultivate that there would be if it was all in. Then, if the yield be twice as great, as it surely will be if the moisture in the ground is doubled, or nearly so, which is the effect of a good summer-fallow, adopt this system for everything; in fact, if you only have one acre of ground, you ought to divide it and summer-fallow one-half one year and the other half the next. In carrying it out it must be remembered that, in addition to sowing in summer-fallowed ground, to get the best results the seed should be put in the earth as early in the spring as practicable, before evaporation begins to rob the ground of its moisture, for a few days' delay in planting will make a marked difference in the germination as well as the growth of the seeds.

No doubt this system has added, and will add, thousands of acres to the cultivated area in the dry belt of this so-called inland empire, and by it it becomes possible for civilized man to exist in comfort, and add largely to the development and prosperity of the country.

HORTICULTURE.

Lemon Culture for Profit.

Read by L. M. HOLT before the Pomological Society of California, at its meeting in Redlands, May 5 and 6, 1892.

Eighteen years ago lemon culture in Southern California was in its infancy. At that time there were a few small lemon orchards in Los Angeles county, but they were composed of seedling lemon trees, the fruit of which was naturally very inferior, and the manner in which the fruit was handled made it still worse.

The seedling lemon tree was soon discovered to be short lived, and it did not take long for our fruit growers to decide that a hardier root must be obtained on which to bud the lemon. The orange root was tried with success. The China lemon root was tried for both orange and lemon trees, but was soon discarded. The lime root was successful, but, on account of being so easily affected by frost, its use was not considered advisable or practical. The universal verdict to-day is that the lemon tree should be grown on the orange root, but some are contending that the sour orange root is preferable to the sweet.

Prior to 1875, the Lisbon lemon, the lemon of Genoa, and some other varieties which have since practically disappeared, were introduced into Southern California. The Lisbon lemon has become a standard, and is recognized to-day as being a first-class lemon, a lemon that one can plant without fear of making any mistake. The lemon of Genoa is thought well of in some localities, but it is not a popular favorite.

About 1877 the Eureka lemon was discovered as a choice seedling in Los Angeles, and was brought to public attention by Thos. A. Garey, who propagated a large nursery of lemon trees of this variety. A cold winter swept away most of his trees, and some 90 small orchard trees secured by myself were scattered broadcast in Southern California, and it was from these trees mostly that this variety was propagated. The Eureka stands to-day second only to the Lisbon, and, in fact, in the opinion of many, it is at the head of the list, the principal claim in its favor being that the Eureka tree is very free from thorns, while the Lisbon is very thorny, and the Eureka fruit has but few seeds, while the Lisbon has many. The habits of the Lisbon tree of making a compact head and a thick foliage are considered very much to its credit by many, placing it, as they believe, ahead of all other varieties thus far introduced into Southern California.

About the time that the Eureka was discovered, Mr. H. H. Higgins, of National City, brought to public notice what he termed the Bonnie Brae lemon, which for a time attracted widespread attention. This lemon seems to be a cross between the lemon and the lime, with the shape of a citron. It was very juicy, nearly seedless, a little oversize, and had a thin rind. It was propagated only to a limited extent, and the public soon discarded its many claimed virtues.

Recently the Villa Franca has been introduced from Florida. There, it is considered the best lemon in the State. Here, those who know it best think the most of it. No one can find any fault with it, but nearly all agree that it is passing through the experimental stage of its existence with a fair prospect that in time, as soon as it has been thoroughly tested, it may become one of the standard varieties of the State. And yet few, at present, care to experiment with it on a large scale.

The seedling lemon, years ago, was known as the California lemon, and afterward as the Sicily lemon. It has required more study and skill and time to develop lemon culture in this State than it has to popularize and make remunerative any other fruit that has been made a success. The cause of this has been that the lemon ripens mostly in November, December and January, but the market for the lemon does not ripen till the following June, July and August. One great problem to be solved has been how to pick and cure the lemon so that it will keep till the market is ready for it. As soon as good varieties had been found, the curing problem was taken in hand by G. W. Garcelon of Riverside, N. W. Blanchard of Santa Paula and others, and to-day the lemon can be safely cured and kept for six months or more without heavy loss.

Years ago, it was customary to let the lemon hang on the tree till it was thoroughly ripe. It then became a great overgrown fruit, with very thick rind and but little juice. One hundred lemons would fill a box and disgust the market. They would sell for $1 a box, or perhaps a little more, and all classes of people became thoroughly convinced that California could not produce a good lemon, or, if it could, it was impracticable to put the fruit on the market in good shape.

The progress made in lemon culture in the last 18 years has been slow—very slow—but, on the whole, it has been very satisfactory.

Our fruit growers have demonstrated the fact that the better varieties of lemons grown on orange stock will produce as fine a fruit as can be raised in the lemon countries along the Mediterranean, so far as size, texture, juice, acidity and keeping qualities are concerned.

They have also discovered how to pick and cure the lemon and it can be placed on the market when it is needed and when it will bring the highest market prices.

They have demonstrated that California was not to blame for not producing a good lemon sooner, and that the soil and the climate of this country would do their parts as soon as man was ready with the requisite skill to do his.

Having discovered the necessary varieties and skill, what other elements are necessary?

To this question I would answer, climate, water and soil.

By climate for the lemon, I refer to absence from frost, or from a degree of frost that will injure either the tree or the fruit. Usually the frostless belt is to be found on the slopes of the valley next to the foothills or mountains. The bottoms of valleys and level tracts of land are usually cold and frosty. This is especially true in the interior valleys, but other conditions are found in the ocean valleys, where the large body of water has a perceptible effect on the temperature of the adjacent country.

There are other influences at work on low temperatures in the interior valleys. For instance, it is a well known fact that a long and extensive canyon, opening out upon the larger valleys, sends down currents of air during the cold, still nights, when frosts and freezes do the greatest damage. These currents of air prevent frosts in the canyons and wherever their influence is felt. This theory has been forcibly illustrated in San Bernardino county, during the past season, in several places.

It is a well known fact that the San Timoteo canyon has an effect on the temperature of Old San Bernardino, preventing heavy frosts at times when they are common elsewhere. The Temescal canyon or valley has had the same influence on South Riverside, and Lytle creek and Cajon canyons have appeared to have a similar effect on Rialto.

The greatest danger from frost occurs when the trees of the orchards are young and small. After the orchard begins to bear, the trees will stand more frost than the fruit will. So far as the orange is concerned, a locality will raise orange trees that will not safely mature the fruit.

The lemon tree is more tender than the orange, and hence the acreage suitable to lemon culture is more limited than that which is adapted to the orange. So far as the crop is concerned, however, the lemon has an advantage over the orange, because it is largely picked in November and December, before the heavy frosts are liable to come, while the orange hangs on the tree all winter, and is, therefore, subject to all the cold weather that we are liable to have.

A location with a suitable climate having been found, the question of water becomes important—very important. The Dutchman's statement, relative to his lager beer, is applicable in this connection. He said: "Too much lager beer is shust right," and the man who gets too much water for his orange and lemon orchard will some day discover that it is just right. If you have too much water, you don't have to use it, but if you don't have enough, the situation is a serious one.

Of course, the amount of water must be determined by circumstances. Some localities and some soils need more than others. A sandy loam soil needs less water than a clay loam, and an orchard located in one of the interior valleys needs more water than one located near the coast.

How about the soil? Well, if the climate and water are all right, you need not worry much about the soil. A moist, alkali soil will not do; but you will not find such a soil except in the bottom of the valley, where the climate is not suitable; such soils are found only in too cold localities. Any location on the slope of a valley is liable to be good, unless situated in a wash or bed of bowlders. A sandy loam or a clay loam are both good, and good orchardists are divided in opinion as to which is the best.

A Florida orange grower visiting the Chicago Citrus Fair, in the spring of 1886, stated that his orchard was planted in sand so pure that he could utilize it for plastering, and yet he got good returns by using fertilizers to the extent of $50 worth per acre each year.

California soil is, as a rule, naturally rich, and hence does not need as much fertilizing as does the clear, sandy soils of Florida, and yet the man who attempts to raise either oranges or lemons without the free use of the best fertilizers makes a costly mistake. As well might a man attempt to eternally check against a bank account without making any deposits. A man who attempts to draw either upon the soil or the bank, without making deposits equal to his drafts, will soon find that his drafts in either case will be dishonored.

Get a good place to put both trees and fertilizers, and do not forget the latter if you expect the former to prove a good investment.

The approved method of gathering lemons is to pick them when they are just beginning to ripen. Mr. Garcelon says that 100 pounds of lemons as they are picked from the tree will shrink so they will pack a 65-pound box six months later, if the fruit is properly handled and cared for. This is not a serious loss. The fruit as it is picked from the tree is supposed to be worth $1 per box. Six months later, the market prices range from $3 to $8 or even $10 per box. If the loss or shrinkage was twice or three times as great, the curing process would pay, as it would return the orchardist more money than the fruit if sold when picked. It is true that the railroads might be robbed of a portion of the money that they would otherwise get for hauling poor fruit to market, and the box makers and packers would make less money, but the growers would get more, and the customers would be better satisfied.

While cured California lemons, marketed in warm weather, are bringing better prices than formerly, we still have our reputation in that line to make, for our lemons do not bring more than half or two thirds as much as imported lemons do, even when they are equally as good, but the time is not far distant when Mediterranean lemon growers will come to Southern California to learn how to handle the lemon crop, just as the French have had to learn the California methods of curing the French prune in order to save their prune industry from ruin.

We have not reached perfection yet in the lemon business, although we have practically solved the problem. Ten years from now we will know more about the lemon business than we do to-day, or at least, if we do not, we had better abandon this country and make room for a more intelligent race.

The careful observer who travels over Southern Califor-

nia, carefully noting the progress being made in citrus fruit culture, cannot help but be struck with the fact that fortunes are made by planting the very best of trees and giving them the very best of care, while the country is strewn with failures and partial failures, caused by planting so-called cheap trees and giving them cheap attention and care. This criticism applies to lemon orchards, but not to that degree that it does to the orange orchards. In either case, however, the best trees and the best care are essential to the best results, and the man who casts pearls before swine is a philosopher beside him who does his orchard work in a shabby manner.

The United States are sending out to Europe annually millions of dollars for lemons. It is doubtful if there is enough good lemon land in Southern California on which to raise enough lemons to supply the present and ever-increasing demand for that popular fruit. It is safe to predict, however, that within the next quarter of a century this southwestern corner of Uncle Sam's dominion will receive many of the millions of money that are now being sent to Europe for lemons.

Pruning the Moorpark and Grafting.

E. A. Bonine gives the Pasadena *Star* paragraphs on pruning the Moorpark to induce bearing on grafting which will be read with interest:

There are a great many Moorpark apricots around Pasadena and very few of them are worth the room they take up, and I think I have found a way by which they may be made to bear. Two years ago I began cutting off the tops of mine and grafting them, leaving about one-fourth of the tree—all lower branches. To my delight these lower branches were densely loaded with fruit last season, more fruit than the trees ever had on them since they have been growing, and they are densely filled with blooms and young apricots for this season, with one exception, and the exception is a late wild plum which I grafted on the Moorpark tree and which has made a large growth. This plum, taking the major part of the sap, has not left enough sap for the lower branches, and as a result no apricots. I have another Moorpark which has been doing as poorly as the rest, near which a drain and cesspool have been placed and this tree is loaded with blooms and fruit this year, and I am inclined to think that the Moorpark needs irrigation and manure. If these are not at hand butcher your trees. Try half a dozen this year and see what the result will be next. Cut away *one half at least*. I have 25 or 30 that I budded last year and the lower branches are a mass of bloom and fruit now (April 24th), and I will be pleased to show the result of what I write about to any who call at the ranch.

Sometimes we have to set our theories aside. We reason that if you prune a tree hard, or butcher it, it will drive the tree to making wood instead of fruit, but the Moorpark does not do this. I should state the trees I cut last spring I budded into the young shoots in the summer and as soon as the buds were set I cut the Moorpark growth off so I was virtually pruning the trees all summer. Sometimes we get results we cannot reason out, and this reminds me of a joke on the rancher. One year the linnets came out of the valley in great numbers; they ate up all my apricot buds and promised to stay all summer and finish my nectarines and peaches, so I planted Egyptian corn among my fruit trees thinking they would prefer the grain, but the result was they brought all their friends and ate up both corn and fruit.

HINTS ON GRAFTING.

Buy a small chip basket, 10x18 inches in size, tear one lid off, take a piece of your old duck overalls and cover the bottom and sides to keep the dirt from getting in, also to keep your basket from wearing. I cover my fruit-picking baskets the same way, and they last several years. Sew on the side of your basket the corner of a pasteboard box, and into this slip a box of matches, and on the other side of your box sew a larger piece. Into this box put a California curved-pattern pruning saw. They are shaped like the segment of a circle, are the best pruning saws I ever used, and, as I think, the only good ones. It cuts by pulling to you. Then you need a chisel to spread your cut while you insert your scion; a small oak mallet; knife for cutting your scions; and one for splitting large limbs; half of a tomato can containing water; and a cotton towel wet and wrapped around your scions. Carry these on your basket on the lid end, with some paper and a lead pencil, and as soon as your scions are put in, state position of tree in the orchard, variety or varieties of graft. If two varieties, mark one in the bark with a letter or hieroglyphic and make a note of it in your book; also note condition of scions and tree, also date of grafting. I use a tin saucepan to melt my grafting wax in. First I take a five-gallon coal-oil can and cut out the side and a V-shaped piece out of the top. Then I put a small incubator (tin) coal-oil lamp in the bottom, using a tin chimney. Fasten (with wire) a little shelf near the top of the can, cutting out a large hole, and set your grafting wax on this shelf. Then take the top of a coal-oil can and hinge it to your can in front of your lamp, and this makes your door to keep the wind from blowing out your lamp. Use a brush to apply wax. Heat it, but not too hot. I cut my scions by holding the limb in one hand and cutting from me. When grafting a large tree, I cut my scions first and put them in my tomato can, then saw off my limbs, pare them smooth, split and insert my scion, and then wax. If the wax is not smooth enough to suit, moisten with your finger (to keep the wax from sticking), and smooth it to suit.

Apples, pears and prunes are easily grafted; peach and apricot scions are harder to get to unite. I have had the best success in late grafting, after the tree is in full bloom, or even past that time, and will say I have seen more failures here from early grafting, the scion drying out before the flowing of the sap than from any other cause. Some varieties do not unite well. Almonds will not do well on apricots. They grow a year or two and blow off.

Apricot is the worst root I know of for prunes, yet if you have large apricot trees, you can graft them to prunes. They unite well, and will bear all right.

The Vineyard.

Resistant Stocks and Desirable Wine Varieties.

At a meeting of the Winegrowers Union in St. Helena recently, a report on resistant vines, grafting etc., was made by Mr. E. P. Palmer, who in company with E. Zange and F. Kraft, made a tour of inspection through the vineyards of Napa and Sonoma counties in July 1890, to investigate the condition of resistant stock planted, was called upon and made a report, covering all points of interest to winegrowers at this time, as follows:

The Riparia and Lenoir are the only varieties which are being extensively planted. Riparia is the favorite on account of its adaptibility to all kinds of soil, doing equally well on hillsides as bottom land; on sandy or clayish, gravelly or loamy soils. This has been practically demonstrated in Sonoma valley by an experience of eleven years, particularly in the reinstated vineyard of Messrs. Dresel & Co., (comprising some 140 acres or more) who are the pioneers in resistant stock, importing the Lenoir and Riparia in 1878, together with several other varieties. They use only the Riparia for reasons enumerated.

The Lenoir is adapted for free soil, having good depth whether on hillsides or bottom land, and in many localities is a more rapid grower than Riparia, although the experience of Messrs. Dresel & Co. has proven that at this time the varieties grafted to Riparia and Lenoir several years ago appear more vigorous on Riparia roots than Lenoir.

Both varieties have proven resistant under ordinary favorable circumstances. I have heard at times that neither were resistant and again at different periods that Lenoir was destroyed by phylloxera. I have been unable, after a thorough canvass of Napa and Sonoma counties, to find an instance where either variety has been killed, except when grafted too low in the ground and roots from the graft were allowed to grow, starving the resistant stock and absorbing all its nourishment. Phylloxera would then attack the roots and kill the vine.

Resistant vines should not be grafted below the surface of the ground but from one half to an inch above, and mound the earth up to the top of the scion, leaving not more than one bud exposed.

What to graft is a very important consideration with all vineyardists. To improve in quality and yet secure a profitable yield without sacrificing quality to quantity, at the same time growing short pruned varieties, thereby saving stakes and tying.

There are a number of light bearers, both red and white grapes, which make a high type of wine, but the average wine maker can not afford to grow them.

After consultation and correspondence with many of our best informed winemakers in different localities, I am led to believe that for hill land and locations where grapes ripen early, that the Mondeuse is a poor man's as well as a rich man's grape. It is a very heavy, regular bearer; makes a good wine; has good color and is short pruned.

Beclan is highly recommended as a beauty for quantity and quality every year. It is not subject to sunburn or coulure; ripens well, attains high sugar, makes a soft, mellow and beautifully colored wine; is a good regular bearer, not as heavy as Mondeuse but makes better wine. It is not adapted for heavy soil as it loses color. A short pruner.

Serene, called by C. C. McIver, Esq., of the Linda Vista vineyard, Mission, San Jose, the "Unknown," was imported by him from Europe eight years ago for the Petite Sirrah, but it proved to be a different variety. It is a very heavy bearer, excelling his other varieties (of which he has a large number) a short pruner; makes a very fine wine, intensely dark and beautiful and retains its color for years.

Carignan finds favor with many. It is a good bearer, makes a good wine, although subject to mildew, otherwise hardy, withstanding heat and rot; a short pruner; too well known in this vicinity to require minute description.

Alicante Bouschet and St. Macaire are the standard coloring varieties; good bearers; yielding an intensely dark colored wine. As a wine by itself, Alicante Bouschet is preferred by the majority and St. Macaire to blend, although both are much used. Every vineyard should have a small proportion at least of one or the other. They are short pruned like the Carignan and do well in almost any soil.

Sauvignon Verte, which is now in most of our vineyards, considering quantity and quality, is as good as any variety; produces a fine wine of the Sauterne type, a good bearer, withstands frost moderately well, requires high stakes and is too well known to require further description.

Semillon, also of the Sauterne type, is a good bearer, not as heavy as the Sauvignon, but makes what is considered by many a finer wine, and one more sought for by the dealers.

Green Hungarian is but little known. It is recommended by Professor Husmann (an experienced, practical viticulturist and wine maker, who has been identified with grape growing and wine making interests of Napa and Sonoma counties for many years) as a strong grower, heavy bearer and making a fine wine much resembling the Riesling; short pruned, hardy and not affected by the sun.

All the foregoing varieties can be seen fruiting at my vineyard this Fall. The Serene and Beclan, grafted into old vines this spring, the others mostly last season.

I have grafted these various kinds, as well as many others (that I did not have already in my vineyard) into old vines to determine their adaptation to my locality and soil, productiveness and color, hardiness and exemption from heat, rot, coulure, etc.

Mr. Krug was asked his opinion and stated that there was no question but that the Riparia stock is the best, although the Lenoir has never been ruined by phylloxera. He said he had Lenoir stock 11 years old perfectly healthy. Mr. Krug also recommended all to graft one-half to white varieties and the others to red.

Poultry Yard.

Relative Merits of Different Breeds.

LODI, SAN JOAQUIN CO., May 2, 1892.

TO THE EDITOR:—It has been so often repeated that for all "around purposes" the Plymouth Rock has no superior, that it may be deemed rank heresy in any one to advance anything differing from this, but my experience and my observation have not led me to any such conclusion, and at the risk of being thought an unorthodox poultryman, I must venture to differ from this apparently almost general belief.

We are too apt, as a general thing, to accept and adopt the opinions of others without proper proof of their real merits; some because they have no real interest in the matter and had as soon believe that as anything else, and many because they are willing to accept the decision of those whom they believe to have knowledge and experience.

I am willing to admit that the question of locality and "manners and customs" of the person enter largely into the consideration of the matter, because certain climates and certain style or manner of keeping, while suitable for one breed would be altogether unsuitable for another of dissimilar habits and requirements. Leghorns or any of the game breeds, kept and treated as Plymouth Rocks or any of the large Asiatic breeds should be to obtain profitable and satisfactory results, would go far to convince their keeper that they were not a desirable breed to keep and he could not be made to know wherein their superiority consisted, while under proper treatment and proper surroundings, their superior merits would be abundantly manifest.

Before we concede the palm of superiority to any one breed we should know that they have manifested it under all conditions that obtain in the general care and keep of fowls, and the Plymouth Rocks have not done this, at least so far as my observation goes. It cannot be denied that for a table fowl, all things considered, they are the most desirable, and a coop of Plymouth Rocks in prime condition, of uniform size with bright plumage, clean looking yellow legs and bright red combs, is a sight to tempt a buyer, or when nicely dressed and exposed for sale, the rich yellow, juicy-looking carcass is very tempting. But in this matter, if one could get over prejudice in favor of a yellow-skinned fowl, he would find that under the white skin of a Langshan as tender, appetizing flesh of a rich and racy flavor would be found as under the yellow skin of any Plymouth Rock—if, of course, they had been equally well kept and got into market in equally good condition.

The Plymouth Rocks are so far of the nature of game fowls that it is a difficult matter to keep them within certain given bounds, even though they should be of a large, heavy strain, as they will fly equal to Spanish or Leghorns and are as great rangers and foragers, but are hardier and easier to raise than Leghorns. As egg producers they do not compare at all favorably with the Leghorns or Langshans, laying smaller eggs than the Leghorn and not so many of them during the season, being also of a slightly dark cast verying from pale pink to light brown. It is not claimed for them generally that they will equal the Leghorns as layers, although they have their advocates also in this direction, but for a table fowl they are, it cannot be denied, altogether superior, and did one find their principal profit in raising fowls for market they certainly have much to recommend them. There is, however, comparatively little profit in that branch of "chicken ranching," and eggs, large, fine, white-shelled eggs, and plenty of them, is therefore the thing to be principally desired, and the Langshan, while fully as good a table fowl as the Plymouth Rock, is a much better layer. The eggs are, however, darker than the eggs of the Plymouth Rock and in that respect hardly suit our market as well, perhaps, as the whiter colored ones, although really a much richer and more nutritious egg. This fact is so well known to housekeepers as to have given rise to the saying: "If you want an egg for an omelette or to fry or boil take always a dark colored one, but if for cake or a light froth then a light colored one." Should you test the matter fairly you will find much of truth in it, and that for richness and substance the dark one is far ahead of the lighter colored one.

My Langshans have done for me better in eggs than my Leghorns, inasmuch as they have laid fully as well during the spring and summer and altogether better in the autumn and winter, which cannot be said of the Plymouth Rocks which are on the whole shy layers, while the Langshans are fully as large and take on as good a condition and were it not for the prejudice against white skin and black legs would be found equally desirable.

While saying what I have, it is proper to state that one will find almost as many strains or breeds of fowls of any one variety as there are poultry yards, each yard apparently having some pet fad of its own and desiring to introduce some valuable quality or striking peculiarity, and so they will be found to vary much in form and size and in laying qualities. I have been shown fowls no larger than Black Spanish or Black Leghorns whose owner and breeder claimed for them a clear pedigree as pure Langshans and as such had exhibited them at one of our county fairs, and he, perhaps, was right, only in the place of having bred for size as the desideratum he had looked to the development of some other quality while, perhaps, keeping the blood pure.

I have bought Plymouth Rocks from three yards East and from two yards in California, each differing from the other markedly in size and form but undoubtedly all pure blood Plymouth Rocks, and so it may be seen that although, perhaps, equally pure, some yards may furnish a better strain for eggs than some others, either in Langshans or Plymouth Rocks, but taking things as they are, the Langshans, to my perceptions, have established their superiority as an "all purpose" fowl. The chicks are hardy and easily reared and, as well as the grown fowl, stand extremes of heat or cold much better than the Plymouth Rock.

T. B. GEFFROY.

THE HOME CIRCLE.

Alone With Conscience.

I sat alone with my conscience,
In a place where time had ceased,
And we talked of my former living,
In the land where the years increased;
And I felt I should have to answer
The questions put to me,
And to face the answers and questions
Throughout an eternity.

The ghost of forgotten actions
Came floating before my sight,
And things that I dreamed were dead things
Were alive with a terrible might!
And the vision of all my past life
Was an awful thing to face,
Alone with my conscience, sitting
In that solemn, silent place.

And I thought of a far away warning
Of sorrow that was to be mine,
In a land that, then, was the future,
But now was the present time;
And I thought of my former thinking
Of a judgment day to be;
But sitting alone with my conscience
Was judgment enough for me.

And I wondered if there was a future
To this land beyond the grave?
But no one gave me an answer,
And no one came to save.
Then I felt that the future was present,
And the present would never go by,
For 'twas the thought of my past life
Grown into eternity.

Then I woke from my timely dreaming,
And the vision passed away;
And I knew that the far away warning
Was a warning of yesterday.
And I pray I may not forget it,
In this land *before* the grave,
That I may not cry in the future
And no one come to save.

And so I have learned a lesson
Which I should have learned before,
And which, though I learned in dreaming,
I hope to forget no more.
So I sit alone with my conscience
In a place where the years increase,
And I try to remember the future
In the land where time will cease.
And I know of the future judgment
How dreadful so e'er it be,
That to sit alone with my conscience
Will be judgment enough for me.

—London Spectator.

A Resurrection.

It was a typical Easter morning, whitely brilliant with sunshine, and filled with the soft air that sometimes comes in early spring.

John Amory felt its influence as he walked through a narrow street in the older part of Boston, swinging his cane like a boy, and whistling in reckless disregard of the Sunday quiet of the place. He was a very handsome man, with a dark, brilliant, Southern face, and black eyes with a latent fierceness of expression in them which made people a little afraid of him. But he was not tall enough to be noticeable, although he was very well built, with a finely developed chest, and an alert, firm way of holding himself.

He was coming to see a former friend of his, David Warner, an artist, whose studio looked over the river at the back of one of the sober old houses Amory was passing He was coming to ask his friend's forgiveness for a wrong he had done him, and which had broken a friendship whose perfectness and nobility it is rare to find, even among men.

The thing which had parted these two had been petty in itself—such a little, little thing it seemed, looking back at it all, but in their blind anger they had magnified it until it became enormous, and each said things the other declared it impossible to forgive.

And so the time dragged on, until one day David came up to Amory, holding out his hand and saying, "It was all my fault, old fellow; will you forgive me?"

But Amory had repulsed him bitterly, with harsh, scorching words, and they had not spoken since. He never forgot the hurt look that crept into David's face, and the contempt which blazed into his usually gentle eyes as he turned away. For the fault was mainly Amory's, and when the latter calmed down, his recognition of this fact and his remorse goaded him into positive fury whenever he saw the man who had been his friend. He was a man whose violent passions left him no middle course of feeling toward any one in whom he was interested; but he must either vehemently love or vehemently hate.

Several months passed by in this manner, until, the night before this Easter morning, he resolved to put an end to the battle raging in him between his false pride, his insane anger and his better nature, and he spent hours writing incoherent letters to his friend, and tearing them up in disgust. It was useless—he could not write what he wanted to say—and so he had hurried here, eager and determined to humble himself.

And yet he could not bring himself to enter the house. A cross street ran by it to the river, where it ended in a tall iron grating, against which he went and leaned in an agony of irresolution, looking up at the windows of David's studio. He saw him come into the light, and stand with his back to it, holding out before him a canvas which he examined intently, with his head on one side, and which Amory fancied was the completed portrait of himself from a sketch David was making at the time of their quarrel.

A lump rose in his throat, and he turned, and looked down at the river.

After a few minutes he said, half aloud: "Confound it!" I can't do it!" and began punching holes viciously in the gravel with his stick.

Just then he heard the street-door bang, and he looked up and saw his friend coming down the steps. He drew back, and waited till he had gotten some distance down the street, and then followed.

David Warner was a very tall, slight man, with stooping shoulders, and wearing a beard a little darker than his fair hair. His small, clear features were of an almost feminine delicacy, but his face, nevertheless, was strong and manly, and the dreaminess of his wild, gray eyes was balanced by his firm mouth.

Intrinsically, his character was weaker than Amory's, but his control of will power and the high principles by which he ordered his life brought out the points in him which were obscured in Amory's character by his waywardness and impetuosity. But David's quiet, practical goodness had had a tremendous influence on Amory, and was now drawing him, in spite of himself, to the point where the barrier he had raised between them was to be broken down.

And so he followed David, half defiantly, on and on through the Public Garden with its fresh, earthy odor of spring, and up the avenue, bright with sunshine and the faces which could not help looking happy on such a morning, and so until they came to Trinity Church.

Amory forgot to scoff at himself for going into a church, as he went unnanounced among the throng of people after David, and up the stairs into the gallery, where he watched him seat himself in the front row and kneel for a few minutes, with his head bowed over his clasped hands. The light streaming in through the stained glass window lay in broad bands of purple and red and gold upon his figure and made a glory of his fair hair. And Amory felt, suddenly and bitterly, how far away and how high above him he was. He made a movement to go out.

But he sat down in the shadow, so that he could get a good view of David's face, and waited.

The service had not yet begun, and below there was a constant stream of people pouring in, the women looking their prettiest in their dainty spring gowns and their flowers, and the men in their immaculate clothes and patent leathers and their shiny top hats. They were such a rich, prosperous, self-satisfied looking crowd that Amory shrugged his shoulders impatiently.

But gradually his restless soul grew calm and uplifted with the vague influence of the organ rolling its grand, solemn chords through the vast church, and the waves of fragrance stealing upward from the Easter lilies standing in the dim, rich chancel.

And now, as he watched his friend's reverent face while the service went on, all the bitterness and anger flowed out of his heart, and he burned with shame for the miserable pettiness of it as he had never done before.

Absorbed in his thoughts, he had not noticed that the minister was almost through his sermon, until he, too, was roused into attention by the marvellous eloquence of the man who is able to hold people breathless before the infinite divinity, and the sweet humaneness as well, of the message he is called upon to deliver. And these were the words he heard:

"Oh, my dear friends, you who are letting miserable misunderstandings run on from year to year, meaning to clear them up some day; you who are keeping wretched quarrels alive because you cannot quite make up your mind that now is the day to sacrifice your pride and kill them; you who are passing men sullenly upon the street, not speaking to them out of some silly spite, and yet knowing that it would fill you with shame and remorse if you heard that one of those men were dead to-morrow morning; you who are letting your neighbor starve, till you hear that he is dying of starvation; or letting your friend's heart ache for a word of appreciation or sympathy, which you mean to give him some day, if you could only know and see and feel, all of a sudden, that 'the time is short,' how it would break the spell. How you would go instantly and do the thing which you might never have another chance to do. . . . Oh, you who are waiting until each day you live makes it harder, go now, and let this beautiful Easter morning be a resurrection of your better selves!"

The great preacher stopped, and there was a short silence, followed by the subdued rustling and stirring and coughing which is inseparable from the end of a sermon.

Amory leaned forward and looked at David, with his hands stretched out on his knees, his lips slightly parted, and his eyes filled with the mightiness of a man's yearning for his friend.

And David looked up and saw him and knew that the thing which had parted them was gone forever.

Then Amory got up and went over to his friend, and laid his hand very gently on his shoulder.

"Come," he whispered.

And they went out together, unconscious of the curious glances of the people about them, feeling only that they had forgiven each other, knowing only that their friendship had come back to them stronger and more perfect than before.

But only one among those people understood. That was a young girl, a slender, childlike little thing, with a sweet, serious face and shy brown eyes.

And her name was Esther Warner, for one of these men was her brother and the other was her lover, and she had waited, saying no word, trusting implicitly that her lover's better nature would triumph in the end.

So she whispered over and over again to herself, with happy tears in her eyes, "I am so glad, oh, I am so glad for them!" as she knelt during the benediction.—Mary Winifred White, in American Cultivator.

Mattie's Soupbone Week.

Part III.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

In the little California town where Mattie lived, the cooking "fad" had not attracted much attention; much less had there ever been any lectures or lessons on the subject. Music, painting, "Spanish," and all sorts of fancy work, was "the thing," femininely speaking. Interest, rivalry in cooking was confined to the cakes, ice creams, pickles and salads served—exhibited—at the "teas" and "socials." Mattie was like the rest; rivalry in dress, fancy work, all the elegant accomplishments, with as little thought about cooking, now she was married even, as possible. Hence she had always got the most expensive cuts of steak—they could be cooked quickly; the highest priced roasts—they were tender, good, more or less juicy, no matter how she neglected the "basting." And she thought she must have a seven or eight pound roast to get "rare done" for Tom; so, afterward, it was cold roast *ad nauseum*, or else a lot went to waste.

If Mattie had not loved Tom so unselfishly, she counted nothing hard that made home attractive for him, she could not have learned so much. Yes, she was an apt pupil of an excellent teacher.

"O, Miss Hetty," she cried, "How could I have got along without you? You tell me things in a way I can't help learning—my brain just gets to buzzing with ideas. Why, it's as funny, as interesting, as studying chemistry, and as fascinating as fancy work for our fair, when we contrive all sorts of things out of all sorts of scraps."

"I have just opened your eyes," Miss Hetty would answer, "that is all. Your bright head and deft hands have done the rest. There was a philosopher who said a man can only see that which he brings with him, the power of seeing or something like that. You, I have observed, never sensed—noticed—the household hints in anything you read or heard, only about dresses and fancy work—things to fuss up parlors and bedrooms, and make them look like curiosity shops. But don't *ever* stop studying cookery as an art—a science. Realize how much your husband's being, his moral nature even, has to do with what he eats—is influenced by it. You'll know what I mean better when you are older, more experienced. But now let some things showy get crowded out, that you may not only learn skill and economy in this, and so better please your husband, but so that whenever you are able to keep a girl you'll know just what's what, and can't be run over and imposed upon. Girls with mistresses who know little about cooking, specially about its economies, are very tyrannical and terribly expensive. Their wages and board are not the sum of all their cost."

"O, I know it," cried Mattie, enthusiastically. "I begin to see that what I am learning is going to be worth dollars and dollars to me in the future. I had before sensed, practically, what a writer on dressing called 'the smartness of simplicity.' Now I begin to see that *good* cooking doesn't necessarily mean *rich* cooking, expensive cookery, not when there's brains and taste back of it. And as for Tom"——

"And what's the matter with Tom?" asked that gentleman, unexpectedly entering the dining room where Miss Hetty and Mattie were sitting.

"Why, Tom, I didn't know you had come. How did you happen to be home so early Saturday night? Dinner isn't quite ready."

"Most, I hope; I'm hungry. Must hurry back. Got an agent there this evening, and had to come now while he was at another store."

"Well, said Mattie, cheerfully, jumping up, "I think things will be ready soon."

"But what's the matter with Tom?" asked that gentleman again, following Mattie into the kitchen.

Mattie laughed. "O, I was just going to tell Miss Hetty what you said this morning."

"Don't go," said Tom to Miss Hetty, who was folding up her knitting work, "and I'll make my little speech over again for your benefit. I was figuring over with Mattie about these experiments and experiences of hers, this morning, and I told her that while I couldn't honestly say but that I liked a porterhouse steak and a rare-done tenderloin roast as well as ever, I wasn't ashamed to acknowledge that I had been inclined to over eat on them—was altogether too much of a carnivora in fact; and I said that I found, on these tasty, lighter dishes of hers, I had felt clearer-headed, not so dull and stuffy, as after a succession of hearty, hot meat meals. So, I found there was such a thing as having too much of a good thing. And I told Mattie she'd done splendidly; I was proud of her. And what she was learning made me think of what my mother once said, that, as a rule, getting along well, financially, in married life, depended more upon the woman than on the man; there are so many ways for a housekeeper to let things go to waste. Of course, that doesn't count drunks and misers for husbands."

"Nor spendthrifts," interposed Miss Hetty, dryly, "nor speculators, nor men who spend all their spare cash on billiards, or cards, or"——

"Hold on, please," cried Tom, laughing. "Circumstances being equal, you know. And so I told Mattie that if we did get along well, paid on our place right along, and made improvements every year, I should credit it to her, and what she learned during our *week of soup bone*."

"Milkmaids."

Ik Marvel, in his "Wet Days at Edgewood,' spends the humid hours in his library. He pores over the vellum of antiquity, and finds that the Greeks and Romans knew quite as much about farming as authorities ranked competent in these days, and he cites passage after passage which reflects admirably their common sense in the management of everything pertaining to farm life. He follows this bucolic vein down through the older French and English poets, till, among the charming metamorphoses which his reading effects, he tells us, "through the prism of their verse, Patrick, the cattle-tender, changes to a lithe milkmaid, against whose ankles the buttercups nod rejoicingly, and wakes all Arden with a rich burst of laughter."

This is the milkmaid of tradition, says Mrs. Frank Crosby, picturesque, songful and laughter-loving, whose praise, coming down the centuries, has reached us through the notes, "oaten stop or pastoral song."

She it is whose meridian glory was, doubtless, in the seventeenth century, the day of castes, processions and pageants, whose customs and costumes we ape now on the stage, in tableaux, the carnival or fancy ball. She it is whom Milton, of that period, mentioned in his "L'Allegro" in this connection:

"The swain responsive as the milkmaid sung."

She is one the birds at their matins missed after the cruel "Sack of Baltimore."

"Midsummer morn, in woodland nigh, the birds
begin to sing,
They see not now the milking maids, deserted in
the spring."

Lines like the following portray her image:

"I see the pool, more clear by half
Than pools where other waters laugh
Up at the breasts of coot and rail.
There as she passed it on her way,
I saw reflected yesterday
A maiden with a milk pail.

"There, neither slowly nor in haste—
One hand upon her slender waist,
The other lifted to her pail—
She, rosy in the morning light,
Among the water daisies white,
Like some fair sloop appeared to sail.

"Against her ankles as she trod
The lucky buttercups did nod."

Or these:

"I met a maiden with shining locks,
Where milky kine were lowing."

"She wore a kerchief on her neck,
Her bare arm showed its dimple,
Her apron spread without a speck,
Her air was frank and simple."

"She milked into a wooden pail
And sang a country ditty."

* * * * * * *

And all the while she milked and milked
The grave cow heavy laden.
I've seen grand ladies plumed and silked,
But not a sweeter maiden."

"But not a sweeter, fresher maid
Than this in homely cotton,
That pleasant face and silky braid
I have not yet forgotten."

What are the songs she sings? Here are bits from one by Sidney Dobell, which represents the course of her thought while the streams of milk beat time till the pail is brimming:

"Fill, fill,
Fill pail, fill,
For there by the stile stands Harry!
The world may go round,
The world may stand still,
But I can milk and marry,
Fill, pail,
I can milk and marry.

"Give down, give down,
My crumpled brown!
And send me to my Harry.
The folks o' towns
May have silken gowns,
But I can milk and marry,
Fill, pail,
I can milk and marry."

Rarely is anything crystallized in verse sweeter than this, which the old mother recalled as the last song of her "sonne's faire wife, Elizabeth," which she heard echoed back from the shores of Lindis, as she sat spinning within her door:

"Cusha! Cusha! Cusha!" calling,
"For the dews will soon be falling.
Leave your meadow grasses mellow,
Mellow, mellow.
Quit your cowslips, cowslips yellow!
Come uppe Whitefoot! Come uppe Lightfoot
Quit the stalks of parley hollow,
Hollow, hollow.
Come up Jetty, rise and follow;
From the clovers lift your head!
Come uppe Whitefoot! Come uppe Lightfoot!
Come up, Jetty! rise and follow
Zetty, to the milking shed."

In adjusting ourselves to changed conditions, much is modified, and much is lost which has not a pecuniary value. Since the steam era began, the romance of dairy-farming as well as of travel, has been taken away. In old England, fast outgrowing her old-time sports and customs, the milk-maid has been one of the last to yield her place. A few years ago, in London, the only trace of the old custom of going a Maying were the garlands of the milkmaids and the Jack-in-the-green of the sweeps. The garland (so called) was made of silver plate, borrowed for the day, and fastened upon a sort of pyramid. Accompanying this droll garland were the maids themselves, in gay dress, with ribbons and flowers; and attended by musicians, who played for them to dance in the streets. Sometimes a cow was dressed in festive array, with bouquets and ribbons on her horns, neck and tail, and over her back a net stuck full of flowers. Thus highly ornamented, the meek creature was led through the streets.

A sad coming down, indeed, from the time when the milkmaid assisted at the festivities around the May-pole in her native village, when lords and ladies, as well as king and queen, laid aside their state to rear its leafy crown! From what has been cited, we may see that we can predicate of the representative milkmaid very enviable qualities. She was frank, simple, comely, rosy-hued with health, graceful, tidy, contented, sweet-tempered and lively, industrious, honest, persevering, devoted to business, proud of her calling, tenacious of purpose, duly ambitious, all of which she could hardly have been had she been avaricious. She has never been naturalized on American soil any more than have the skylark and the nightingale, nor is she the exact prototype of the dairywomen—the farmer's wife and daughters and the "hired help" (barring the foreign element)—that till more recent times, sustained the credit of the dairy interest in this country. Our dairy woman added a large intelligence to the good traits enumerated, and was more likely to be heard singing religious or patriotic songs daily, for her training led her to believe she owed an abiding loyalty to God and her country.—Western Rural.

YOUNG FOLKS' COLUMN.

In Charity.

Written for the RURAL PRESS by ADAH FAIRBANKS BATTELLE.

DEAR DEB—Don't work so hard that those poor eyes of yours will ache. School goes well though we had a fearful history exam. O! Deb, I heard that Mrs. Nichols cuts everyone who calls on her new daughter-in-law. The upper ten aren't all angels, are they? I'll be at the door to walk up with you this evening. In haste—LOTTIE.

With a little sigh Deborah read the characteristic note from her impulsive sister. Why did Lottie persist in repeating such unkind remarks as the one regarding Mrs. Nichols? They gave the mild Deborah a feeling of aggravation. Each word of slander was to her like a porcupine quill.

She put the note in her pocket as the lady for whom she was sewing entered the room. Mrs. Eaton was imposing in appearance and she carried herself with the dignity of an arch duchess.

"You have sewed for Mrs. Nichols, have you not?" she asked as she tried on the basque which the young dressmaker had basted together.

"Yes, I sewed there for some time last fall," replied Debby.

"And are they pleasant people? Did you like them?" patronizingly.

"I was very kindly treated," said Debby with quiet dignity.

"A dressmaker has such good opportunities for seeing how the domestic machinery runs. I have heard that Mr. and Mrs. Nichols are not turtle doves and it's well known that she turned her son out of doors after he married Madge Smith, such a pretty girl and so stylish."

Mr. Eaton paused and glanced at the little dressmaker, but not by the movement of an eyelash did that person assent or deny.

"It sems so horrible not to receive one's daughter-in-law, not to give her a reception or—or anything. But no one blamed Mrs. Nichols very much for Madge's mother is *such* a queer woman. I suppose she is good enough, but such a queer old creature."

"Yes, she is very kind hearted," returned Deborah demurely. "No one minds her odd ways when once her kindness shows itself."

"Yes indeed" quickly replied Mrs. Eaton, "I had rather go to her for a favor, queer as she is, than to that Miss. Roddan who puts on so much dignity. She knows how to snub people because they are not rich, and her parents are just as plain as anybody."

"I sewed there this month" said Debby "and she was very pleasant. You are not really acquainted with her, are you? She is very bright, a real artists beside being a good pianist. And she talks well on any subject. Over at Oakville where she taught German, they say they never had a teacher with so good an accent." Deborah's enthusiastic way was so convincing that Mrs. Eaton added to the list of good qualities, "What a pretty figure she has."

"There's Miss. Weston," said Debby as a tall girl passed, walking rapidly.

"I wonder if that girl knows how people talk about her?" mused Mrs. Eaton. "Why Mrs. Justin told me only the other day—"

"Mrs. Eaton, people don't understand Winnie Weston. I went to school with her and I know she is an excellent girl. She likes to go and have a good time and she hasn't a brother to go with her. People ought not to talk against her, Mrs. Eaton; she has no mother to go to, you know."

"Can you cut the bell skirt?" asked the lady abruptly.

"Yes ma'am. What do you want made in that way?"

"The brown suit, I think, and I want the basque surplice in front; the kind that is fastened at the front. What kind of suits do you prefer to make?"

"I make all kinds, but I prefer whole dresses, those with skirt and waist together. It is a satisfaction when they are done, to know that the weight hangs on the shoulders where it belongs. Don't you like dresses made on a princess lining?"

"I don't know but I do. They are graceful. Don't you find that most people prefer skirt and basque separate?"

"Many do. When I make those I sew the skirt to a waist made of the lining. Then they hang from the shoulders."

Mrs. Eaton laughed. "You ought to be one of those health dressmakers—what do they call them—the ones who make dresses in the Greek style and don't fit them over corsets. But people will always wear tight clothes."

"Perhaps not always," remarked Deborah, and worked on silently and swiftly.

"How fast you work," as the pieces were advancing toward completion. "Don't you get tired?"

"I make my work a rest by changing. First I cut, then baste, use the machine, make button holes, then go back to cutting for variety. Resting is doing different sorts of work."

Mrs. Eaton laid her hands idly in her lap. "I can't rest your way," she said smilingly.

"Didn't I see Mrs. Kitty Marcy wear one of those Greek suits?" asked Mrs. Easton when the brown suit was being fitted.

"Yes, a black one. She is so tall and slender that she looks fine."

"Nothing she could wear would make her look pretty to me. Since there was so much said about that divorce suit I don't even want to hear about her. I can't see how a woman can bear to make herself so conspicuous."

"Why, you don't blame her for leaving her husband? Think of her children. She would have put up with his drunkenness and neglect, but she could not see her children suffer. And he whipped them so cruelly. She is devoting her life to her children."

Mrs. Eaton turned round to say, with a sharp tone in her voice, "I believe you would find excuse for anybody."

"When I am acquainted with a person and know her good qualities I can't bear to hear people misjudge her. You have no idea," in a sudden burst of confidence, "how my work helps me to appreciate people. There are people that you think you would not like, but when you go into their homes and they are so considerate and pleasant, you like them."

Deborah's last three words had all the force of a pledge of friendship from a less candid person. Although Mrs. Eaton was not in the habit of crediting others with good qualities which she herself did not possess, it came to her that something beside Deborah's work brought her so many friends. Being a dressmaker did not make one feel kindly toward neighbors. It must be something in the girl herself. The appreciative way was a sort of sunshine which Mrs. Eaton missed. Deborah put away her work and went home for the night.

It was a happy family that gathered round the student lamp in the Hill sittingroom. After the children were helped to prepare their school lessons for the next day, there came an hour of reading aloud. Mr. Hill chose some interesting author and many were the works read together in the family reading circle.

For the time, Deborah could forget her trials. If she had been older and wiser, she might have been deaf to gossip. This she had not learned to be, and her conscientious nature was daily hurt by cruel reports about people who were nothing to her. To them she was a dressmaker.

For some time to come, Deborah was to be at the large house near the bridge. So much work at one place was not easy to find, and as Mrs. Eaton paid promptly, Deborah was glad of the place. To be sure, there were drawbacks. Debby must constantly hear town gossip, as distasteful to hear as it would have been to the victims of the unkind discussion.

Unlike her sister, Lottie had a faculty for picking up bits that she called "news." She remembered them usually because they were funny, for Lottie had a keen sense of the ridiculous. From some perversity in her nature Lottie often went to Deborah with these nettling rumors. She did not confide them as information but let fall the anecdote in its most ridiculous light where Debby could but hear it. In vain Deborah remonstrated. Lottie protested that thereafter she should consider all mankind angelic. If anyone told her of the Prince of Wales gambling she should say that it must be a mistake, probably he only played casino occasionally for pastime. But Lottie's extravagant promises only meant that she would go on hearing and repeating to her sister.

It was late one night when Lottie pranced into the bedroom anxious for a romp. After gesturing wildly toward an imaginary Desdemona, Lottie came toward the bureau with uncertain steps, and wildly grasped for the nearest support. "That is the way Mrs. Eaton's son walks."

"Mrs. Eaton's son!" from Deborah, who had just rescued the lamp.

"Yes, he has just come home. He drove past the school-house in fine style to-day. But they say he is—Well I won't hurt your sensitive feelings by repeating it," and Lottie brushed her hair vigorously. "How does it happen you didn't meet him," she asked, as the thought struck her, "were you not at Mrs. Eaton's to-day?"

"No. Mrs. Nichols wanted me for one day and I went there this morning. I am going back to Mrs. Eaton's to-morrow," and Deborah fell asleep thinking that this must be the son who had been away so long.

The next morning early Deborah opened the door to be met by a pale-faced, tearful woman who held out her hand. Deborah grasped the offered hand wondering what could be coming. Mrs. Eaton's lip moved before she spoke. "Can you, will you—will you come and stay with me for a few days? I am in trouble." Deborah laid aside her hat with a resolute motion, then followed Mrs. Eaton to the sitting-room. All the coldness had vanished and Mrs. Eaton put one arm round Deborah while she told her in a broken voice of this son who had come home to break her heart. "He is very sick dear, and I cannot bear to have people know all about it. Oh, the disgrace! Need I have any one know it? If you can stay and take care of the house I can take all the care of my son. Will you stay?" Deborah did not hesitate as she answered, "I will stay while you need me."

"Thank you, dear. You know the house. Don't do too much; if you could cook some little delicate dish to tempt his appetite. He does not eat anything.

When Mrs. Eaton came downstairs Debby was ensconced at the cooking table, stirring. The kitchen had been freshly set in order. "Where did you learn so many things?" asked Mrs. Eaton.

"Oh, housework is a pleasant change from sewing. I like it for exercise, especially if I can roll up my sleeves and go right in."

Deborah did roll up her sleeves and go right in. She kept the house in order and in every way possible relieved Mrs. Eaton of unnecessary strain outside the sick room.

Mr. Eaton cared for his son at night and Deborah knew something of the horror of these vigils from the sounds that came even through the thick walls.

"If we had such a daughter," said Mr. Eaton regretfully to his wife. "She is a wonderful girl and the most charitable person I ever knew," was the response.

"Tell your father and mother," said Mrs. Eaton, "that we will adopt you whenever they can spare you."

Many bright spots came into Deborah's plain life as Mrs. Eaton strove to show her gratitude.

"I feel perfectly safe to tell Deborah Hill all my troubles," Mrs. Eaton said, "for she never tells tales, and she feels kindly toward everybody, especially toward people who are in trouble."

LET the perfect ideal of indissoluble marriage be once definitely rejected by the world, and human society will inevitably fall back to that wallowing in the mire from which the church rescued it. And in whatever degree you tamper with this ideal and derogate from its strictness, in that degree do you demoralize woman. Yes, and man too; for assuredly he speedily sinks to her level. W. S. Lilly.

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PATRONS OF HUSBANDRY.

The Secretary's Column.

Worthy Master Davis writes May 6th: "I am just home from a week of picnicing in the rain. Had a good time, and hope have done some good work for the Order."

By telegraph from E. C. Shoemaker, Master of Tulare Grange, received May 9th, we learned of the death of Mrs. Albert J. Woods of Tulare Grange, formerly of Lodi. Mrs. Woods has been a highly esteemed honorary member of the State Grange for many years.

Temescal Grange, May 7th, gladly accepted the invitation of Master Renwick and wife to attend a fraternal picnic at the Renwick Farm, at Fitchburg, near Mills Seminary, on the line of the electric railway to Haywards.

Hon. C. P. Berry writes from Wheatland, May 9th, that on account of unexpected business requisitions and sickness which has fallen upon his family, it will be impossible for him to fill his appointments in Sonoma county. He appreciatingly remarks that "Past Master I. C. Steele is a host in himself, and if he can meet the people at those places, they will be highly edified and will lose nothing by my absence." Master Davis promised to attend to the vacancy thus occurring in the appointments of Mr. Berry.

The Secretary of the State Grange has just published the late changes in the Constitution and By-laws of the National and State Grange in suitable form for inserting in the printed pamphlet. These amendments will be sent free, on application, to any Grange or member applying.

Sec'y Clara Vignaut of Placerville Grange writes that it is not feasible for Placerville Grange to hold a State Canvass meeting on May 27th. It is hoped that arrangements will be made later for a grand rally of the members of that old Grange and neighboring farmers.

Last year, J. H. Brigham, Master of the National Grange, proclaimed Saturday, June 6th, 1891, as "Children's Day." We presume therefore that the first Saturday in June will henceforth be considered as Children's Day in the Grange. In his proclamation the National Master said: "I sincerely hope that our entire Order will strive to make it one of pleasure and profit to the boys and girls who are growing to manhood and womanhood upon the farms of our country. State Masters are requested to supplement this proclamation and to do all in their power to interest all in the exercises of the day. For good reasons, State Masters may select some other day for their jurisdiction, but it is desirable that all unite upon the day named."

TULARE AND KERN COUNTIES.—We returned Monday from a week's trip to these counties. Found Bro. J. W. Mackie, president of the Tulare irrigation district, very busy. The trustees have a large force of men and teams still at work finishing up their many miles of main canals and distributing ditches. Best of all, water is already flowing through the system, with prospects of an abundance for all purposes soon. Improvements in Kern county are progressing rapidly. Orchards and vineyards are being planted in a thorough manner. The recent work done in and about Bakersfield is quite suggestive of early days of successful Riverside. The asphalt and petroleum fields tributary to Bakersfield are quite likely to soon equal, if not rival, all others in the State. Our acknowledgements are due to Bro. John Twohy and family, and other Patrons and friends for their kindly attentions.

GRANGE MEETINGS.

Appointments in the special State Grange canvass for this week are for I. C. Steele, P. M., and Hon. C. P. Berry in Sonoma county viz: at Glen Ellen, Monday, May 9th; Bennett Valley, Tuesday; Petaluma, Wednesday; Two Rock, Thursday; Sebastopol, Friday; Santa Rosa, Saturday. Grange meeting to be held at 10 A. M., and public meeting in the afternoon.

Next week the appointments are for J. V. Webster, I. C. Steele, and B. F. Walton, at American River, Monday, May 16th; Enterprise, Tuesday; Florin, Wednesday; Elk Grove, Thursday; Sacramento, Friday; Grass Valley, Saturday. Let all farmers turn out and enjoy and profit by the opportunity offered in their behalf. A. T. D.

From the State Lecturer.

LODI, May 8, 1892.

TO THE EDITOR:—After so long a time, I have found time to make a brief report of Bro. Overhiser's and my trip in the north part of the State. After leaving Orland (a brief account of which had been made up to that time in the RURAL), we arrived in Anderson under escort of the friend who had been looking after us for some time that we did not fall into bad company, "Bro. A. D. Logan." At Anderson the trio were met by that valiant Patron, Bro. C. P. Dunham, shown to a hotel for supper, after which we started for Millville, said to be 16 miles, though the writer thought that the surveyor's chain was double the length of the standard; but our pilot brought us safely to port. After a good night's rest, April 25th found us all much refreshed and in a pure atmosphere near the base of a mountain covered with snow. After a brief stroll about town, we were informed that it was time to go to the Grange Hall, the closed meeting being at 10 A. M. A quorum being present, the W. M., Bro. J. L. Nichols, called to order, when the third and fourth degrees were conferred on a class of 13 by Bro. O. and self, concluding with a feast, etc. In the afternoon there was an open meeting, when the hall was filled full. There being scarcely standing room, at least 50 gentlemen had to stand for the short space of 1½ hours, during which Bro. O. and self tried to entertain them, and with all *that* cruelty they asked us to come again, perhaps from courtesy. I am not quite sure but they know best, but nevertheless I think that the Millville meeting was one of the most successful meetings that I have had the pleasure of attending this campaign. The evening was set apart for the young people and members of the Order, and that was well patronized, as Bro. O. can testify. Before leaving Millville Patrons, I desire to say: If there is a Grange in California that is inculcating the principles and teachings of our Order for the edification, cooperation and social features for old and young, Millville Grange is one in the Galaxy.

Tuesday, the 26th, we were taken under the kind care and protection of Bro. Dunham and went to Anderson; tried hard, all of us, to get up a good attendance for an open meeting there, but at the open meeting held in Anderson not over a dozen farmers were present. Perhaps they are all doing well and making money, and under no duress whatever, want no light or information whatever, and in that state of lethargy of which only an earthquake will awaken them. Nothing was done there that was encouraging to us. Bro. Dunham has the faith that there will be a new Grange organized near there before the meeting of the State Grange.

We left Anderson on the evening of April 27th for Red Bluff. Stopped all night at that point and till noon next day, but no meeting and no results, and left there the 28th for Dixon to see what could be done there. On the way from Red Bluff to Dixon we lost Bro. Logan somewhere. He stepped off the train and the train went off and left him. If any Patron finds him anywhere on the line he should be reported. I fear he is indisposed.

Upon arriving at Dixon, could not find a bed in the town, only in a brick building, and we had had some experience in brick buildings recently and were not inclined to accept that kind of quarters, but Bro. Overhiser found an old Patron there, Bro. Dudley, and we accepted his kind offer of hospitality and stopped at Dixon with him. At Dixon Bro. O. and I parted company, and I went to Sacramento and stopped with Bro. and Sister Flint, and the next day returned home. Thus was completed my swing around the circle, and from experience now gained I would suggest that a different system be adopted in the future, that there may be more effective work at less expense, which will be reported to the State Grange.

On Saturday, May 7th, I visited Lockeford Grange and conferred the third and fourth degrees on a class of four brothers and three sisters, concluding with an ice cream and strawberry festival. The membership of this Grange is now over 50 and four more applications were called for at the Secretary's table, which augurs well for Lockeford Grange.

On Wednesday, the 11th, if it does not rain, we will organize a new Grange in San Joaquin county. Grangers' picnic at Clements Friday, May the 13th, and at Linden Tuesday, May the 17th, so I am told, and everybody goes. Fraternally,

J. D. HUFFMAN.

Land-Clearing Contracts Wanted.

If this should come under the notice of any person having land-clearing to do in considerable quantity in California, either brush, stumps, or standing timber, I would be pleased to hear from them, with a view to contracting for the same. Address, Geo. Harvey, California Stump Puller Works, 82-84 Zoe St., San Francisco.

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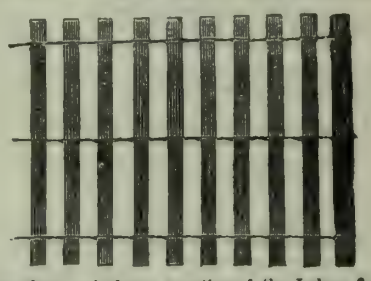
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JUDSON MFG. CO.,
14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.



Rice's Patent
CALF WEANER
—AND—
SUCKING COW MUZZLE.

Prevents calf or cow from sucking themselves or each other. Thoroughly tested and endorsed by all. No hindrance in eating and drinking. No pain. Complete success.
No. 1, for Calves, 50 cts. each; No 2, for Yearlings, 75 cts. each; No. 3, for full grown animals, $1. All postpaid by mail.



FUNK'S PATENT CALF FEEDER.

Raises calves better than the cow, on prepared feed and all the calf can eat.
No air swallowed; no fingers chewed; no ears sucked. Less trouble; greater success; easy to clean.
Sample Feeder mailed postpaid, $1 00; per dozen, $9.00.

J. G. WICKSON & CO., 3 & 5 Front St., San Francisco.
346 N. Main St., Los Angeles. 141 Front St., Portland, Or.

S. P. TAYLOR PAPER CO.
Paper Manufacturers and Dealers.
FRUIT PAPER!
Lining Paper of every description for Dried Fruit Boxes.
RAISIN WRAPS AND SWEAT PAPERS.
Manilla and Straw Paper in Rolls and Sheets.
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Hay Presses made by the Celebrated Press Manufacturer,
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WIDE WEST (All Steel) PRESS.
FOR SALE BY
L. C. MOREHOUSE,
SAN LEANDRO, - - - CAL.

BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD
To be Happy buy a DANDY STEEL MILL
AND A DANDY STEEL TOWER.



We Make the Challenge, Dalzy and O.K. Wooden Mills, and a Full Line of Pumps, Pipe, Cylinders, Tanks, Grinders, Shellers, Etc.

With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.
Challenge Wind Mill & Feed Mill Co.,
Batavia, Kane Co., Ill.

LOWEST PRICES.
EASIEST TERMS.
LARGEST STOCK.
Oldest Music House.
PIANOS
DECKER BROS. FISCHER
KOHLER & CHASE.
26 O'Farrell St., S. F.

ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

Produces all fruits possible to both the temperate and semitropic zones.
The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
Owned by the largest land company in California.

The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

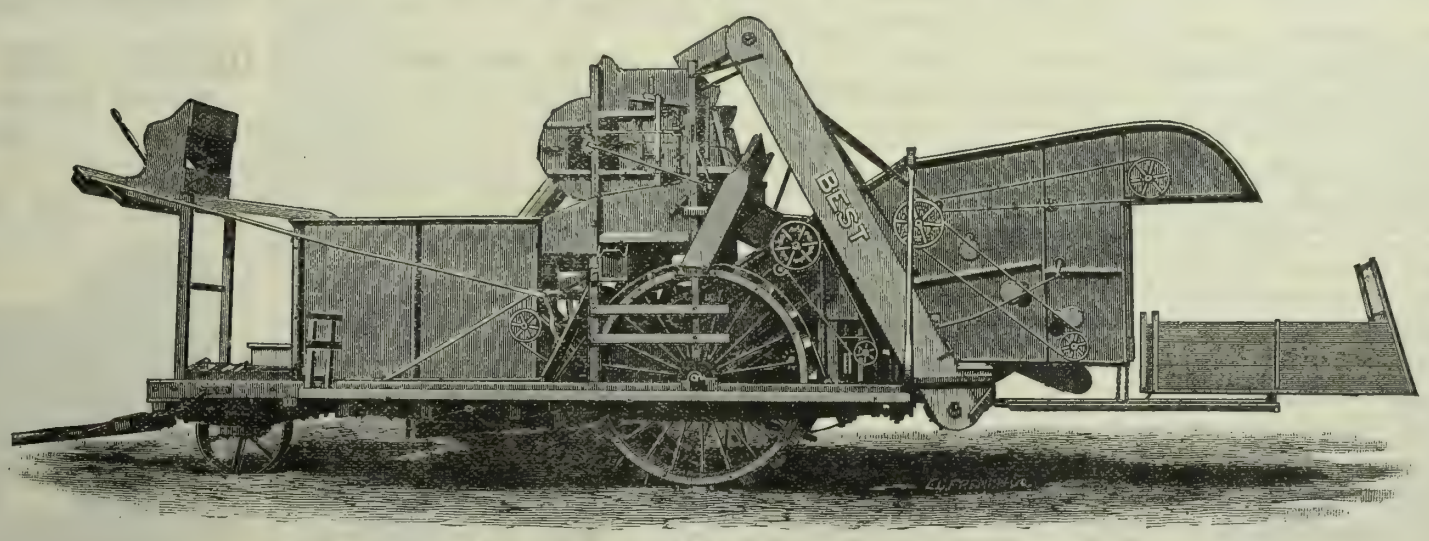
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KERN COUNTY LAND CO.,

S. W. FERGUSSON, Agent. BAKERSFIELD, CALIFORNIA.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

FRUIT MARKETING.

A Raisin Man's Plan of Cooperation

C. E. Barnett of Fowler, Fresno county, writes to the *Expositor* as follows:

The raisin men of Fresno county are in a very critical condition as to the proper mode of disposing of their crop the coming season. There are two distinct ways of handling the business.

The first proposition is that offered by the packers of Fresno and other parts of the State, to take the people's raisins and pack and sell them, and not advance the grower any money until they make the sales.

Now, I cannot agree to such a method, because men and corporations nowadays are too tricky to do business on such loose principles. It is all right for the packer, as he is sure of his cash paid out for the preparation of the goods for the market, which cannot be estimated exactly; so he will necessarily have to hold a small percentage, say 10 per cent, until the close of the season, and see how much more expense will be incurred before the work is completed.

Then the packer must have his five per cent commission off before he can make any reckoning to the grower. By the time all these little necessary expenses come off, then the middlemen that handle the goods in the Eastern market must make a good thing out of the business—say one-half—and what the packers and middlemen get, leaves the grower about one-fourth as much for his crop as the wholesale man has to pay for the same.

Let me show you a little point in that kind of business. For example: I deliver 20 tons of raisins on the 25th of September, and they are packed and sold the following day. It will be at least ten days before I get my money. Now, all this time the firm or corporation has the use of the money I should have, and they can use the same for the paying of expense; and my neighbor delivers 20 tons two or three days later than I did. They pack and sell his and give me a check on the bank for my money at the end of 10, 20 or 30 days, just as the case may be.

Now, it is the grower that needs his money just as soon as possible; but the above is the style of commission agents.

My honest opinion is that you had better look well before you take hold of any commission concerns as represented through the press of Fresno.

Another question: What guarantee have you when you deliver your goods to the packing-house that you will ever get anything? None.

Now, if I see right, the grower has all the uncertainties against him, and will have to bear all the burden, heavy or light, while the packer is sure of all the money he has spent, together with 50 per cent commission on the whole crop. This is not the proper way for the growers to do. Let commission concerns alone, first, last and all the time.

Don't you know that commission concerns, or firms, never work for the interest of their employer? As a general thing, all they think about is to sell, regardless of price, so that they will be sure of the 50 per cent allowed.

Now, this should not be. Men who have articles equal in quality and quantity should receive the same remuneration for them; but this is not the case. Men and firms are so constituted, they think, "Well, that fellow is in California, and we are here. Dig him all you can, for you may never get another chance." And that is the way the business goes—"Dig him all you can."

The second and most effectual way should be for the ranchers to pack their own crop on the ranches, or form an association among a few individuals and pack their goods in first-class shape, and then go to the people that use raisins in the East and sell them direct to the retail merchant, or to the people. Don't take any raisins to Chicago, New York, Boston or Philadelphia.

These towns are overstocked with raisin brokers. Go where the people use them, and let them see that the first crop of California raisins is what they should be.

Now, some may say that we cannot do this way. If you can't, suppose you have 20 tons of raisins; if the merchants of a place do not want to buy your raisins, sell them to the people. Mind, I do not favor the forcing of any one to do anything; but you can rent a suitable place and sell your stuff and make far more than enough to pay your wages and expense. Now I know this to be a fact. If 10 or 15 growers would combine and pack their own crops, they can select some one from among them and send him to the market to sell the product. Did you ever see a wholesale grocery house make a success unless they had a drummer on the road for them, and sometimes two or three?

The cooperative companies would be all right if they were not so badly wrapped up in the commission agents that you cannot make them see the necessity of placing some of our own men in the market that know the grades and quality of the different kinds of goods. What do one-half the brokers in the East know about raisins? I do not think they would know what a first-class raisin is if they see it.

Handle your own business! You know what you want, and no one else does.

THEY say that every day is a man's education, and we believe it to be true. The advertisement of Brown, Craig & Co., for the Phenix Insurance Company in this issue, suggests a novel and yet practical solution of the problem of farm insurance. On inquiry it was learned that this company has been conducting this business on the coast for the past ten years, while it has been generally supposed to be an innovation, the result of that firm's progressive tendencies.

It is evident to all farmers that insurance is as necessary to them as the plow, yet the average farmer finds it difficult to afford himself this protection unless the payment of the premium can be made at harvest when his income is assured.

The system of the Phenix is to insure for a term of years, accepting a nonnegotiable note for the premium and payable at a time of the year most suited to the farmer.

An examination of a Phenix policy evidences a remarkable freedom from the usual retrictions by policy conditions, and they provide that in addition to their liability from fire, the company also protects against lightning. It would seem that the Phenix Insurance Company offers a full value for the premium charged, in fact it would appear that they undertake too much; but their experience is the proper basis to judge the profit arising from the quantity and quality of protection offered.

To insure horses against fire and lightning while in barn or field anywhere in the State, is an evidence of that Company's liberality, the only restriction being that they shall not be insured while in a city, town or village, and which at a glance is a very proper limitation of the Company's liability.

Every farmer should hold a "Phenix" policy and thereby enjoy the confidence of such sure protection as is guaranteed by its six millions of dollars of assets.

VALUE OF THE WEATHER SERVICE.—The practical application of the work of the Weather Bureau of the Department of Agriculture by farmers themselves is becoming more and more apparent. Just after one of the cold waves which passed over the South not long ago, the following telegraphic dispatch appeared in a Memphis, Tenn., paper, telling of the frost in Mississippi: "No damage resulted to tomato plants, as growers were warned by cannon firing on receipt of Weather Bureau report. Prospects are still good for over 2000 acres in at this point." Being warned a full day ahead of the coming freeze the "truckers" had time to protect their crops.

AMERICAN SOUTHDOWN ASSOCIATION.—The annual meeting of the American Southdown Association will be held in Springfield, Ill., May 25, 1892, at 10 o'clock A. M. Matters relating to the exhibit of Southdowns at the World's Columbian Exposition and the importation of this breed, together with the usual business receiving attention at the annual meetings, will make this session one of particular interest, and a full attendance is desirable. Communications sent the Secretary by members who cannot be present, will be laid before the Association.—S. E. PRATHER, Secretary.

A Legislative Endorsement.

A law was passed last winter in Minnesota affecting the sale of alum baking powders. The interest excited by the bill when proposed led to a long and thorough investigation by a legislative committee of the qualities of all the baking powders sold in that State, with the result that the Royal was shown by very positive evidence from the State Chemist, Dr. Drew, and others, to be the purest, strongest, and in all respects the best baking powder in the market.

ALAMEDA SANITARIUM.—Dr. W. P. Burke, so long connected with the Rural Health Resort at St. Helena, has, in connection with his brother, opened on Railroad Avenue, between Fifth and Sixth Sts., Alameda, an excellent medical and surgical sanitarium. Dr. Burke has many friends here who will welcome his advent to Alameda.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

JERSEYS—The best A. J. C. C. Registered Herd is owned by Henry Pierce, S F. Animals for sale.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

M. D. HOPKINS, Petaluma, Breeder of Shorthorns. Dealer in fresh Cows, Beef Cattle and Sheep.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

J H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

BREEDER OF REGISTERED JERSEY Cattle. H. A. Mayhew, Niles, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Importer and Breeder of Shorthorn Cattle and Poland China Hogs.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

POULTRY.

MADISON S. CRITCHER, Santa Cruz, Cal. Light Brahmas, Black Langshans, Buff Cochins, Barred Plymouth Rocks, Black Minorcas, White Leghorns. Settings, $1.50.

DEER MOUNT POULTRY YARDS, St. Helena, Cal. S. C. White Leghorns, W. Holland Turkeys, Toulouse Geese and Pekin Ducks and Guinea Pigs.

CALIFORNIA POULTRY FARM, Stockton, Cal., send for illustrated and descriptive catalogue, free.

C. BLOM, St. Helena, Brown Leghorns a specialty.

JAMES QUICK, Patterson, Cal., Breeder of Pure Bred Poultry of Choicest Varieties and Best Blood.

JOHN McFARLING, Calistoga, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa, Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

SHEEP AND GOATS.

R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

GOLDEN ITALIAN QUEENS—California Headquarters, Wm. Styan, San Mateo, Cal.

COLTS BROKEN.

THE SOUTHER FARM,

One and a half miles northeast of San Leandro, Alameda County,

— HAS —

Every Facility for Breaking Colts Properly.

Rates Very Reasonable.

HORSES BOARDED AT ALL TIMES.

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MEMBER OF THE ROYAL COLLEGE OF VETERINARY Surgeons, London, England. Late Veterinary Surgeon in the United States Army. Veterinary Contributor to the "Pacific Rural Press." The diseases of all Domestic Animals treated on Scientific Principles. Special attention given to Chronic Lameness and Surgical Operations. 405 BRODERICK ST., SAN FRANCISCO. Calls to the country promptly attended to. Telephone No. 4067.

ANNUAL COMBINATION SALE

—OF—

STANDARD AND HIGHLY BRED

Brood Mares, Harness Horses, Colts & Fillies,

TO BE SOLD AT AUCTION

AT

SALESYARD, Corner MARKET ST., and VAN NESS AVENUE,

AT

10 a. m., Tuesday, May 17, 1892.

At this COMBINATION SALE will be sold the consignment of A. L. WHITNEY, Esq., comprising twenty head of first-class

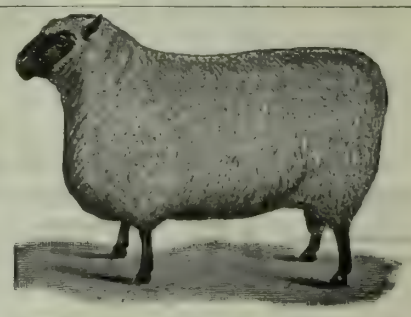
TROTTING MARES, COLTS & FILLIES,

By DAWN, SIDNEY, SWIGERT

And Other Noted Sires.

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OXFORD DOWN SHEEP

FOR THE PACIFIC COAST.

W. A. SHAFOR, - - Middletown, Ohio.

LARGEST AMERICAN IMPORTER OF O. D. SHEEP.

Twelve Years Experience. Imports will arrive from England in July. Order Early. Get your neighbors to join. Order car lots by freight. Save Express charges.



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WILMANS BROS., - - Proprietors

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Breeders and Importers of Thoroughbred French Merino Sheep,

NEWMAN, STANISLAUS CO., CAL.

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BERKSHIRE SWINE.

Prize Herd of Southern California.

FIVE FIRST PREMIUMS IN 1891.

PIGS OF ALL AGES FOR SALE.

SESSIONS & CO.,

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BADEN FARM HERD.

Short Horn Cattle and Draft Horses.

Catalogues and Prices on application to

ROBERT ASABURNER,

Baden Station. - San Mateo Co., Cal.

WHEN YOU BUY,

—— BUY ——

THE BEST!

— THE —

H. H. H.

Horse Liniment

Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

MANUFACTURED BY

H. H. MOORE & SONS,

THE DRUGGISTS,

248 MAIN STREET, STOCKTON, CAL.

STOCK SCALES



4 TON $45.

U. S. STANDARD. FULLY WARRANTED.

☞ Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

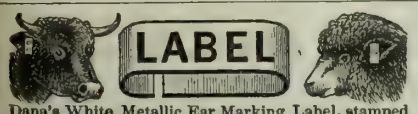
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SHEEP

BREEDERS SHOULD SEND a stamp for our new illustrated catalogue of Wool Growers' Supplies and a free copy of the only illustrated Sheep and Wool Journal published. We sell Shepherds' Crooks, Shears, Dockers, Sacks, Twine, Wool Boxes, Bells, Marks and a hundred other articles needed by every sheep owner. Send to-day. C. S. BURCH & CO., 178 Michigan Street, Chicago.



Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted.

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Patented in United States, July 16, 1889, and in Ten Foreign Countries.

A comb that combines the strength of metal with the elasticity of a brush. Efficient, humane, convenient and durable. Descriptive circulars on application. Send 50c for sample by mail, if not sold by your dealer.

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RUPTURE,

PILES and all Rectal Diseases POSITIVELY CURED, in from 30 to 60 days, WITHOUT OPERATION OR DETENTION FROM BUSINESS. Also ALL NERVOUS, SKIN, BLOOD PRIVATE AND CHRONIC DISEASES OF BOTH SEXES. STRICTURE AND URINARY TROUBLES CURED No charge unless cure is effected. Consultation free. Call or address for pamphlet, DRS. PORTERFIELD & LOSEY, 838 Market Street, San Francisco, Cal.

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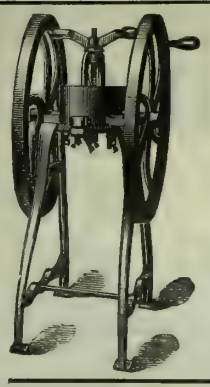
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Mann's Green Bone Cutter

FOR POULTRY FOOD.

Patented June 15, 1886; August 20, 1889. Canada Patent, June 12, 1890.

WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.

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LITTLE'S CHEMICAL FLUID NON-POISONOUS SHEEP DIP.

BEWARE OF CHEAP IMITATIONS.



One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Each drum contains 5 English or 6¼ American gallons. Also

Little's Patent Powder Dip.

(POISONOUS). Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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Successors to FALKNER, BELL & Co., Sole Agents.

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IMPORTANT!

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One Case Makes 1000 Galls Dip. PRICE $16 PER CASE.

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EGGS FOR HATCHING.



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BREEDER AND RAISER OF THOROUGHBRED

Jersey and Holstein Cattle. Also, Poland China and Berkshire Pigs.

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SHIRE AND COACH HORSES A SPECIALTY.

LOW PRICES and EASY TERMS.

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MANHATTAN STOCK FOOD.

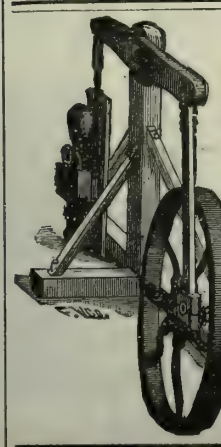
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Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc.

It keeps Horses and Cattle healthy. For milch cows; it increases and enriches their milk.

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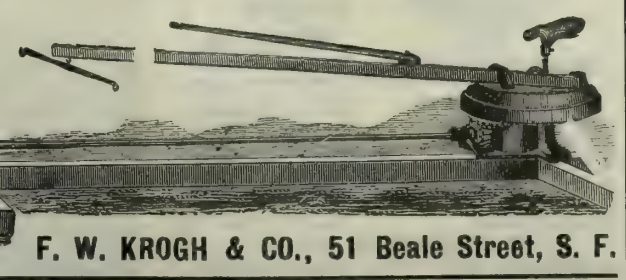


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Fly-Wheel Walking Beam for Pumping Large Quantities of Wate

Send for Catalogue and Price List.



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BREED'S UNIVERSAL WEEDER & CULTIVATOR

Endorsed and used by the best Farmers throughout the country.

"The Weeder has come to stay; no doubt about that." T. B. TERRY.

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Can be made in raising Chickens than in any other business for the capital invested. A beautifully Illustrated Catalogue of Incubators, Brooders and all kinds of Chicken Fixings **Free.** Agents for **Mann's Bone Cutter, Necessity Clover Cutter,** and everything required by poultry-raisers.

Petaluma Incubator Co., Petaluma, Cal.



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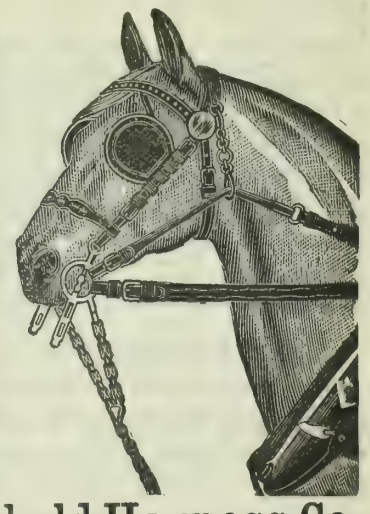
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Send Stamp for Circular.

BUY YOUR HARNESS AT WHOLESALE PRICES.

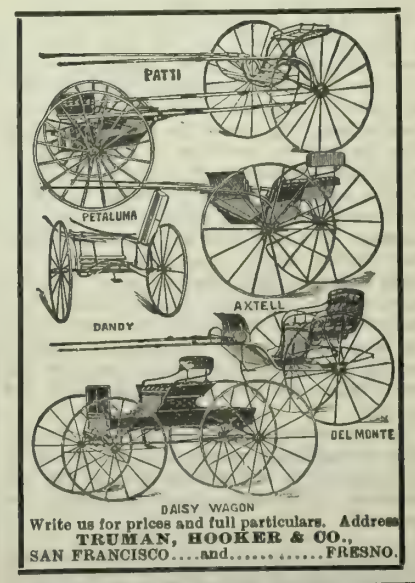


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Elegant Hand-Made Buggy Harness. All Styles of Harness on Hand.

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—PATENT—

SQUIRREL EXTERMINATOR.

This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

F. E. BROWNE,

314 & 316 So. Spring St., Los Angeles, Cal.

Now that good grain crops are pretty well assured, the thoughtful farmer looks forward in the near future to the realization of the results of his year's work, in some instances two year's work (crops on summer fallow land). About the only contingency to fear is the destruction of his grain (when ripe) by fire. He has been compelled to take the chances of failure of crops by drought, hot winds, rust and sometimes overflow, because there is no insurance against these misfortunes. He can protect himself to some degree, against loss by fire, by insuring his grain in good companies. We are informed by the underwriters that the cost is very slight as compared to the value. It is from five cents to 25 cents per acre, varying according to the amount insured and the time the policy is in force. Where the cost is so slight no farmer should go uninsured. If he is fortunate enough to get through his harvest and get his crop to market without loss by fire, he will not miss the small outlay paid for insurance. If on the other hand, he does not insure, and his crop is destroyed by fire, he is apt to be financially embarrassed in consequence, as he has depended upon his crop to pay his debts and to give him the means for putting in another crop.

We wish to call the attention of our readers to the advertisement of Messrs. Brown, Craig & Co., found in this issue. This firm is among the leading underwriters on the Pacific Coast, and have been in buisness a great many years and have paid out to their patrons several millions of dollars in losses. They represent four splendid old companies, namely the Phenix of Brooklyn, the American Fire of Philadelphia, the Pennsylvania of Philadelphia and the Insurance Company of the State of Pennsylvania of Philadelphia. The combined assets of these companies amount to over thirteen millions and they issue a joint policy covering grain in the field. The policy covers the grain while standing in the stack and in the sack; in fact, until it is moved from the grain fields. It is one of the strongest combinations writing grain on the coast.

A New Fruit-Drier.

In another portion of this issue we publish the announcement of the California Standard Fruit Drier, which is worthy a word of explanation. It is one of the most complete inventions of the kind now on the market and has given universal satisfaction wherever used. By it fruit can be dried ready for market within 24 hours, and retain all its natural characteristics of color and flavor, thereby saving from 8 to 15 days of time and labor. It puts a net gain of from 20 to 30 per cent in weight over sun-drying or hot air. The evaporation or drying is accomplished by steam, the evaporator maintains a uniform heat of 210 degrees, and over and around all the fruit on the trays passes a warm current of air which is taken pure and cold from outside the evaporator and heated, creating a strong draft by expansion, thereby removing every particle of moisture from the fruit on the trays as fast as it is forced to the surface by the steam heat. There is no possibility of burning, as the temperature cannot be carried above steam heat, 212 degrees. The fruit does not touch the metal plates, being simply suspended on trays between hollow steam shelves, with a warm current of air constantly passing over it. No insects dust or dirt can come in contact with the fruit while being evaporated. Raisins and figs are especially beautiful and perfect when taken off the evaporator ready for market.

Fruit-growers who have tried this Evaporator are highly pleased with it. Send to the company for descriptive circular and testimonials. For address and illustration see page 463

CITRUS TREES AT THE WORLD'S FAIR. Chief Samuels of the Horticultural Bureau in Chicago has written to the California World's Fair Commission that the five-acre tract which it was understood would be granted to this State for the purpose of showing citrus trees in a growing condition cannot be utilized for that purpose. Instead, the local governing Board has set aside five acres in the western end of the midway plaisance, and entirely outside Jackson Park, for growing trees. This plat is to be divided among 50 States and Territories and all the foreign countries, but Mr. Samuels offers to allot one acre of the space to California. This restricted space will probably be utilized in accordance with the intention respecting the original plat, and divided equally between the World's Fair associations of Northern and Southern California.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. E. F. Giddings as above.

TREES BUDDED TO ORDER.

I have a Fine Lot of Peach Seedling now ready to be Budded; also a few hundred Peach-Almond Stock.

On such orders as are received by June 1st, very low rates will be given.

Trees will be ready for shipment by Jan. 1st, 1893.

All Trees FREE FROM SCALE.

No irrigation is used, as all the stock is grown on lo land near the Sacramento River.

For Further Particulars address

H. B. EVERETT,

Sutter City, Cal.

May 10, 1892.

The Best Article is the Cheapest.

BUHACH

IS THE

Best, Purest and Most Effective Insect Powder on the Market.



BY ITS INTELLIGENT USE hotels, restaurants, saloons, stores and offices may be kept free from all troubles me insects. It is now regarded as a necessity in most of the principal hotels in the United States, and wherever it has been introduced it has given complete satisfaction. Owing to an increased production of Pyrethrum flowers, from which this valuable article is made, and their improved facilities for re ucing them to powder, the manu'acturers have this season made a material reduction in their prices.

Send your orders to the

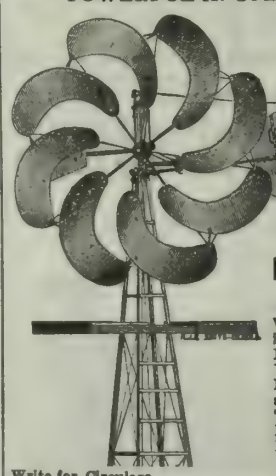
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Columbia STEEL WIND Mill

New in Principle. Beautiful in Appearance.

POWERFUL IN OPERATION.



Contains Covered Internal Gear.

UNEQUALLED In the line of **Pumping Windmills.**

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FOR SALE.

A FARM OF 188 ACRES IN ASHLAND, OREGON, 40 acres in Alfalfa and well watered. A modern house on place. Address

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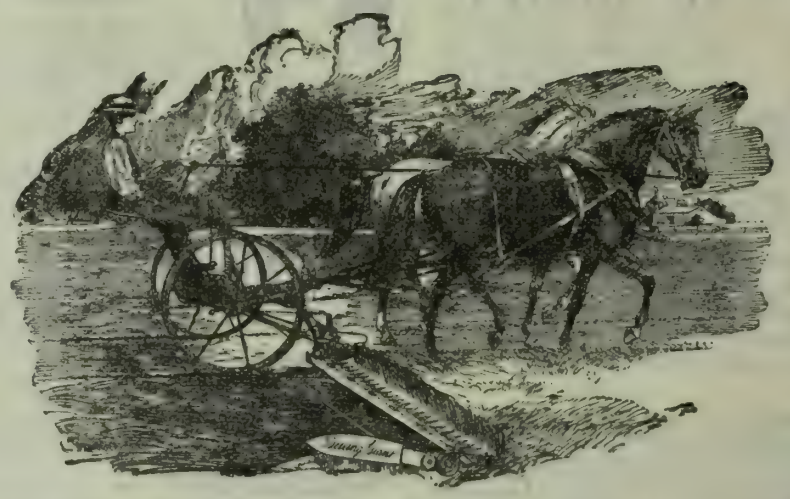
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General Agent Winans' Pat. Carriage Co., Mich; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers. Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.

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STRONGEST CONSTRUCTION, LARGEST WHEELS, WIDEST TREAD, SUPERIOR CUTTING APPARATUS.

LIGHTEST DRAFT. LARGEST VARIETY OF SIZES.

BETTER THAN ANY OTHER. BETTER THAN EVER BEFORE.

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WM. DEERING & CO.,

11 BLUXOME STREET, SAN FRANCISCO.

Look out for new address next week.
Write for copy of "Grass, Grain and Gain."

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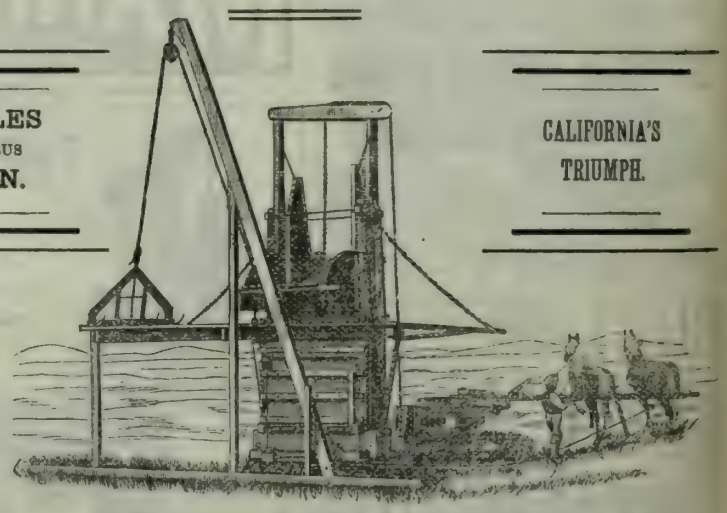
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Capacity, 41 Tons per Day.

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MULES VERSUS MEN.

CALIFORNIA'S TRIUMPH.



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Pacific Wheel and Carriage Works,

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TRICYCLE FOLDING BAR MOWER.

The Hickory Hoop-Pole Cutter.



THE ONLY MACHINE with SOLID wrought STEEL GUARDS and SOLID wrought STEEL KNIFE CONNECTIONS.

It will cut Pick Handles, Wagon Spokes, Ax Handles, etc., demonstrating Superiority over Cast Guards and Cast Knife Connections.

Buy a Whiteley and nobody will have a mortgage on you in way of repairs.

ALLISON, NEFF & CO.,

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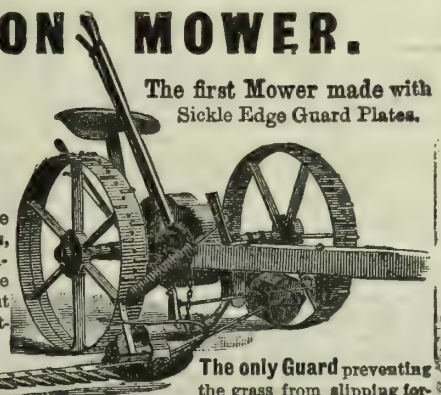
KNOWLTON MOWER.



The only Guard that sharpens itself by use.

THE SPRING, Carrying the weight of the bar on the Drive Wheels, gives great cutting power without side draft, and making the draft of the 5, 6 and 7 ft. Mowers but a trifle more than other makes cutting but 4 ft. 3 in.

The first Mower made with Sickle Edge Guard Plates.



The only Guard preventing the grass from slipping forward when the section strikes it.

BUCKEYE HAY RAKES, 8, 10 and 12 Feet.

No better haying outfit than a **KNOWLTON MOWER** and **BUCKEYE RAKE.**

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PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and From the House. **J. W. BECKER, Proprietor.**

DON'T DON'T pay 50 cents per gallon for syrup when you can get the same quality at 17c in barrels, 28 cents in kegs, or 35 cents in single gallon tins.

DON'T DON'T Pay 10 or 12½ cents for the same brown muslins we are ready and anxious to sell you at 7 and 8 cents, some 40 inches wide, 12 yards for $1, that would surprise you.

DON'T DON'T pay 12½ and 15 cents for colored shirtings. We have good medium quality at 7 cents, better at 8½ and 10 cents, and Excelsior Amoskaegs not kept elsewhere at 12½ cents.

DON'T DON'T pay 25 cents and 35 cents for Scotch cheviots—we'll give you the same, in 20 different patterns, 31 inches wide, at $12½ cents.

DON'T DON'T pay $2.50 to $5.00 for ladies' fine shoes when we are offering such good value at $1.25, $1.35, $1.50, $1.75, $2.00, and elegant cloth tops, square toe, patent tip, 2½ to 6, at $2.75.

DON'T DON'T pay 10 to 25 per cent extra on staples and 50 to 100 per cent extra on other goods for the sake of a little credit or time—you have to pay sooner or later.

DON'T DON'T run in debt and keep yourself poor all your life when a little extra care and extra rustling would enable you to buy for cash and supply every want, besides having money left to educate the children.

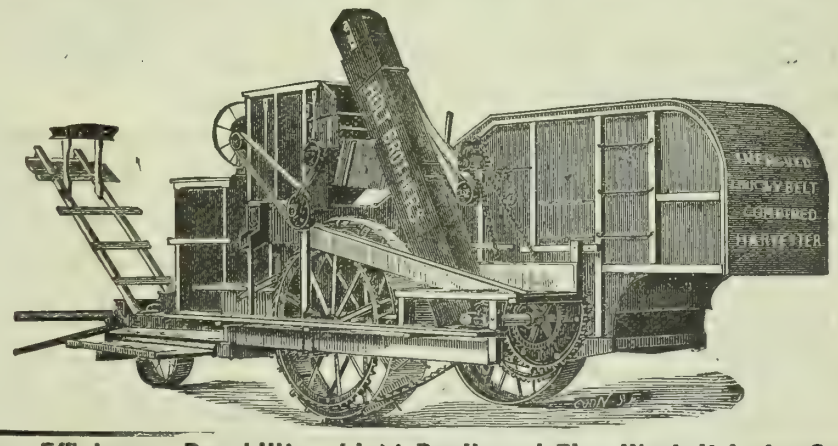
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416 and 418 FRONT STREET, - SAN FRANCISCO, CAL.

SEND FOR THEIR FULL PRICE LIST.

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Improved Combined Harvester.



For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. **or,** **HOLT BROTHERS CO.,** 30 & 32 Main St., San Francisco.

By Reducing the Interest of the Debt The Nation Makes a Saving.

By using CARBOLINEUM AVENARIUS 1000's of Dollars will be Saved.

FARMERS, Orchardists, Wine-Growers, Hop-Growers, Chicken-Ranchers, let us tell you:

Save money and work by painting your Fences, Barns, Stables, Troughs, Stakes, Poles and all wood exposed to moisture or climatic influences with the celebrated Carbolineum.
IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.
It is at loggerheads with Insects, Chicken Lice and Vermin. They don't like Carbolineum; they keep away.
It is an enemy to Rats and mice; they lose their appetite for wood treated with Carbolineum.
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It prevents Shingles coated with Carbolineum from rotting, warping or cracking.
It makes Rope nice and pliable, it beats tar coating.
It contains no acids or injurious or poisonous ingredients.
It is THE BEST WOOD PRESERVER IN THE WORLD. We state facts and have testimonials genuine and indisputable.

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BUILDING PAPER.
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WATER ALKALI ACID PROOF!

P & B Fruit Drying Paper.

SAMPLES AND CIRCULARS FREE.

PARAFFINE PAINT CO. 116 BATTERY ST. SAN FRANCISCO.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FRUIT NOTES.—Oroville *Register:* John R. Preston recently took a contract to plant 1500 orange trees on land now covered with oaks. He agrees to remove the oaks, plow, level and prepare the land, and, in 15 days from date of contract, to have the orange trees planted where now the oak trees stand. The handbook recently issued by the State Board of Trade gives some interesting figures concerning the famous ranch of General John Bidwell at Chico. The number of bearing almond trees is 2678, the nonbearing ones, 7666; apples, bearing, 1570, nonbearing, 1224; apricots, bearing, 2944, nonbearing, 4197; quinces, bearing, 37, nonbearing, 75; cherries, bearing, 981, nonbearing, 1289; chestnuts, bearing, 150; figs, bearing, 217; grapes, bearing, 150 acres; nectarines, bearing, 368; nonbearing, 124; olives, bearing, 50, nonbearing, 2427; oranges, nonbearing, 300; peaches, bearing, 9959, nonbearing, 13,451; pears, bearing, 361, nonbearing, 5324; pecans, bearing, 5, nonbearing, 100; plums, bearing, 3043, nonbearing, 285; prunes bearing, 2816, nonbearing, 3454; English walnuts, bearing, 100, nonbearing, 50; Eastern black walnuts, bearing, 50; California black walnuts, bearing, 75; berries in bearing, eight acres. Total trees in bearing, 25,390; nonbearing, 39,886.

ORCHARD AND OTHER CROPS.—Gridley *Herald:* In Butte county there are miles and miles of orange and olive groves in bearing and coming into fruiting this year. There are lemon and lime trees within the county boundaries that have borne fruit for long years. Near Gridley are the largest continuous orchards in the world. The finest citrus colonies on earth for location and natural adaptability of soils are are Palermo and Thermalito, a few miles from this city. Coffee, tea, tobacco, cotton and hemp plants thrive in this county. The banana, pineapple and tropical fruits can be raised in Butte with proper care. The natural home of the olive is here, and thousands upon thousands of these trees are yearly planted. The vine and deciduous fruit trees grow to perfection all over the county.

CROP PROSPECTS. — Chico *Chronicle-Record:* The present season has been one of the most peculiar that we have experienced in many years. In the early portion of the season, the sun shone and the rain descended alternately, and in a ratio that gave the greatest promise of an abundant harvest. Later in the spring, Northern California experienced a heavy and in some localities a disastrous storm of hail Following immediately upon the heels of the hail and frost came soft, warm and gentle rains, which neutralized the ill effects of the former conditions, and restored the previous promise of abundant crops with the exception of a few varieties of the earlier and more delicate fruits. The orchardists in this vicinity—and the same conditions appear to prevail in other localities—will, and are even now called upon to have the weaker and poorly set fruit picked from their trees, in order that the hardier and better fruit may mature in good size and flavor. The directors of the Chico cannery are even now doubtful of their ability to handle the bulk of the canning fruit in even this immediate vicinity. The story that there will not be one-tenth of a crop of fruit is the veriest rot. There will also be a good average crop of grain and cereals this year. There is no doubt that in some few localities—especially in the timber regions—there is a good proportion of the heavier summer-fallowed grain more or less lodged from the effect of the hail storm and the late heavy rains. But much of this will rise as soon as dry weather comes for a few weeks. The farmer has no cause to feel blue this year, as he will have a good, fair yield of grain. Should it remain slightly cloudy for a few days after the present storm, there will be nothing to fear from rust, and, that being the case, the grain yield will be far above the average. Taken as a whole, the crop outlook for 1892 is extremely bright, and the promise is of abundant fruitage in field, orchard, vineyard and garden.

Colusa.

EXPERIENCE AGAINST FROST.—Colusa *Sun:* John Cheney has had an experience this spring that may be of value. He plowed his vineyard early, and rains came on and packed the ground down, and gave the surface a crust. The land being free from clods and perfectly smooth, it was a uniform glazed surface. A few days before the late frost that killed De Jarnatt's, Gray's and other vines, already noted, Mr. Cheney plowed about half his vineyard, and now the frost came along, and exactly to the row, killed all the newly plowed land, doing no damage whatever on that part with the smooth surface. This is an important *fact* on which to base operations. Theories may be built on facts, but facts are worth more than theories.

Fresno.

STRUCK A LARGE FLOW OF WATER ON THE WEST SIDE.—Fresno *Expositor:* A company, while boring for oil in Pleasant valley, near Coalinga, struck a strong flow of artesian water at a depth of 800 feet. The water rises 16 inches above the top of the well. This is an important discovery. Artesian water in this side of the valley would not amount to so much, because it is not so much needed, for there is abundance of water for all irrigation without boring wells to the depth of 800 feet to get it. But on the western side of the valley such is not the case. Pleasant valley, where this well was sunk, lies near the base of the Coast Range; and while it is not regarded as impossible to lead water there by means of irrigation canals, yet it always has been admitted that a bountiful supply of water brought there in canals must be a very expensive affair. It lies far away from the supply of water which the rivers send down from the Sierra Nevadas; and the Coast Range has no large supply of running water of its own. For this reason, the discovery of the stratum of artesian water there will be hailed with delight by all persons who are desirous of seeing Fresno county prosper, and especially by the people who live in that part of the West Side, and who have all along been contending against adverse circumstances in the matter of obtaining water for irrigation purposes. The land is as good as any in the county. In fact, the people in that vicinity are confident that their land is a little better than that of any other portion of the county. It is a pardonable pride, and there is no one who will not be glad to see the people obtain an abundant and cheap supply of water for irrigating their lands. By that means they will be able to produce not only grain and hay, but also fruits and vines.

PRECAUTIONS AGAINST FROST.—Fresno *Expositor*, May 4: This morning the Coast Range was white with snow. From this, the inference is drawn that the rains extended entirely across the San Joaquin valley, and fell as snow on the western mountains. If the frost comes, it will do much harm, in spite of all that can be done to prevent it. The large orchards and vineyards will have to take their chances. But in many places it is possible to take steps to protect fruit and vines. It is done in other portions of the State with success. It is done by building fires, so that the smoke will hover over the fields and drive the frost away. These smudge fires are usually built upon the windward side of the orchard, so that the wind will carry the smoke across, and thus a few fires will serve as a protection to a considerable acreage of trees. Persons who can, should have their smudge ready, so that, if needed, it can be used when frost is threatened. The expense will be small and the saving may be great. The material most suited for such fires consists of wet hay, straw or tules. Any material that will smoulder and make a great smoke is suitable.

Kern.

LARGE PEACH YIELD.—Bakersfield *Californian:* At Mountain View Colony, J. W. White has some two-year-old peach trees of the late George Cling variety, and in culling the fruit this season, which had to be done in order to preserve the trees, he kept count of the fruit picked from one tree and found that he had pulled off 1800 green peaches, and then had not taken one-half from the tree. These peaches, when ripe, will average a pound apiece. He expects to gather at least 1200 pounds from each tree, providing he can so prop up the branches that they will not break down. From a two-year-old Briggs' May, which will have ripe fruit the last of this month, he picked off 2400 peaches, each about the size of an English walnut, and in this case again he did not remove one-half of the fruit. These peaches, when ripe, will average ten ounces each, so if the tree will stand it, there will be a yield of 1500 pounds per tree. These trees are only two years old—that is, three years from the pit, and of course, therefore, they have not yet begun to reach their full bearing capacity.

Los Angeles.

BENEFICIAL RAINS.—L. A. *Express*, May 3: Los Angeles county is a great county for corn. A great many farmers have not planted corn this season on account of the continued dry weather of last month. Now they will probably put in a larger acreage than usual, as the rain has soaked the ground thoroughly. Farmers in this vicinity plant corn from the middle of April to the first of June. The barley that has been cut for hay is damaged to some extent, but the late sown grain will be greatly benefited. The hay that was not too far advanced will also be helped materially. The vineyards will be refreshed by the rain. They depend upon irrigation in some districts, but in a majority of cases they probably have only the winter rains to depend upon, and the late rain will prove of great assistance. The deciduous fruit crops will be much benefited. Alfalfa hay will be specially profited where there is no water available for irrigation. Farmers who have recently been interviewed, said that if there was a good rain within a week, it would insure a crop of grain on thousands of acres. This timely rain has, therefore, settled the question between hay and grain. Vegetables will be also much benefited, especially potatoes. Another great advantage will be the increase of the reservoir supply.

CROP NOTES.—Santa Monica *Outlook*: Haying commenced last week. The click of the mower was heard on every hand. Our "salt water farmer" has beat the natives this summer. The acreage sown is larger than ever, and crops on the Home Farm are vastly superior to any in the vicinity.

SILKWORM EXHIBIT—L. A. *Express*: The Ladies' Annex of the Chamber of Commerce have on exhibition on the second floor of the old county courthouse building about 200,000 silk worms which are being bred from the eggs to the cocoon. There are in all about 200 trays, and the development of the worm can be seen at all ages and stages.

Monterey.

CROP PROSPECTS.—Superintendent Wood is now on his regular official round among the public schools of the county, which affords him a good opportunity to note the condition of the crops in the various localities by him. He says: The lower end of the Salinas valley, from Chualar to Moss Landing, and Pajaro, will, with cool weather, have an average crop. Beginning at Chualar and going south, the grain crop gradually falls off, showing the worst at Chalone and King City. Some of the smaller canyons running into the valley near King City will have hay, with possibly a little grain. On the southern slope along the valley the grain fields are already dried up and can make nothing. On the northern slopes the grain is yet green, but not sufficiently advanced in most cases to insure crops. The grain on the Trescony grant across from San Lucas promises some crop with favorable weather. Long valley and Pine valley will have but little hay or grain. The irrigated land on the San Ardo Rancho promises an excellent crop of alfalfa, with a mixture of barley. Where not irrigated, the San Ardo will produce very little, if any crop. Bradley and San Miguel are much the same. The grain has not headed, and, in most cases, will not. Hames, Indian, Priest, Cholame, Pleyto and Jolon valleys will have some crop, the last named four the best. In some places the wild feed is good; in others, poor. Cattle are yet in good condition. Farmers are selling off all the stock they can spare to avoid feeding them next winter. The present outlook is anything but encouraging. In some localities the frosts of the past two weeks have injured the fruit to some extent, but orchards generally are looking well. This week's rainfall has made the outlook decidedly more encouraging all over the county.

Napa.

RECLAIMING THE MOUNTAIN SIDE.—Napa *Register:* Mr. Melone, proprietor of Oak Knoll farm, some time ago arranged with a company of woodchoppers that they should clear the hillsides of the farm of brush and timber, sparing only the redwood, laurel and sound oak trees, the company to pay him 50 cents a cord for all wood it sold. On this basis work has progressed to the eminent satisfaction of both parties to the contract, and it promises to continue for years. Where, under the old order of things, the ground was given over to an underbrush so thick that not a blade of grass would grow under it and only wild game could run through it, just enough trees to afford shade and comeliness to the locality now stand, and there is abundance of green pasturage for the sleek-sided livestock that feed on the place.

Sacramento.

CROPS ON COSUMNES RIVER. — Interview in *Bee* with William Dixon: "It is very good, considering the extremely backward spring which opened out in February so auspiciously. I do not think, however, the cold rains and an occasional frost has done any damage. In my orchard I find a fine prospect for peaches, apricots, plums and pears. I should say there will be a full crop." "How about corn?" was asked. "It is too early to say, but we have no fears about corn. The Cosumnes valley is famous for corn and annually produces a crop which for quantity and quality cannot be excelled on the Pacific coast. A corn crop is as sure, with a few contingencies, as taxes, which you know never give the farmers the go-by. The only thing that can spoil our crop is the grasshopper plague, and they have never yet made an entire success of it. Once we get our corn up we are all right and are almost sure of from a ton and a half to three tons to the acre I planted my corn, 150 acres, two weeks ago, but it has not come up yet. I may have to replant, but I think with warm weather in a few days it will be all right." "Has alfalfa-haying commenced?" "Not yet, although the first crop has been ready to cut for a fortnight. We dare not go into the field until the weather settles. Hay will be up to the average this year, I think, and good fields will turn off from six to ten tons per acre during the season. Usually we cut three crops, but frequently four are harvested. Grain of all kinds is growing very rank, and there is danger of it falling before harvest, especially if we should have heavy late showers."

San Diego.

MOUNTAIN APPLE ORCHARDS.—S. D. *Union:* It was learned from Supt. Wagner, who has recently returned from the northern part of the county, that 5000 apple trees have been planted on Smith mountain this season at an elevation of 5400 feet. Large quantities of other fruit trees have been set out there this year. The Julian apple belt, which is 4500 feet above the sea, has produced the finest apples on this coast, and now it looks as though that section will soon have a rival.

WELCOME RAINS.—Winchester *Recorder:* This week, the parched and thirsty earth was refreshed by a series of copious and welcome showers, which have gladdened the hearts and brightened the financial prospects of every farmer in the valley. The grain fields and orchards sucked up the needed moisture as fast as it fell, and by Tuesday noon the ground was soaked to a depth of several inches, varying in different localities from three to ten inches. This very fortunate occurrence will greatly increase the yield of the grain and hay crop, and insures better times for farmers than was thought possible earlier in the season. Many ranchers state that the recent rains will double their crops, and others say that many thousand acres they did not expect to cut at all will now yield profitable returns for harvesting.

Shasta.

FRUIT NOTES.—Anderson *Enterprise:* The fruitmen in this section are complaining of the the continuous rain, claiming it is ruining the prospects for a heavy crop of prunes, as the fruit is falling from the trees, more particularly noticed with young trees that come into bearing first this year. What fruit does hang will be exceedingly large and of a better grade than on trees heavily loaded. A number of Happy Valley fruitmen, who will have a considerable quantity of fruit to handle this season, were in town Tuesday to attend the association meeting. They report that frost and rain have done no material damage to their crops, the frosts being light out there.

Solano.

GRAIN CROPS.—Dixon *Tribune:* In the lower part of Solano county the ravages of the Hessian fly have made a failure of what promised to be a good crop. In Northern Solano, however, the present indications are for one of the largest crops ever harvested. The late showers lodged the heavy summer-fallowed grain, but no serious injury will follow and the wintersown grain will be greatly benefited.

Santa Cruz.

DAIRY NOTES.—Watsonville *Pajaronian:* J. L. Koster, president of the Watsonville Creamery and Cattle Co., spent several days here last week. The creamery is now buying considerable milk from dairymen, and is making a large quantity of butter. Most of the product is being packed, as the prices for butter are rather low at present. Some of the leading dairymen of this section are also packing, because the prices will not justify sales now. Packed butter brings a good price in the winter months, when dairy products are at the highest figures.

Sonoma.

INCUBATOR FOR EXHIBITION AT CHICAGO.—Petaluma *Courier*: The incubator company of this city has almost completed a superb incubator destined for exhibition at the World's Fair at Chicago. It is intended for hatching ostrich eggs, of which it will accommodate 28. In the construction of the machine California redwood is the only timber used, and it is of the most beautiful pieces. The machine will be exquisitely finished and will make a very handsome exhibit.

Sutter.

FRUIT AND GRAIN IN SOUTHWEST SUTTER.—Cor. Yuba City *Independent:* After an inspection of the orchards here, I would sum up the fruit prospect about as follows: Peaches will yield a large crop, and the thinning process will have to be applied. Pears will be about one-third crop, as will also be prunes, plums, apricots, etc. The farmers probably have the largest acreage of grain they have had for several years, and they are all smiles in anticipation of big crops.

Tulare.

REMARKABLE GROWTH. — *Delta*: Judge Nye brought in from his ranch in Antelope valley some samples of beardless barley six feet and two inches tall. Fifty stalks grew from a single grain. He also brought down some bearded barley stalks six feet and ten inches long. The judge had with him a lemon sprout of one year's growth over eight feet long.

A BIG YIELD.—Tulare City *Citizen:* There is on exhibition at the *Citizen* office a bunch of barley containing 368 heads, grown from one kernel of barley. The heads are all large and well developed, an average one of which has 90 grains, making a total yield of 33,120 grains. This wonderful bunch of barley was grown upon the ranch of John McCabe, on Deer creek, near Belleville.

Ventura.

RAINS AND CROPS.—Ventura *Unit*: The rainfall ensures a good crop of beans but some of the limas will have to be replanted. The fruit crop will be largely increased and trees just planted saved from drought. Hay that is cut will be injured slightly. The rain came too late to help the growing barley materially. The greatest benefit of the fine shower is, perhaps, the damper put on the croakers who persist in predicting a dry year.

Yolo.

FRUIT NOTES. — Guinda *Independent:* Ed. Haswell of Rumsey paid Elmira a visit the beginning of the week. Mr. Haswell estimates Rumsey will ship 2½ cars of fruit, including grapes, this season. Wm. B. Stitt of the Stitt-Buck orchard here, has had "hands" picking off peaches from the three-year-old trees the past week. From one tree 1100 were taken, leaving about as many more to ripen. This is a sample of the entire orchard. All the other trees, notably the apricots, are bearing well in this part of the Capay valley. A gentleman who is an authority in horticultural circles in this State on raising almonds, was written to by the Guinda almond novice for advice as to how he should manage his trees. The Guinda gentleman stated that his almond trees had grown, within one year, in many cases to eight feet. The almond authority replied that such a growth is "phenomenal," and that a growth of four feet is the average in his experience.

OREGON.

TOO MUCH RAIN IN JOSEPHINE COUNTY.—Grant's Pass *Courier:* April was not a very kind month to growing crops. The cold rain and occasional frosts kept vegetation back to a considerable extent. Corn and potatoes planted early were the worst sufferers. The corn rotted in the ground and the potato vines wilted to some extent. Posted farmers claim that the 10th of May is plenty early for corn-planting.

ARIZONA.

FRUIT NOTES.—Phœnix *Gazette:* The fruit crop this season will be immense, as will also the barley and wheat output; all in all, 1892 will be the most prosperous year Central Arizona ever experienced, and will not only give our valley a great lift in its race for supremacy, but will be a prosperous era for the tillers of the soil. Maricopa county alone has 2,000,000 acres of land that will grow all the fruits known to the most favored climes in the world. Think of this wonderful area of citrus fruit land; think of the hundreds of thousands of happy, prosperous men and women that will people this peerless domain; think of all this that will come to this great country when Arizona becomes wedded to the union of States; think of this and tax your energies to consummate this future condition. Yavapai, Cochise, Pinal, Mohave and Gila will supply the mineral output, while Maricopa Yuma and Graham will ship to the marts of the country the choicest of fruits.

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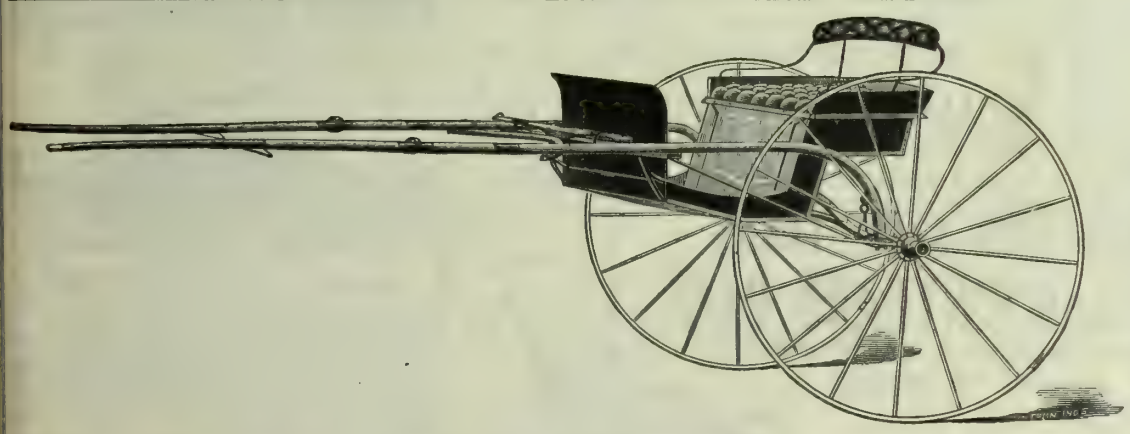
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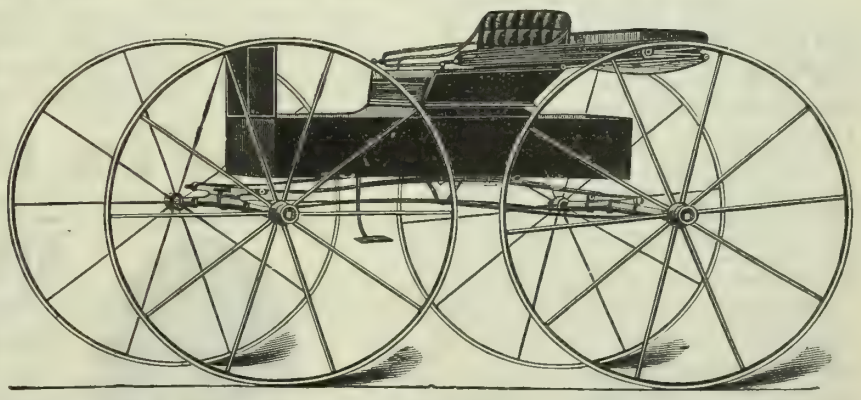
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The Dairy.

A New Creamery at Arcata.

The *Western Watchman* of Eureka, Humboldt Co., gives a description of a new creamery at Arcata which was opened May 5th, with a picnic and literary exercises, and a demonstration of creamery practice in all its branches. The following description is given of the establishment:

Size of foundation, 34x66 feet, 2 stories; boiler room, a lean-to on the east side, 12x26; capacity of boiler, 18-horse power, steel tubular boiler, made by Langford Bros.; engine, 12-horse power. The creamery is located on the Doe place. The wagons drive up on the south side, and deliver the milk to the weighing tower, where it is emptied from the large cans into the weighing tank, a testing sample is taken out, the milk weighed and set down opposite the number of the patron; it is then discharged through a large faucet into the receiving vat, having a capacity of 600 gallons. The hoisting windlass and crane is geared and attached to the steam power of the creamery and works to a charm, hoisting the milk to the second story. From the receiving vat the milk is led into the extractor-separators, each having a capacity of putting through one ton of milk an hour. These machines can be used as butter extractors, or as simple separators, by a slight change in the internal arrangement. The separator process is being used solely thus far. From the separators the cream is conveyed by tin troughs to the cream room, and discharged in the cream vats, three in number, 600 gallons capacity each, passing over the Kausen patent cooler, which leaves the cream at an even cool temperature. Adjoining this is the churn room, fitted with two large box churns, each having a capacity of 300 gallons. When the cream is churned to butter it is taken out and placed on little carrier tables, which are rolled into the working room and placed on the rotary butter worker, 100 pounds at a time, where the buttermilk is worked out and the salt worked in, whence it is dumped on the broad butter tables, where the last operation of moulding into rolls or squares is performed. Then it is packed away in the storage room. The skimmed milk descends immediately from the separator to a small receiving tank, from which a pipe extends to the outside of the building, from which customers draw fresh, warm skim milk for their calves. This receiving tank is fitted with an overflow pipe, which leads the surplus milk into a large vat capable of holding 1500 gallons, into which also the buttermilk is run. From there it is forced by a rotary pump through 2900 feet of pipe to the hog pen, away down on the marsh.

The outside walls around the cream room butter room and storage room are 12 inches thick, with double air space; the outside space is the circulating air chamber, and the inner space is the dead air chamber. Every room is provided with ventilators.

The creamery is supplied from a driven well; the tank holds 5000 gallons at an elevation of 36 feet, and the water is raised by a double acting force pump.

The creamery is now handling three tons of milk daily, and is equippen to handle 20 tons daily. They are now averaging a pound of butter to 23 pounds of milk.

This creamery receives its milk upon the test plan, using the Babcock test, so that each customer receives returns in exact rations with the richness of the milk he produces. Thus, each customer's record stands squarely on the merit of his product, and one does not gain an undue profit at the expense of another.

In closing this description it is but just to say that the Arcata creamery was planned and constructed by R. A. Simpson of Ferndale, and that he has thought out a most complete creamery plan is proven by the fact that after the work was accepted by the stockholders and the price cheerfully paid, the Association complimented him with a unanimous vote of thanks for the completely satisfactory manner in which he has carried out his engagement.

The operating of the creamery is in the hands of C. T. Spencer, well known as an experienced butter maker, and his assistant, Mads Madsen, and these handle the milk of 24 patrons who are now putting in their milk. During the heighth of the season, the receipts will probably reach eight to ten tons daily.

THE essence of true nobility is neglect of self. Let the thought of self pass in, and the beauty of great action is gone, like the bloom from a soiled flower.—Froude.

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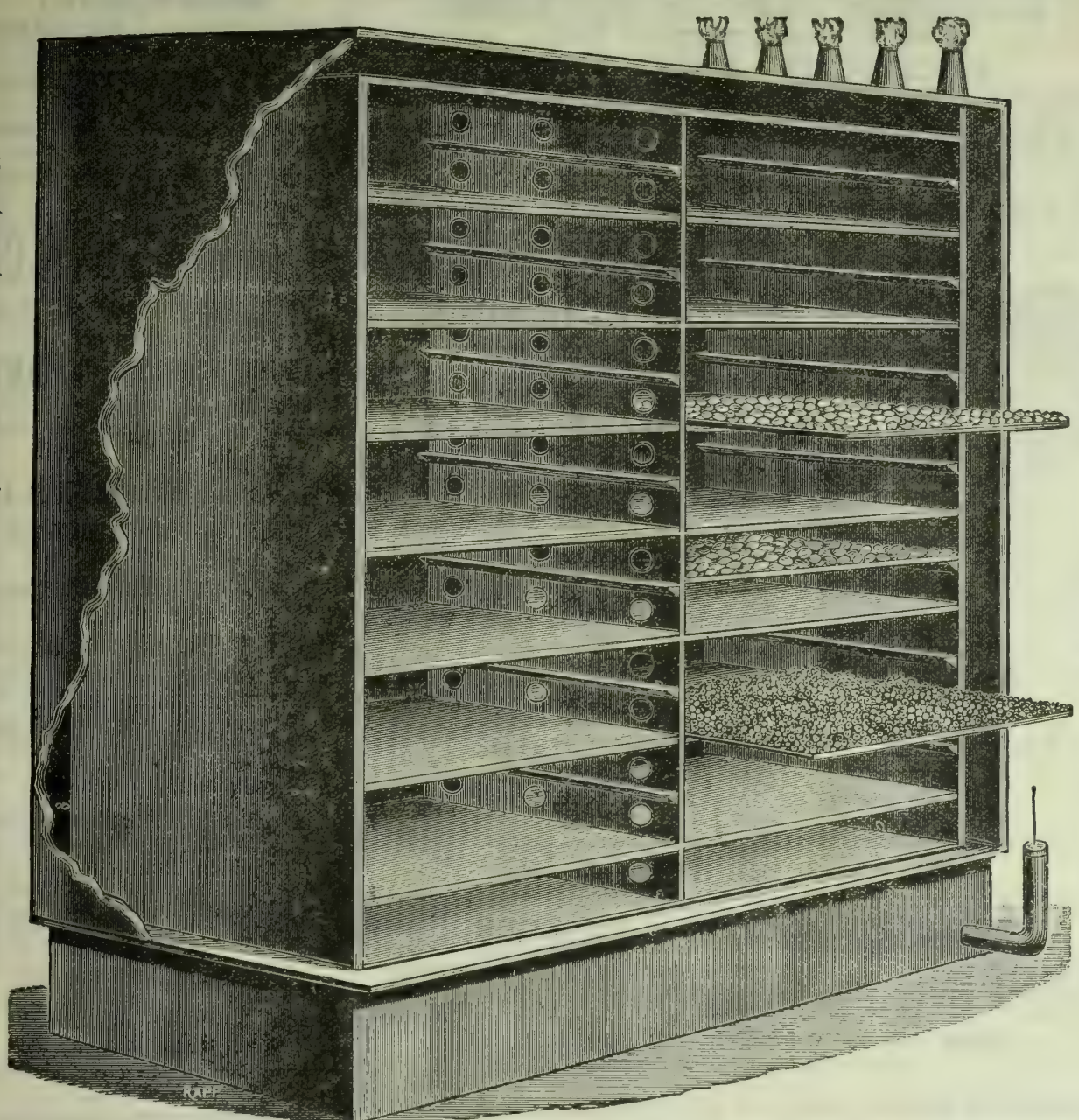
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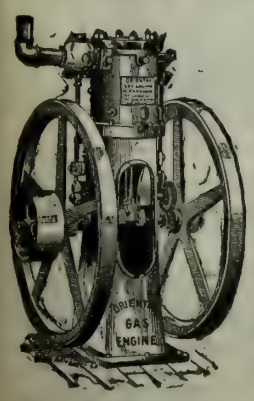
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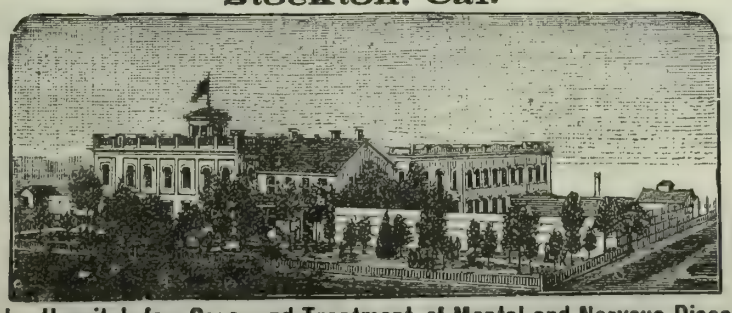
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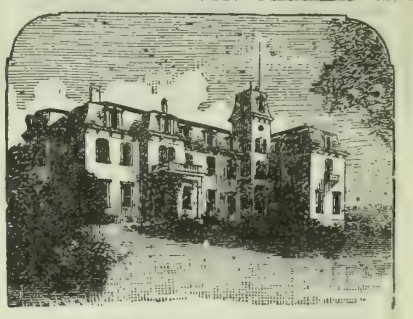
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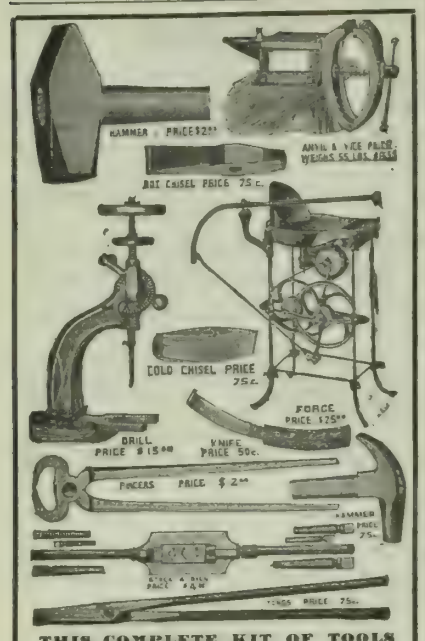
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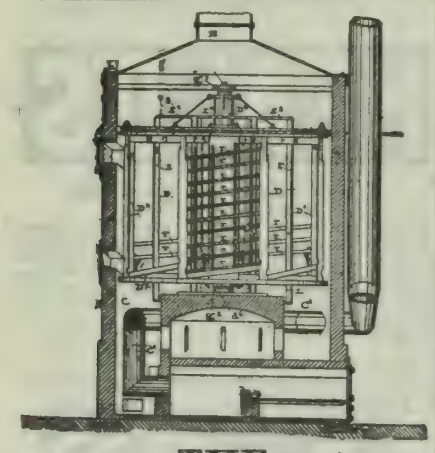
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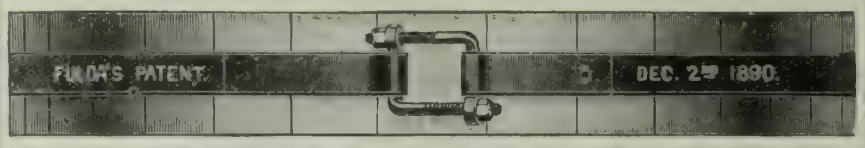
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S. F. Market Report

Market Review.

SAN FRANCISCO, May, 1892.—Cool weather with alternating fair weather and showers have been of inestimable benefit to growing crops in all parts of the State. The outturn of cereals, it is now claimed, bids fair to be fully 20 per cent more than was looked for six months ago; the grade will also be much better. Tree and vine fruits have been greatly benefited; of course there are isolated cases of damage by the unseasonable weather, but they are few and far between. Operators in grain are watching with deep interest growing crops here at the East and abroad for now is the turning point for good or bad. The local money market continues lifeless with the rate of interest on glit-edged security favoring borrowers. Although money is reported to be easy, yet paper offered for discount is scrutinized closely, which shows that there is a feverish uncertainty regarding the future.

Foreign Grain Review.

LONDON, May 8:—*Mark Lane Express*: English wheats are in better demand, and foreign wheats firmer in London. Holders ask 6d more. At Liverpool there is fair business, but prices unchanged. Corn is firm, 22s 9d@23s, and good round. 27s@28s. Oats quiet. At to-day's market English and foreign wheat was 6d dearer. Flour firm.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June.	July.	Aug.	Sept.
Thursday	7s00½d	7s00 d	7s00½d	7s00½d	7s00 d
Friday	7s00½d	7s00½d	7s01½d	7s01½d	7s00 d
Saturday	7s00½d	7s00½d	7s01½d	7s00½d	7s01½d
Monday	7s00½d	7s00 d	7s00 d	7s00½d	7s01 d
Tuesday	7s00½d	7s00½d	7s00½d	7s00½d	7s01 d

No. 2 Red Winter are quoted and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	36s6d	36s d	36s6d	Firm. Cold.
Friday	36s6d	36s3d	36s6d	Held higher.
Saturday	36s6d	36s3d	36s3d	Quiet but steady.
Monday	36s6d	36s3d	36s3d	Steady. Warmer.
Tuesday	37s d	36s3d	36s6d	Steady.

To-day's cablegram is as follows:

LIVERPOOL, May 11:—Wheat - Buyers hold off, hoping to obtain concessions. California spot lots, 7s 5½d; off coast, 37s; just shipped 36s 3d; nearly due, 36s 6d; cargoes off coast firm but less active; on passage, quiet; weather in England very fine.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug.
Thursday	153½	154½	153½	154½
Friday	151½	151½	152	152½
Saturday	152½	152½	152½	151½
Monday	151½	152½	153½	152½
Tuesday	150	151½	152	151½

The following are to-days' telegram:

NEW YORK, May 11:—Closing morning session.—Wheat 90⅛ cts. for May, 91 cts. for June, 91⅞ cts. for July, 90 cts. for August, 90⅝ cts. for September and 93⅜ for December.

CHICAGO, May 11:—Wheat—82⅛ cts. for May and 82 cts. for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	150	148½	....	....	142½	142
Friday	149⅜	148⅜	....	....	141⅜	141
Saturday	152½	150	....	....	142	141⅛
Monday	152½	151½	145½	145½	142½	142
Tuesday	151½	151½	....	....	141½	141½

The following are to-day's recorded sales on Call:

Wheat—Morning Informal session: Buyer September—100 tons, $1.43⅜; 100, $1.43⅝; 100, $1 44 ₩ c l. Regular session: Buyer season—100 tons, $1.50. Seller 1891-46 tons, $1.4 ½. Buyer September 100 tons, $1.44; 100, $1 43⅜ ₩ ctl. After noon: Seller 1892—100 tons, $1.41½

BARLEY.

	Buyer Season.		June.		December.	
	H.	L.	H.	L.	H.	L.
Thursday	100	99	....	....	....	....
Friday	99½	99½	101⅜	100	....	....
Saturday	100	100	....	....	....	....
Monday	100⅜	100⅜	....	....	107	106½
Tuesday	100⅜	100⅜	102	102	....	....

The following are to-days' recorded sales on Call.

Barley—Regular session: Buyer season—100 tons, $1.01½. Seller 1892, new—$1.00½; 300, $1.00½; 300, $1.00½; 500, $1 ₩ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 6.—*Bradstreet's* says: Some of the markets report a good demand for wool, while others are meeting with quiet trade. Manufacturers are buying where they can find wools suitable to their wants, and as some markets have a larger supply of choice wools than others, they are going there for stocks. Prices remain about steady. The strength developed at the London sales did not effect the markets here. There is too much wool here and too much in sight. In Ohio and Michigan wools there is very little doing, Quarter-blood wools are in light supply and firm. Texas wools are quiet. The demand for California wool is light. New wools from this State continue to arrive, and large lots are said to be on the way East. Territory wools are inactive. The total sales of pulled wools for the week were large. The stocks of A and B supers are small. Prices are very firm on all choice lots. The season for long wools is over and short wools will soon begin to come forward. Australian wools are less active. London sales closed on Tuesday with 10,000 bales taken for this country. The prices at the close were firm and competition strong. The next sales will open June 14th. There continues to be a fairly active movement in carpet wools. Prices are steady and firm. Manufacturers are now engaged in making samples for the fall trade.

NEW YORK, May 9.— Seaboard sale records imply an active market but an unusual amount of foreign swells the account. There seems to be no stimulating feature for any grade. Most holders continue to be free sellers, and buyers, of course, will not reward them with hardened prices. Driblets of news from primal points indicate irregular prices and no prompt negotiations of the moment. Sales at New York amount to 544,000 lbs domestic and 284,000 foreign. Boston trade has been large, the sales amounting to 1,684,000 lbs domestic and 1,500,000 lbs foreign, chiefly carpet. Quotations are reported quite as low as at any time during the past year. The outlook for the new clip is weak. Philadelphia has a good attendance, but trade was restricted on account of the few attractive lines offering.

Eastern Dried Fruit Markets.

NEW YORK, May 9.—California dried fruit is cleaning up fast, and the market is in better shape for next season's goods than was expected for this date. Prunes are well worked off, and only the intermediate sizes remain in first hands, say sixties to eighties, which are quoted at 5½@6¼ cts. Raisins—The market is low and holders are anxious to close out; 3⅛@4 cts. has been accepted for four cars of Three Crown for Chicago, and seven carloads to a New York firm, at 3 cts. Many of the latter are damp and sticky, but the good ones make the price a safe one, even at a summer risk. The stock of Valencias here on April 30th was 300 boxes. Apricots are steady at 9@10½ cts.

California Fruit East.

CHICAGO, May 10.—California Dried Fruits—Are ruling very steady. Arrivals are small. Of raisins there is still a fair to good supply on the market, but otherwise the offerings are very moderate. Demand is very fair for all lines.

CHICAGO, May 10.—California Cherries—Sell moderately; boxes, 8@10 lbs, $4; 8@10 lbs, black, $4@4.50.

NEW YORK, May 8.—Sales at auction to-day Rockport cherries at $2 per box. No demand for white Cherries. Black Tartarians brought $7 per box.

Eastern Hop Markets.

NEW YORK, May 8: Hops have been neglected all the week. Brewers took a few lots when their views were met, and in this way State ranged one cent lower. The offering, however, is not general, as late English and Continental advances are strong allies for holders of straight choice lines. Pacific rates thus are unchanged. Options are dead. June Coast is bad, and asked 24@26½ cts.

Miscellaneous.

NEW YORK, May, 9: Lima beans are quiet, at $1.65 @1.70 spot per bushel. Mustard seed is steady.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 9, '92, were as follows:

Flour, qr. sks	93,381	Bran, sks	14,000
Wheat, ctls	80,282	Buckwheat "	....
Barley, "	11,860	Middlings "	4,420
Rye, "	173	Chicory, bbls	160
Oats, "	100	Hops, "	....
Corn, "	5,420	Wool, "	2,569
Butter, "	1,930	Hay, ton	1,210
do bxs	838	Straw, "	95
do bbls	2	Wine, gals	165,550
do kegs	5	Brandy, "	15,650
do tubs	24	Raisins, bxs	1,050
do ½ bxs	452	Honey, cs	27
*Cheese, ctls	1,261	Peanuts, sks	....
do bxs	158	Walnuts "	32
Eggs, doz	55,400	Almonds "	36
do " Eastern	95,100	Mustard "	....
Beans, sks	14,201	Flax "	....
Potatoes, sks	14,603	Popcorn "	....
Onions, "	1,303	Broom corn, bbls	....

*Over'd, 221 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to May 9, '91.	July 1, '91 to May 7, '92.
Flour, ½ sks	343,123	419,025
Wheat, ctls	1,349,676	1,267,470
Barley, "	268,512	51,533
Oats, "	324,562	403,500
Wool, bales	6,063	6,588
Hops, "	443	431
Rye, sks	210	3,498
Potatoes sks	98,555	132,635

Cereals.

Dealing in futures on Call Board has been more active. So far the fluctuations do not afford much of an opportunity to make quick turns; this is accepted as evidence that dealers are watching more closely crop advices than market advices.

The local wheat market has a strong undertone, notwithstanding the studied efforts of a bear contingent to depress prices. It now begins to look as if the world's wheat crop and the statistical position of wheat are favorable to farmers, yet fuller advices are required to warrant farmers and dealers to operate on it. Receipts of wheat are light. It is claimed that the supply in the country is light. Several charters were made the past week and at rates which show a slight advance. Crop advices in this State, Oregon and Washington are uniformly favorable.

The receipts of barley are light, with the bulk coming to hand being dark grade. Brewing grades are in light supply. It now looks as if better prices can be reasonably looked for in the more choice grades. New crop barley is expected to come in quite freely in next month. Rains in the southern part of the State greatly improved the crop prospects in that section.

Oats are steady; for bright choice grades an advance is obtainable. The supply in this State and also up north is light. Crop prospects in Oregon and Washington are said to be very favorable.

Corn does not exhibit much strength. The export demand has fallen off while the home demand is light. Rains have improved the crop prospects.

Rye continues dull and heavy.

The imports into Germany for the first two months of the present year ending February 29 were 9,328,000 bushels of wheat, against 3,000,000 bushels for the same time last year. The imports of rye were 3,584,000 bushels, against 2,448,000 bushels for the corresponding time last year. The imports of barley were 4,722,000 bushels, against 5,392,000 bushels last year, and corn 4,720,000 bushels, against 2,288,000 bushels.

Mark Lane Express, April 18: The exportations from the Atlantic ports are not excessive, and both France and Germany are buying with unwonted vigor. Antwerp, too, is 2s. dearer from the 1st of the month, and as the British markets show a net decline of 1s. 6d. for the same period, the difference in the situation is not less than 3s. 6d. per qr. The effect of this change will probably be that whereas at the end of March the United Kingdom had the pick of American and Indian offers, the preference at the end of April will rest with the Continent. Californian wheat on passage to the United Kingdom is still a large quantity, but 1,426 000 qrs. is a total which shows an important modification since March 17th, when 1,801,000 qrs. were afloat. Californian wheat is now cheap. 38s. per qr. at Mark Lane and 7s. 5d. per cental at Liverpool, but the center of depression is to be found in Indian sorts, which a fall of silver to 39⅛d. per ounce has caused to be forced on sale at 32s. for a good medium quality such as No. 2 Calcutta. The South American Republics are shipping wheat a good deal more freely than had been expected. Chile is poor, owing to the recent civil war, and English gold is in great request. Thus we have 200,000 qrs. of Chilian wheat already on passage to the United Kingdom, and 100,000 qrs. in course of shipping. The trade, while recognizing this fact by only quoting 36s., against 39s. paid for Chilean wheat in March, will do well to recognize that no lasting expansion of Chilean wheat production is likely. On the contrary, we hear that the southern province has gone very largely out of cultivation.

Oregon Crops.

Oregon Crop-Weather Bulletin for the month of April reports as follows: Throughout Oregon the rains during April have been in excess of the normal amount, The rains have penetrated the soil, and it is now more thoroughly moistened than it has been for years. Water stands on the lowlands of Willamette valley. Temperature has been from two to four degrees below the normal for the month. This deficiency is apparent in every section of the State from the retarded condition of vegetation. The season is fully four weeks late. Frosts occurred with unusual frequency, and they did slight damage to the fruit interests. A severe wind and rain storm, one of the most severe on record, occurred on the 24th. There has been a marked deficiency in sunshine and an excess in the number of cloudy and rainy days. The weather has delayed spring seeding and farming operations in general. It has been unfavorable to shearing and lambing. The latter has been very successful, however, fully 85 per cent of the lambs saved. The wool clip is unusually good, the staple being long and remarkably clean. The acreage of grain is as large as ever before, and considerable is yet to be sown. That which is sown is in first-class condition, except in a few places on the lowlands of the Willamette valley. The wheat has a good stand and has stooled well. Though the season is late, yet vegetation is healthy and offers bright prospects.

Feedstuff.

Improved natural feed has restricted the demand, and as the receipts of both bran and middlings have been free, prices shaded off. Ground barley is strong in sympathy with the grain. Feed meal is weak.

Rains the past fortnight are reported to have done considerable damage to hay cut and not cared for, but growing crops are benefited. At this writing advices regarding the crop are conflicting, but the general tenor is favorable. It is claimed that many fields of grain which would have been cut for hay will be harvested, but on the other hand, many fields reserved for hay will yield heavier crops. There is a good demand for choice old hay.

Dairy Produce.

The receipts of butter, cheese and Eggs at San Francisco in April were as follows:

Sources—	Butter. Lbs.	Cheese. Lbs.	Eggs. Doz.
California	1,785,950	639,000	231,988
Oregon	2,400	1,900	90
Eastern	4,700	162,000	357,990
Totals	1,793,050	802,900	590,068
January	502.200	476,900	420,345
February	622,550	313,500	250,765
March	1,188,700	574,200	358,756
Four months	4,106,500	2,167,500	1,619,934

During the first four months of 1891 the receipts were 3,903,600 lbs butter, 2,152,300 lbs cheese, and 1,385,047 doz. eggs.

Notwithstanding continued heavy receipts of butter, the market is strong at an advance. So far as the writer can learn, there is more butter being packed than ever before. The packing is done in any style wanted by buyers. It is claimed that considerable butter has been put into pickle, which tastes more or less of weed. This will tell against any brand of butter, tasting of weed and packed for future use. Creameries and dairies up North, and also those in Nevada, are in full operation. They supply the markets in their States.

Cheese is weak. Receipts are large and demand more or less offish. Concessions are necessary to induce free buying,

Eggs, after selling lower, are, at this writing, firmer with a slight advance obtainable for the more choice frest laid. Cool weather has been in favor of holders.

Vegetables.

Garden truck shows more or less firmness, with prices fluctuating according to receipts and demand. Warm and clear weather is now wanted for the plants to make a rapid growth. Unseasonable weather put the plants back, but, as the ground is well soaked by rains, the benefit will be large. Peas continue weak. String beans and summer squash are slow in coming in.

Onions, if old and choice good keepers, fetch good prices, but poor keepers, and also new, favor buyers. The crop promises to be large.

New potatoes are strong at a slight advance. Choice and more matured are in good request for shipment eastward. Old potatoes are fairly steady. many dealers taking them in preference to new, owing to the lower prices.

Fruit.

Rains did considerable damage to strawberries in some localities, but the general effect will be beneficial. Strawberries have a wide range. The tone was weaker to-day. Raspberries and gooseberries are coming in slowly. The crop promises to be a full average.

Cold and generally unseasonable weather has put the fruit season back. It will not be much if any earlier than it was in last year. The general quality and size of fruits this year will be a decided improvement over that in last year.

Cherries are coming in slowly. The quality shows a slight improvement, but warmth and sunshine are required to bring them out more perfectly. The rains have not done any material damage; there are a few cracked cherries, but the fruit is compact. Had warm, growing weather ruled instead of cold, the damage would have been large. Damage to apricots and prunes has been exaggerated. The fruit will be large and of excellent quality. Extra sizes will make up a very large part of that lost by there being a lessened number of fruit to the tree. Mr. Nash, of Eveleth & Nash, writes from Santa Clara county that the fruit crop will be a good average and of good quality.

Reports are current that contracts have been made for several orchards, but particulars are withheld. The present outlook is greatly improved over the prospects of about four weeks ago.

Choice to fancy oranges are scarce and wanted. Poor oranges continue in good supply, although the stock now here is smaller than at anytime in this year,

Lemons and limes are dull and weak.

Dried fruits are in light supply. Odds and ends are being picked up for shipment

Raisins are slow. The stock is light.

Wool.

More life is reported to the market, but at prices not showing any material change over those ruling at the commencement of the season It is only desirable clips for special use that fetch an advance. It is reported that considerable buying has been done in the interior. F. P. McLenan & Co. and other scourers continue to report running to full capacity.

Live Stock.

The market is weak at lower figures for bullocks and mutton sheep. The lower prices are due to free offerings and a lessened consumption, owing to more vegetables. With stock in good condition owners are always anxious sellers, particularly with the season so far advanced as it is now.

Miscellaneous.

From reliable advices up to May 11, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	221,951	273,466	*†140,214	65,190
San Diego	14,261	18,271	4,084	.....
San Pedro	11,389	7,630	....	18,181
Oregon	24,207	33,293	19,418	
Puget Sound	17,163	18,961	.....	
Totals	288,971	351,621	163,716	83 371

*Engaged for wheat, 1892, 19,272; 1891, 51,612 †For new crop loading, 9,566

The statistics of produce exports from this port from July 1st to May 4th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,390,301	12,276 952
Flour, bbls	932,144	1,072 724
Barley, ctls	1,001,632	280,953

Poultry strengthened slightly during the week but at the close the market is a shade weaker, owing to Eastern shipments being near at hand.

In hops there is absolutely nothing new to report. Crop advices are generally favorable in this State.

Nuts are sluggish. The receipts of beans are heavy, but it is claimed that the bulk was purchased previous to shipment.

Honey is scarce but no higher.

Extra choice in sacks quotations, while very poor quotations.

BEANS AND PEAS.

Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 80
Red	2 15	@	2 40
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 20	@	2 40
Fld Peas, blkeye	1 30	@	1 50
Do green	1 50	@	2 00
Do Niles	1 30	@	1 40
Split	4 50	@	5 50

BUTTER.

Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20½
Do do Giltedge	—	@	21½
Eastern	—	@	—

CHEESE.

Cal, choice mild	—	@	9
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Young America	—	@	11

EGGS.

Cal. ranch, doz.	18	@	—
Do do selected	—	@	20
Do store	16	@	—
Eastern	16	@	18

FEED

Bran, ton	17 00	@	18 00
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 50
Middlings	19 50	@	21 00
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		

HAY.

Wheat, per ton	12 00	@	—
Do choice	—	@	15 00
Wheat and Oats	10 00	@	13 50
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60

GRAIN, ETC.

Barley, feed, ctl	96½	@	—
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 32½	@	—
Yellow, large	1 30	@	—
Do small	1 32½	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 27½	@	—
Rye	1 37½	@	—
Wheat, milling. Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@	1 57½

HOPS.

1891 Choice to Ex.	26	@	—
Fair to Good	22	@	—
Extra, City Mills	4		
Do Country Mills	4		
Superfine	2 75	@	—

NUTS—JOBBING.

Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16

ONIONS.

Silver Skin, Choice per ctl	1 75	@	2 00
Fair to Good	1 00	@	1 50
Cut	50	@	—
New Reds	50	@	90

POTATOES.

Early Rose, ctl	25	@	40
Burbank Seedling	50	@	70
Do do Oregon	60	@	1 15
Do Humboldt	40	@	75
River Reds	30	@	45
New	80	@	1 15
Sweets	—	@	—

POULTRY.

Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	4 50
Do large	5 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@	9 00
Geese, pair	1 75	@	2 00
Goslings	2 25	@	3 00
Turkeys, Gobl'r	17	@	20
Turkeys, Hens	19	@	21
Manhattan Egg Food ₩ cwt	11 50	@	—

PROVISIONS.

Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—

SEEDS.

Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½

WOOL.

SPRING, 1892.

Humb't & Mend'cino	16	@	20
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'r & F'th'l.	15	@	17½
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def	10	@	12
Nevada (State)	15	@	17

HONEY.

WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	25	@	—

WEDNESDAY, May 11, 1892.

Cherries, box. Black	1 00	@	2 25
White	50	@	1 00
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green	—	@	—
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	—
Garlic, lb	8	@	12½
Squash, Mrft, tn	12 00	@	15 00
Do Summer, box	1 00	@	2 00
Tomatoes, box	—	@	—
Asparagus, box	1 00	@	—
Do choice to ex.	2 00	@	—
Peas, green, sk	50	@	—
Do sweet	50	@	1 00
Rhubarb, box	35	@	25
String Beans	6	@	10
Cucumbers, doz	50	@	1 50
Mushrooms	10	@	30
Egg Plant, lb	20	@	30

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 11, 1892.

Limes, Mex	2 00	@	3 00
Do Cal	—	@	—
Lemons, box	50	@	2 50
Do Sicily	5 00	@	—
Oranges, Seedlings			
Redlands	1 75	@	2 25
River side	1 50	@	1 75
Los Angeles	1 25	@	1 50
Do Navels—			
Redlands	3 00	@	4 50
Los Angeles	2 50	@	2 75
Riverside	2 50	@	3 50
Duarte	2 50	@	3 00

Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.

Strawberries, per chest— Longworth	6 00	@	11 00
Sharpness	4 00	@	6 00
Gooseberries, ₩ pound	4	@	7
Raspberries, bkt	25	@	40

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	5	@	—
Second quality	4½	@	—
Third quality	4	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	5	@	—
Do light	6	@	—
Dairy	6	@	—
MUTTON.			
Wethers	7	@	—
Ewes	6½	@	—
Do Spring	8½	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Heavy	4½	@	—
Feeders	3½	@	4
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	7½	@	—
Do, June-July	7½	@	—
Wool Bags	36	@	38

An Efficient Machine.

Messrs. Truman, Hooker & Co. handed us the following letter from one of their agents in Oregon unsolicited:

"UMPQUA, OR., May 7, 1892.

Messrs. Truman, Hooker & Co., San Francisco, Cal.—GENTLEMEN: Last February I purchased a Pacific Spader Harrow from you, and after giving it a thorough trial cultivating my orchard, am pleased to say that it is by far the best cultivator that I have ever used. It pulverizes the soil and kills young weeds in a way that no other machine I have ever seen can compare with.

Owing to the open winter, weeds did not stop growing, and when we commenced plowing, they were three feet high. We turned them under and put the spader on the ground and it did its work right from the start, never dragging up the weeds as any other cultivator would.

I would not take $100 for it and do without.

No man with five acres can afford to do without the Pacific Spader. Respectfully,

S. D. EVANS."

Action of Frost on Cotton.

At the last meeting of the Manchester Section of the Society of Chemical Industry, a short communication by Mr. C. F. S. Rothwell, on "The Action of Frost on Cotton," was read. The literature published on this subject, said the author, gave the idea that cotton was "tendered" by frost. To quote Hummel's "Dyeing of Textile Fabrics," "the evidence on this point was conflicting, and it was quite conceivable that the crystallization might act injuriously in a mechanical way, and that the atmospheric ozone might also exercise some slight destructive influence." This uncertainty might be attributed to the fact that, until recently, no reliable machine for testing the strength of the cloth was available. To decide the question, two pieces of "madder bleached" cloth, one of good and the other of very poor quality, were placed in water for ten minutes, withdrawn, and without squeezing were exposed to a temperature of 4° C. (28° F.) The cloth was quite stiff in three minutes, and, when the ice had evaporated, its strength was tested in Goodbrand's machine against some of the original cloth, when the breaking weights were found to be identical. The trials were repeated, the cloth being frozen for 16 hours. In this case also the strengths were found to be identical. It was thus evident that cotton was not "tendered" by the freezing of water within it, at any rate not when in the ordinary width. If the fiber were compressed to a greater or less extent, as would happen at the bottom of a wagon load, the cloth might probably be weakened mechanically by the crystallization of the water, but he had no proof of this. The prevailing oppinion that cloth was weakened by frost had, no doubt, arisen from the fact that when the fibers were frozen stiff they were easily snapped, but any stiffening body, such as gum, would have the same effect, and this had obviously nothing to do with the actual strength of the fiber.—*Textile Mercury.*

The Coyote.

SOLEDAD, Monterey Co., May 5.

TO THE EDITOR:—Living in a neighborhood where coyotes are very destructive, I wish to contribute my mite in favor of the scalp bounty. When small and defenseless stock is destroyed the producers of such stock suffer loss, so also the consumer, because the production is lessened and the consumer pays a higher price; herein is the universal benefit of the coyote bounty, which is a very small tax compared with the great benefits resulting. We (myself and family) have lost about $200 per annum for the last 20 years by the depredations of coyotes.

We have often tried to poison them, and sometimes succeed; occasionally we shoot one. Since the coyote bounty law they have decreased, and as they continue to become less we can afford to increase the reward for their destruction to any reasonable sum.

T. C. HERBERT.

QUICKSAND.—The reason a person sinks in quicksand is because the latter is composed chiefly of small particles of mica mixed largely with water. The mica is so smooth that the fragments slip upon each other with the greatest facility, so that any heavy body which displaces them will sink, and continue to sink until a solid bottom is reached. When particles of sand are ragged and angular, any weight pressing on them will crowd them together until they are compacted into a solid mass. A sand composed of mica or soapstone, when mixed with sufficient water, seems incapable of such consolidation.

[ADVERTISEMENT.]

Mass Meeting.

The People's Party of Alameda Co. will hold a mass convention at Haywards on Saturday, May 21, 1892, at 10 A. M. Every person living in this county interested in this movement is cordially invited to attend. General business pertaining to this county will be transacted, county ticket put up, and delegates (one to each Supervisor District) will be elected to attend the State Convention at Stockton, June 1. 1892, where State ticket will be put up and delegates will be elected to attend the National Convention at Omaha, Neb., July 4, 1892, for nominating United States presidential candidates.

H. B. VALPEY,
Chairman Co. Central Committee.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos., $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

How Society is Indebted to Invention.

In the "Relation of Invention to the Conditions of Life," in the *Cosmopolitan Magazine*, Mr. G. H. Knight says:

With each step in industrial progress not only is the greater the number who can be warmed, fed and clothed, and the better are their life conditions, but in default of such progress a vast majority would not have lived at all. It is to industry, guided by scientific methods, and to science that concerns itself with practical applications of its discoveries, that we are indebted for such magical arts as that which makes light itself depict for posterity the very features and expressions of the life it once illuminated; for the kindred art whereby scenes in the most remote regions are made to pass in realistic panorama before the pleasantly cheated vision; for the instrument which, having analyzed the sunbeam and revealed the chemical constituents of distant constellations, becomes, in the hands of the metallurgist, the means of determining the precise instant at which to arrest the process of "conversion" in the Bessemer steel manufacture. It is to invention that society is indebted, not alone for the refinements, but for every necessary of modern life; for food, clothing, and shelter; for the arts of spoken, written and printed speech; for the means of flashing the very voice to a listener in a distant city, or catching the fugitive, tremulous tones and storing them for the delectation of generations yet unborn; for music, poetry, and the plastic arts; for locomotion by land, by sea, and even through the circumambient air; for the gift of soothing with healing wings the bed of anguish; for the ability from this tiny speck of earthly life to sound the abysses of time, thought and space.

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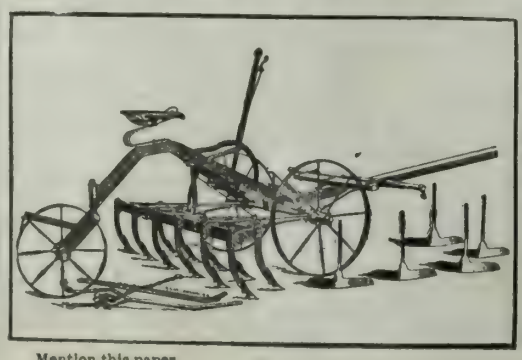
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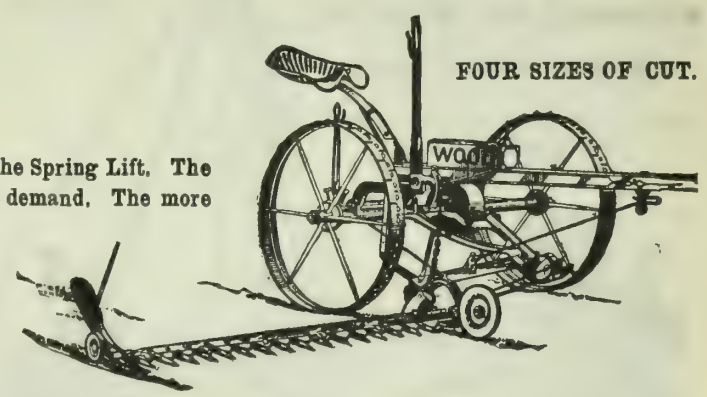
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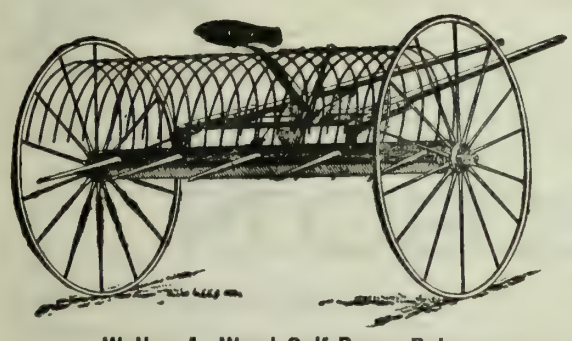
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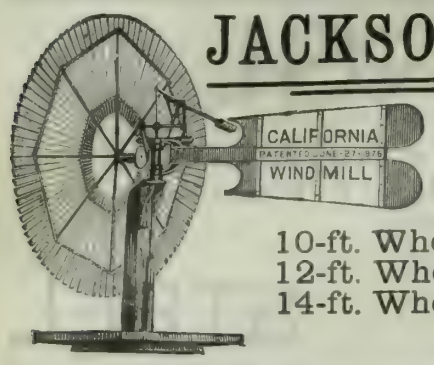
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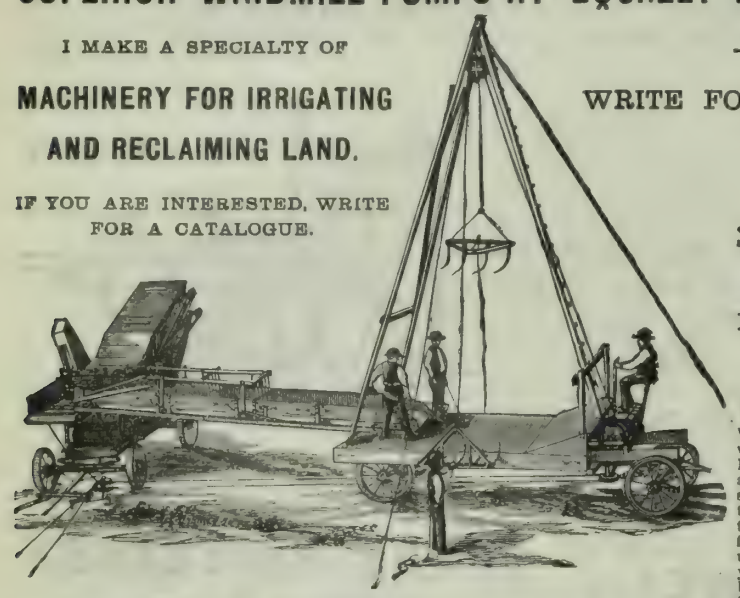
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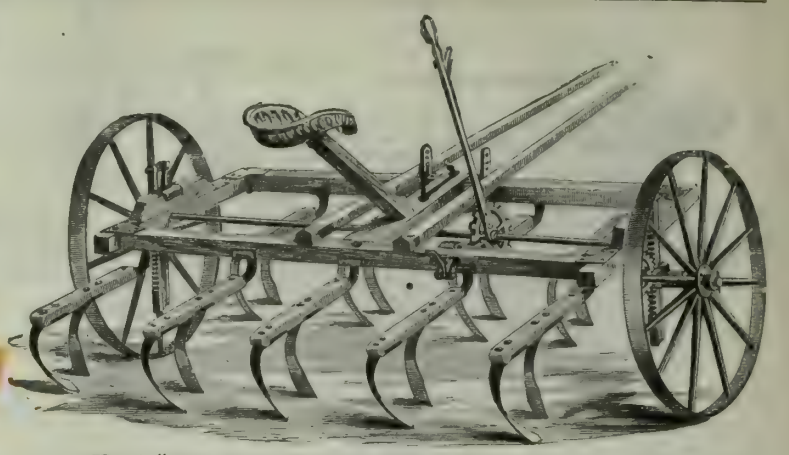
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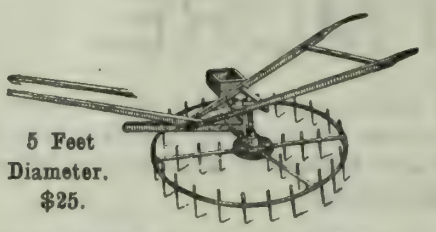


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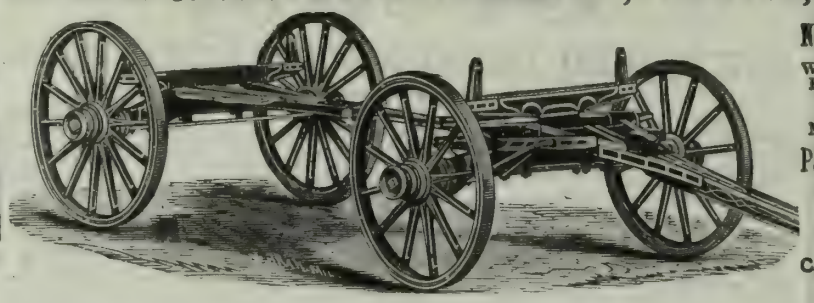
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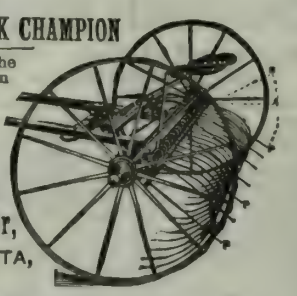


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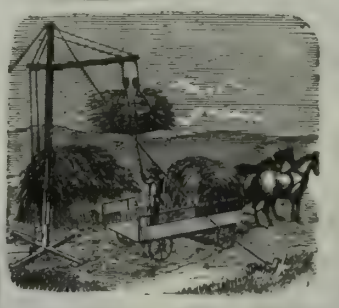


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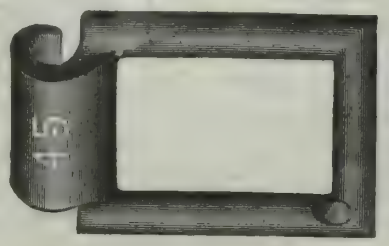


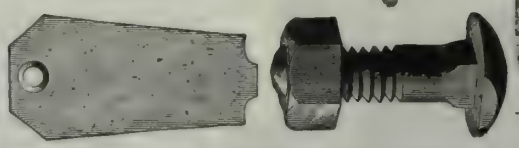






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Vol. XLIII. No. 21. SAN FRANCISCO, SATURDAY, MAY 21, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Stony Creek Valley, Colusa County.

When we speak of the "great valley of California," or when we divide it by specific mention of the Sacramento and San Joaquin valleys, the distant reader probably conceives the notion of a wide stretch of land definitely bounded on the sides by the foothills of the Coast Range and the Sierra Nevada, something as the sides encompass the bottom of a basin. This view does not include the hosts of small valleys which lie among the outer fringes of the foothills, and are themselves arms of the great valley. From north to south for hundreds of miles, the east and west sides of the great valley intrude themselves among the hills, by means of these smaller valleys which open into the great valley. These small valleys are usually higher than the great valley, and their soils, formed by wash from adjacent hillsides, are often deeper and richer than the great valley soils. With elevation and the immediate shelter of adjacent hills, these valleys are often warmer and freer from frost than the broad expanses below, and they usually have greater rainfall. It is natural, then, that the earliest fruit should come from these small valleys; also that, because of deep soil and more abundant moisture, they should be favorite sites for orchards and vineyards. Sometimes these small valleys are very narrow, and are inclosed within the boundaries of a single ranch; sometimes they widen so that they inclose thousands of acres and form an important farming district. The engraving on this page presents a view of one of the larger valleys, and is characteristic of these valleys, which have not yet received attention from the fruit planters. These valleys are usually well wooded, or at least freely dotted with trees, though not covered as in a forest. As improvements progress, these old oaks disappear before the serried lines of fruit trees and vines, but when the territory remains in grain or pasturage, the trees are left to beautify the landscape and furnish grateful shade for stock. Such is the condition in Stony Creek valley, which is the largest of the small valleys in Colusa county. It is 40 miles in length, and could hardly be called a small valley at all, except in a State where there are so many larger ones. It is very picturesquely situated among the sloping foothills of the Coast range, and is a region of excellent repute for salubrity of climate and fertility of soils. The settlement of the valley began as early as 1854. The farm shown in the center of the picture is that of I. W. Brownell, who settled at this point in 1858.



VIEW OF STONY CREEK VALLEY, COLUSA COUNTY.

THE STATE FLORAL SHOW.—The spring show of the State Floral Society, which occupied the last four days of last week in this city, was a notable success. The main floor of the Mechanics' Pavilion was largely filled with the exhibits of foliage and flowering plants and cut flowers, and the grouping and arrangment were very effective and beautiful. It was, undoubtedly, the greatest exhibition of the kind ever held on the Pacific slope, and its character reflected much credit upon the State Floral Society, under whose auspices it was planned, and carried out by a very able and devoted exhibition committee. Though the expenditures and payment of premiums called for a large amount of money, it was nearly supplied by the public patronage, and the Society can congratulate itself upon signal success for this its greatest effort. The premium list for the fall show is already published, and it is none too early to begin making collections and growing plants for the exhibition which will be held in the Mechanics' Institute pavilion, about the first of November.

FARMERS' INSTITUTE AT POMONA.—The next meeting of the Los Angeles County Farmers' Institute will be held at Pomona on Friday and Saturday, May 27 and 28. A program full of practical subjects will be presented and there will also be entertaining musical and literary features. We hope our many readers in the region about Pomona will take full interest in these meetings and will prepare to attend. It will be a season of free inquiry into all branches of farming suitable to the region and such conference will be profitable to all who participate. Prof. Wickson, of the State University, will conduct the meetings.

A MAMMOTH POPPY.—One of the curiosities of the Flower Show last week was an "Iceland poppy" ten inches in diameter, deep red marked with black, which was grown by Mrs. A. Dowd of Menlo Park from seed procured from some Eastern seedsman.

Progress in the Wool Interest.

An encouraging note in the wool line is refreshing. There are from time to time quite clear indications that we should not allow our wool interests to work down too low. It is true that we shall have to produce wool upon another basis than the old free range plan, and that to make sheep pay upon enclosed fields upon alfalfa or other grown feed, we must have better sheep and produce higher-priced wool. This is quite possible providing our growers apply themselves to an understanding of the question and will make the investment necessary to get good blood and handle it properly. J. R Dodge, the Statistician of the U. S. Department of Agriculture, gives assurance that a very comprehensive presentation of the statistics of sheep and wool gives the estimated number of sheep and product of wool for each of 22 years past, the average wool supply by decades since 1840, the annual importation of wool since 1870 and the average annual importation of woolens by decades since 1830. It shows that the value of our flocks is greater by $42,000,000 than in 1870, and the value per head greater than since 1875.

From these facts it appears that the domestic supply of wool is six times as great as in 1840, and that both domestic and foreign supplies were only three pounds to each inhabitant while they are now 6½ pounds. Then, including imports of woolens, scarcely four pounds per head were used, whereas we now require over eight pounds.

It appears that three-fifths of all the wool used for all purposes is of domestic production, while four-fifths of the requirement is manufactured in this country, leaving only one-fifth to come in the shape of imported goods. It is gratifying to know, also, that for three decades the value per head of imports of woolens has been regularly declining, and is now only about three-fourths of a dollar per annum for each individual, when in 1850–1860 it was considerably more than a dollar.

THE TOBACCO PRODUCT.—Those who are experimenting with the tobacco product in this State may be interested to note that the high prices resulting from the shutting out of Sumatra tobacco by present customs law has stimulated tobacco-growing in the seed-leaf districts, and the acreage will be materially increased in the Connecticut valley, Pennsylvania and Wisconsin. A strong tendency to increase the acreage in Kentucky, in case the season should be favorable for putting out, is also noted.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 21, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

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Bicycles—A. W. Gump, Dayton, Ohio
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Land for Sale—Kern County Land Co.

See Advertising Columns.

The Week.

A hot wave comes just in time to convince our distinguished editorial visitors of the accuracy of their preconceived notion that California, in order to be semitropical, must be next door to Tophet. This is a common impression among new comers, and we hope that the weather will moderate so that they can have a good sample of the "balmy and delightful" before they depart.

The incoming host of writers and publishers was cordially welcomed to the borders of Southern California, and has been entertained with lavish hospitality in Southern towns. At Los Angeles the visitors were met by a distinguished company of representatives of the various State organizations, including the State Boards of Trade and Horticulture, the State Grange, etc., who will serve as their escort to the several points to be visited in Central and Northern California. All this week will be occupied in a round of such delightful local receptions, and early next week they will reach the metropolis.

We are glad this greeting to Eastern newspaper folk is so cordial and wide-reaching. Certainly California owes much of her growth and prosperity to the information so freely circulated in the journals which our guests represent, and we rejoice that they come to see the country which they have helped to develop. It is fitting and proper that they should enjoy the best we can extend in the way of generous hospitality.

The People and the Politicians.

The direct and dominant force of public opinion upon Governmental policies, and upon political affairs generally, is one of the curious and happy facts of American politics. It is curious because without parallel or analogy in any other country; and it is happy because it is the circumstance, above all others, which affords assurance of the integrity of our institutions. No matter how wire-pullers may plot, or rings may juggle, all are at last brought up to the snubbing post of public opinion and made to step in time with whatever tune it may choose to play.

For the ten thousandth time this principle is now being notably illustrated and, curiously enough, by contests between the rank and file and the leadership of both the great political parties. The organized machinery of the Democratic party is more completely "handled" by Mr. Hill of New York than it ever has been by any man since organization became the rule in our politics. Mr. Hill wants the nomination for the presidency. His schemes are supported openly by Gorman, Bryce, and others, and covertly by Watterson, Carlisle and their associates. These leaders know that with Hill in the presidential chair there would be abundant "spoils" for distribution. But, on the other hand, the rank and file, the great unorganized mass of Democratic voters, to whom policies are more than "spoils," and to whom principles are more than expedients, will have none of Mr. Hill and his machine-made boom. They steadily demand the nomination of Mr. Cleveland, and so strong has become their demand, that nothing in the natural order of things can prevent his nomination. The politicians have been driven to the wall by the force of a public opinion, which, though silent, is irresistible.

On the Republican side the situation is almost exactly reproduced. It is very plainly to be seen that the leading party politicians of whom Boss Platt of New York, Boss Quay, of Pennsylvania, chief bugle-man Clarkson of Iowa and local ringsters everywhere the whole crew of spoilsmen and self-seekers are not friendly to the renomination of Mr. Harrison. After the habit of their kind they refrain from outspoken methods of opposition; but their private wishes may easily be read. Their platform, if they dared to announce it, would be "anybody to beat Harrison." But in opposition to these "leaders," these managers of the "machine," there stands the overwhelming mass of opinion within the party ranks in supporting Mr. Harrison, and his nomination is as sure as anything in the future can be.

The selection of these two men by the popular choice of the two great parties illustrates the continuing integrity of the popular jugdment; with either of them in the presidency the power of that great office will be honestly and diligently employed. We might wish, perhaps, for certain higher qualities in each of them, but either will take good care of the interests of the country.

Another Great Livestock Deal.

It is reported that another great cattle king has been crowned in Chicago, and the greatest deal of recent times places him on the bench alongside of Armour, Swift and Morris. Six small concerns which have hitherto had issues with the old kings, have pooled their issues and put their new king on a par with their old rulers. It is said that these six concerns have a capacity for slaughtering and curing 10,000 hogs a day in the summer and 15,000 in the winter, with all the requisite improved refrigerating plants and accessories. Last year the combined plants slaughtered 1,250,000 hogs, 120,000 cattle and 20,000 sheep and calves. The six concerns cover more than 20 acres of ground at the Chicago yards and have branches in other cities.

A noteworthy feature of the deal is that Henry Botsford of the Chicago Packing and Provision Company concern, which made a net profit in two years of $1,200,000 for its stockholders, is to be president of the new amalgamated company. That will take him out of the category of "small packers" and will put him at the head of establishments slaughtering one-third of all the hogs packed at Chicago.

Some gossip about the amount of money involved in a livestock transaction in Chicago may be interesting to some reader who may be wondering how much he can get for a surplus steer or a farrow cow. The figures are startling:

"The new company will have a capital of $6,500 000. There will be $2,500,000 six per cent gold bonds, redeemable in thirty years at 110. There will be £400,000 of 8 per cent preference cumulative stock and about £450,000 of ordinary stock, equivalent in all to about $6,500,000. Of this, $1,750,000 will be represented by cash capital. The firms which are amalgamated have, during the last three and one-half years, averaged $875,000 net per annum, during the last two years they have averaged $975,000 per annum, and in 1891 they made over $1,100,000 net, being more than $850,000 for the first year, $950,000 for the second, and $1,100,000 for the third year. Of the $6,500,000 securities of the new International Packing and Provision Company, limited, about one-half have been taken by the venders. The bonds have been taken by a syndicate of local banks."

The plans of this one concern may give some inkling of the vastness of the livestock interests when the whole country is considered. We believe California should and will have a greater share in this line of wealth-making.

Who Wants a Colony?

TO THE EDITOR:—Can you or any of the readers of your paper (who, from its excellence, ought to be numerous) give me authentic information as to the best location in your State for a colony of practical old country farmers who intend going in for grain and high-class stock-raising. Any information will be gratefully received by IAN, care Editor.

This inquiry comes from a RURAL subscriber in Chicago who expects to take his place among the farmers of the Pacific Coast. The information he desires may be useful also to other home seekers. We will print descriptions of lands suitable for the purpose specified, providing such descriptions do not exceed 200 words in length, and are written by residents in the localities described. Descriptions should mention distances from railways and prices at which tracts can be purchased, as well as general notes of the natural adaptations of the lands.

Statistical Review of Barley.

The cultivation of barley in California has at all times been an important industry, but at no time has it assumed such proportions as within the past three years. This is largely due to increased attention given to fruit culture and also to many large tracts of land which had been given over to pasture, being cut up and sold to small holders. It is roughly estimated by seemingly well informed horticulturists that for every acre of land devoted to fruit, one work animal is required. If this estimate is well grounded, then we can readily see how barley is such an important industry when it is stated that it constitutes about the only kind of grain which is fed to horses. Besides this, with improved milling machinery, barley is rolled and fed largely to dairy cows, work oxen and to stock fattened for market.

The State Board of Equalization reports the number of horses in this State in 1890 as follows: Thoroughbred, 1433; graded, 60,618; American, 152,691; common, 84,149; colts, 91,249; total, 390,140. In 1891 the Board reported the number as follows: Thoroughbred, 1417; graded, 48,141; American, 141,641; common, 113,216; colts, 89,075; total, 393,493. The returns for 1892 are not at hand, but it is claimed that they show a substantial gain. An average of fully two-thirds of the horses are fed barley the year round. Of the other third, part are fed other grain, while the rest are pasture-fed. With two-thirds of the horses fed barley, any farmer or horseman can readily figure out the quantity consumed annually.

Besides the barley required for feeding to stock, large quantities are taken yearly by malsters, the amount of which we are not prepared to say. We also supply an important export trade. That sent out of the State is common to gilt-edged. The latter is sent almost entirely to the Eastern States and to Europe.

The number of acres seeded to barley in this State in 1889 was 1,167,627; in 1890, 852,902; in 1891, 1,118,867; and in this year it is estimated at 1,250,000. The increased acreage seeded in this year is largely in the counties of San Diego, San Bernardino, Tulare and San Joaquin. The acreage devoted to barley in the above counties is fully up to that seeded in 1889, while in the other counties more or less of an increase is reported over that seeded in either 1889 or 1891. In estimating the crop outturn, one important factor must be considered—the acreage that is neither cut for hay nor harvested. This varies according to the season. This year fully 20 per cent will either be cut for hay or else left in the field, owing to its generally being of too poor quality. At one time, about the middle of April, it looked very much as if one-third of the crop would be more or less of a failure, but with showery and cool weather toward the latter part of that month, and extending to about the middle of the current month, crop prospects improved rapidly; and, with continuance of favorable weather, the yield to the acre will be a full average, as well as the grade.

Eastern Oregon and Eastern Washington are free contributors to this market, notwithstanding much of the barley raised in those two States has a high market value east of the Rocky mountains for malting. In this State it is also held in high favor, ranking fully up to the best Californian. The receipts of barley from up North, from July 1, 1891, to May 14, 1892, aggregate 51,533 sacks, against, in the like time of 1890–91, receipts of 269,912 sacks. It is quite generally claimed that the barley crop in the Central States in this year will be light, which, if it will prove to be correct, will create a good demand for Oregon, Washington and California barley. So far this season, the shipments from this State to the East have been light, but from up North they have been quite free.

The exports by sea from San Francisco, from July 1, 1891, to May 14, 1892, aggregate as follows: 1,005,734 centals, against 291,854 within the corresponding time in 1890–91. The receipts of California barley at this port within the above dates were respectively 2,476,295 centals and 1,626,145 centals. Adding the receipts form up North, and the grand total received at this port was 2,527,828 centals within the above dates in 1891–92, and 1,917,999 centals within the corresponding time in 1890–91. Deducting the quantity exported, and there was taken in this city, for home feeding, 1,549,570 in 1890–91, and 1,470,561 centals in 1891–92.

While it is too early to estimate the probable foreign demand during the season of 1892–93, yet crop advices received from Europe do not indicate a full average yield to the acre, while with only fairly favorable crop weather, it will fall below an average. Last year the outturn was not only below an average, but the grade was as a rule poor. This created a free demand for malting barley from this coast, Canada, and other supply sources.

The State Press.

Modesto *Herald*: "Kern, Tulare and Fresno counties furnish illustrations of the great benefits of irrigation. A desert waste has there been rendered wondrously productive, and opened up to settlement, civilization and wealth. Land there that a few years ago was considered utterly worthless, or only useful for a few months in the year as a sheep range, now is worth from $100 to $1000 per acre; and unnumbered vines, and miles of orchards, and broad fields of waving grain, and villages and growing cities, mark the trackless wastes of former times."

Woodland *Democrat*: "The people of California have not, at any time, received direct benefit from any official act of the Railway Commissioners, and the proceedings of the last session, if correctly reported, should be sufficient proof that they never will."

Speaking of recent Chinese legislation, the Grass Valley *Tidings* says: "If the judges are disposed to favor the people of the Pacific coast rather than the unwelcome aliens, the danger from this source will not be very serious. Judges Morrow and McKenna can be trusted in this connection, we think."

The Canal Question.

LAMANDA PARK, May 15, 1892.

TO THE EDITOR:—The Nicaragua canal completed will be a great thing for the commerce of the world. It will be especially beneficial for Australasia, the large equatorial islands eastward of Sumatra, the east coast of Asia and for the western coast of North and South America.

The construction of this canal meets with the approval of a vast majority of our citizens. There is, however, some disagrement as to the means by which the canal is to be constructed.

This disagreement is exceedingly useful in causing an examination of the present scheme of a private company to construct and manage it. The scheme, as I understand it, is that the necessary funds are to be derived from bonds for one hundred million dollars, guaranteed by the United States—that is to say, by a Government loan. The security seems to be a first lien on the canal, with certain privileges of employing its own engineers to pass on work and of holding 70 per cent of the stock of the company in escrow, with an option on the stock at a price I have not seen named. During the period of the escrow and option, the Secretary of the Treasury votes this block of stock. This escrow and option seem to expire at the completion of the canal. I have not seen the bill, and consequently derive my impressions from its friends' statements in the papers.

Assuming this statement to be substantially correct, we next wish to know the option price and who is to get the money should the Government choose to buy. Here is a point that I am either misinformed about or that needs some light. Then what voice has the Government after the expiration of the option should it not buy?

It is not to be presumed that the gentlemen who are said to have risked some six millions on the enterprise are expecting to go without any profit. It is reasonable that they should have a good round reward for their work and risks, but we should have a clear idea of what this amount is to be and where it is to come from.

The American people have always been too impatient in examining bounty and subsidy and guarantee schemes that were asked for on the grounds of a general public benefit. The resulting laches have ended in the most oppressive and the most corrupting monopolies we have. The subsidized Pacific Mail Steamship Line is operated on the cleanest dead-cinch plan that is anywhere extant. Nothing like it exists. The subsidized Pacific R. R. combine is another gigantic oppresser and political corrupter born and reared on Government guarantees and subsidies. The subsidy-bounty guarantee scheme has so far worked for the enrichment of a few while the people of government have been defrauded. We are certainly justified in a close examination of this new guarantee scheme, to see that our past experience is not repeated.

Assuming, again, that the bill now before Congress does give sufficient security for the proper expenditure of the Government loan and for the management of the canal in the public interest without the payment of some vast sum for stock, we still have the danger of further congressional modification, which would destroy both of these. Take for instance the change procured by the Central Pacific R. R. in its Government debt. The Government held a first mortgage on this property, but by Act of Congress this was released and the Government mortgage was changed to a second lien and the security absolutely destroyed. With the powerful lobby now constantly maintained in Washington by the protected and bountied interests, a lobby all powerful in legislation, we must admit the danger of a similar hocus pocus under similar inducements.

Mr. Pool recently called attention to the extraordinary concession for the exclusive navigation of Lake Nicaragua by a certain company. Capt. Merry replies that this concession expires in 1895, and that any way the canal company holds an assignment of it. All these things, and many others, are subjects for careful examination. There should be a sort of abstract of the whole record presented together with the present Senate bill. By the way, the senators named as advocating this bill are supposed to be very close to one or another of the largest corporations in this country. Sherman is a general all-round monopoly man. Dolph is quite friendly to the Northern Pacific. Edmunds, when a senator, frequently appeared in the Supreme Court as counsel for the Pacific roads; thus, with Evarts acting as their special hired advocate before one department of the Government while themselves legislative judges of these railroads in another department.

Capt. Merry goes on to say that the Nicaragua Government has expressed its intention of granting no mo e exclusive rights of navigation over its internal waters. If the navigation of Lake Nicaragua—the key to the canal—rests on the mere expressed intention of the local Government to let it alone and not grant it away, we have at once a need for further guarantees. A Central American Republic's expressed intention, I should say, was inadequate.

The arguments offered by the friends of the private corporation are largely open to question. Mr. Jno. T. Doyle says that the rate of the canal tolls will be proportioned to its cost. If the canal is operated by a private concern on business principles, the cost will play no part in the toll charges. In such c. se, the charges will be fixed at a rate that will insure the largest possible returns to the company. It will consider the capacity of the canal, the development of commerce by its advantages to the full use of this capacity, and fix the charges accordingly.

Whether the canal costs one hundred billions or one hundred millions, affects in no way the gross revenue the canal will bring in, and would certainly affect in no way a business man controlling it in fixing his charges.

The claim that a musty and forgotten treaty with England prevents the United States from building this canal directly, while allowing it to do so indirectly, seems to me very weak. The further claim that the concessions of the Central American Governments for 20 years to this company will keep others out, is more tenable. But these gentlemen of the company are either on the make or they are patriots—perhaps a little in both lines. In either case, they can be arranged with on liberal terms to relinquish their rights and have them renewed to the United States. The Canadian canals and the Sault St. Marie and Erie in this country, show that Provinces, States and the United States can build and manage canals without the intervention of private companies.

I agree with Cannon that the Government should be all or none in this canal. Less complication, less temptation, less danger of abuse and fraud, and less danger to the public users to have it either all one way or all the other. By all means, let us see the contracts and the bill, then we can obtain a clearer idea. I believe in the canal and I believe, too, that the cheapest and best way to build and manage it is to pay the present six-million-dollar-investment men their profit and have it over with, and get rid of all the entanglements the mixture of public and private interest must bring.

ABBOT KINNEY.

Some Extraordinary Questions.

FRESNO, Cal., May 16, 1892.

TO THE EDITOR:—Suppose the Senate bill to give government aid to the Nicaragua Canal should become law; that the Government, by its assistance in construction, or by additional payments in construction, should become owner of $70,000,000 of the one hundred millions of stock; that the Secretary of the Treasury hold that stock in trust and six men as directors, in a total of 15 directors, represented the Government's or people's interest in the canal, and voted the Government stock, what would there be to prevent one or more of the Government Directors from misrepresenting the Government or people's interests and selling out?

The representative system, wherever applied—whether in Government or business, as it now exists—has one serious defect—it leaves the men chosen, in place of a numerous body of others, free to be representatives or misrepresentatives; as free to be misrepresentatives as anything else. The Senate bill does not say how the Government's Directors should vote. It does not say, there is no bill whatever, before Congress, saying what the Government or people's interests are, nor how the Government Directors should vote in case they come into being. It does not fix a maximum rate of toll. What surety have we, then, that the Government Directors, or some of them—enough to give a majority of stock on the side of the private corporation directors—would not yield to the blandishments of private capital or the pressure of political intrigue when in office, and misrepresent the people? How can a man be a representative unless he is (1) instructed plainly as to what he is to do and (2) obeys his instructions. The man who wields power derived from the people by their vote or appointment, by those elected by them, is a delegate, and not a representative; and it is that kind of Government Directors which the Senate bill provides for the creation of.

I am for the building of the canal, and by the Government purchase of stock, if the difficulty I have indicated, if the danger of misrepresentation by Government Directors can be destroyed, but if Government Directors are to be left free to misrepresent the people's interests, then I agree with Pres. Cannon that a Government partnership with private capital is dangerous to the interests of the people. And the reason is plain, for it would be manifestly to the interest of the private capitalists to put on as much tariff as the traffic would bear, and to the interest of the Government (if it represented the people) to make the tariff as little as expense of operation would permit. The consequence would be a continual conflict of interests, and we know that "a house divided against itself cannot long endure." The Canal Company would soon become all Government or all private, and necessarily so.

F. P. COOK.

If in the nature of things it were possible to instruct the directors "how to vote," then it would be unnecessary to appoint directors at all, since the ends sought might be reached by statute. It must be presumed, just as it is in the case of members of Congress, that the directors representing the people's interest would by their votes support that interest. If our correspondent really believes that six true men cannot be found for the service he must be far gone indeed in pessimism. As to the further question, namely "How can a man be a representative unless he is instructed as to what he is to do; and obeys such instruction?"—this is really too silly for serious consideration. Any man may be a representative who is chosen to represent, and he may be instructed or not. In nearly all representative systems the representative is not instructed, since in the nature of things, instruction would be an impossibility. How, pray, could representatives elected to Congress be instructed how to vote concerning matters as yet not before the public? The question is a pure and simple absurdity.

It is not true in the sense it is assumed by our correspondent, that a "house divided against itself cannot stand." In every chamber of government administration—in every board of administration concerning large affairs—there is constant division. Congress is not unanimous and yet it contrives to "stand" pretty well; there is never unanimity in any political party but they manage to "stand" nevertheless. Whoever heard of a railroad directory in which there was not constant clash of judgment—still they work pretty steadily toward profitable ends.

In going into this canal project the people will have to take the chances of getting faithful and true representatives just as they do in the greater business of general government. Sometimes the wrong men are chosen for governors and presidents and so, sometimes, wrong men might be chosen for directors of the canal. But the fear that opposes the canal project because bad men might get into the directory, should, to be consistent, decline to support the system of representative government because the administration may get into bad hands. There is no department in the affairs of civilized life in which dependence upon the integrity of others does not play a part; and the experience of society is that there are more honest men than rogues.

For the Canal in any Honest Shape.

CARMEL VALLEY, May 17, 1892.

TO THE EDITOR:—I don't think my last letter justifies Mr. Doyle in classing me with those opposed to Government's joint ownership of the Nicaragua canal. I merely wished to point out that there were no insuperable obstacles to an *entire* ownership by the U. S. Government, or at least none that C. P. Huntington or Jay Gould, if they ran the Government, would allow to remain insuperable; nor do I yet see, after all Mr. Doyle has urged, that a Government ownership, *if desirable*, might not be arranged by negotiation with all parties concerned. In fact, Mr. Doyle seems himself to desire a a real, if not nominal, Government ownership. "The company," says Mr. Doyle, "is to transfer to the United States seventy per cent of all its stock and security," etc., and this "can be voted on by the Secretary of the Treasury." So long as the Secretary of the Treasury is true to his employers, the people, there should be no fear of oppressive tolls. Unfortunately, too many of the people's servants are like Ginral C., that "that dreffle smart man," in the Biglow Papers, who had

> "Bin on all sides that give places or pelf,
> But consistency still wuz a part of his plan,
> He wuz true to one party, and that wuz himself."

But if we cannot trust our Government honorably to husband the people's resources and uphold the people's rights when thus controlling a majority of the stock, I don't see how we could look for anything better if the entire membership were vested in the Government.

Further, I am much opposed to enlarging our already too cumbrous political machine. Unless civil service reform were so faithfully carried out as to insure tenure of office during good behavior and efficiency capacity, the canal would become for the party in power an instrument for the debauchery of voters. There are already far too many "spoils" for the "victors."

I think the ideal plan would be a joint international ownership, and a joint international treaty of neutralization, as in the case of the Suez canal. Failing that, I am prepared to vote for the canal in any shape we can get it, built and owned by the U. S. Government or by private company with governmental aid. Uncle Sam ought to have his eye teeth cut by this time, and should be able to protect his family from being outwitted by a few adventurers. It should be easy to insist on a strict economy in building and to insist on only a fair profit being exacted in tolls.

So I want to be on record as hurrahing for the canal in any honest shape! May it be built without a days's needless delay.

EDWARD BERWICK.

Santa Barbara County Notes.

CARPINTERIA, May 16.

TO THE EDITOR:—While the rain of two weeks ago will benefit fall crops, it has not been of any particular benefit to hay and grain as they were already so far advanced that they could not be much renewed.

Prospects are very good for beans and corn. Not nearly so many Lima beans are being planted as usual; the low prices for them causing farmers to plant corn and small beans. Many blackeye beans have been put in on contract, the price for them being two and one-half cents per pound.

Fruit and nuts are promising well and growing finely, except some varieties of pears and plums.

A great many lemons are being set out in Montecito and Carpinteria valleys. The lemon thrives wonderfully well in this section and is never bitten by frost. Santa Barbara lemons are always salable at higher prices than any other in the State. Harleigh Johnson, of Montecito, has done much to bring this about as he has made a study of the curing and packing of lemons as well as oranges, and now cures and packs the bulk of all citrus fruits sent from the county. Santa Barbara oranges are also enjoying a boom this year as they are entirely free from frost bites.

Heavy shipments of Lima beans are now being made as prices came up to two cents per pound and many concluded best to unload their crops, although that is still a low figure.

The asphaltum business promises to be heavy, and extensive works are being put in at Carpinteria and preparations made to ship heavily.

Santa Barbara is busy laying her outfall sewer and building the "Esplanade Del Mar." H. R. Richardson has applied for a franchise to construct an electric motor road from the city to Montecito.

The County Horticultural Society has begun to hold monthly open air meetings in the country, as is usual all the summer months. Last Wednesday the society met at Jno. Spence's and will meet again on the first of June at J. A. Blood's place in Carpinteria.

L. B. CADWELL.

Fewer Raisins But Better Ones.

HANFORD, CAL., May 18, 1892.

TO THE EDITOR:—You can, if you wish, say over my signature that the frost of April 10th here damaged the first crop of raisin grapes in the entire Lucerne valley fully one-half, possibly two-thirds of what it otherwise would have been. This frost, together with the subsequent unusually cool weather, has also so delayed the second crop as to cause a serious probability of its not ripening sufficiently early to be cured into raisins. Such serious destruction of fruits by frosts has never before occurred in this part of the State, and the real damage suffered by raisin growers here in consequence is just being realized by them. The result is really disastrous, and it can safely be said that the quantity of raisins produced in the Lucerne valley the present year will fall far below that of 1891, notwithstanding the large increase in acreage just coming into bearing, but the quality will be better than in any previous year if the fruit is well cured.

Speculators in land and dried fruits here and in Fresno have, and still do, as a rule, strenuously deny that any serious damage has been done to the incoming raisin crop by frosts in the upper San Joaquin, but growers, who are best qualified to know, and who have investigated the matter thoroughly, say otherwise, and as I believe that it is not only right but best that the truth be known, particularly in matters of this kind, I have said what is herein written.

A. F. JEWETT.

Weather and Crop Bulletin for Week Ending May 13th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Humboldt County.—Eureka—The weather has been warm, with a fair amount of sunshine, which greatly improved the fruit crop. The number of rainy days and the amount of rain, however, have been detrimental to the potato and cereal crops. *Upper Mattole*—The cold storms still continue, but no frost; everything backward. The prospects for grain crops are fair, and no very serious damage to fruit from the continued cold rains. *Mad River*—The weather has been favorable, and much warmer, and good growing weather; on most places, too moist for cultivation. Apples and prunes have set better than any other fruit. *Blocksburg*—The continued rain delays getting the ground ready for corn, potatoes and other vegetables. Warmer weather and sunshine is most needed. The highest temperature was 60, and the lowest 34 degrees. *Hydesville*—Oats are the principal crops in this vicinity, and are looking fine. It is thought the cherry crop will be light, the cause not known. Strawberries are ripening very slowly. *Phillipsville*—Cold and hard rains early in the week; but later, less rain and warmer. Grass has been growing nicely, and stock looks well. No frost. The fruit crop looks promising. Grain never looked better. Everybody has had rain enough, and now we all want a little sunshine.

Lake County.—Upper Lake—The unusually heavy rains of the past week have helped grain-hay, also grain; but slightly damaged alfalfa, and have done no good to fruit and grapes. There is now great need of warm, sunny weather, as everything is backward.

Shasta County.—Anderson—More sunshine would be beneficial to gardens. The fruit crop looks well. Peaches will have to be thinned out; the trees are heavily laden and large for the season. Prunes will be a large crop. Bartlett pears are good; other varieties not so good. Highest and lowest temperatures, 68 and 36 degrees.

Tehama County.—Red Bluff—The weather has been favorable to grain and hay. Haying will begin in about ten days. The present fear is too much heat after the recent cool weather. The frost on the 11th did no damage in this vicinity but was rather detrimental to fruit in the foothills. Strawberries in the market, but not so good as last year's.

Butte County.—Chico—Weather has been very favorable for the grain crop. *Palermo*—The temperature slightly higher, the amount of rain less, and the sunshine a little more, than last week, thus enabling the orchardist to plow and cultivate, which all are doing. Grain and fruits promising.

Glenn County.—Williams—Prospects continue favorable. *Willows*—Haying is well under way; crop will be a full one. Some wheat lodged, but not seriously. Peach crop a full one. Apricots very light. Prunes nearly all killed by the frosts of April.

Sutter County—West Butte—Grain is making an excellent growth; weather unusually cool for the time of year; rainfall .94 of an inch, and for season, 14.54 inches. Some alfalfa-hay spoiled by continued rains and damp weather. *Yuba City*—The weather for the week has been favorable to a large extent. Light frosts nipped some vegetables. The rains have aided late sown grain. The warm weather and drying winds have put a check on rust in the grain.

Yuba County.—Wheatland—Summer-fallowed grain is looking yellow in places, from too much rain and cold weather. Winter sown grain is doing finely. Both need spring weather. Other crops are backward.

Nevada County.—Nevada City—The past week has not been favorable for crops of any kind. The temperature has been much lower than for this season of the year, but no material damage has been noticed or reported.

Placer County.—Newcastle—Farmers are thinning peaches; prospects favorable for a good crop. Pears and cherries will be light.

Sacramento County.—Mayhew's—Slight frost on the 10th; temperature was 35; white frost on the roofs of the buildings; no perceptible damage noticed or reported. *Franklin*—The weather has been of great benefit to all growing crops. Haying will commence in a few days. All the barley and most of the wheat is headed out, and what the farmers now need is good, warm, bright, sunshiny weather, so the heads can fill.

Volo County.—Rumsey—All crops favorably affected by the rainfall, temperature and sunshine of the past week. *Briggs' Vineyard*—The rainfall, temperature and sunshine beneficial to fruits and grain. *Woodland Democrat*—S. T. Mowder returned from a trip (Friday, 13th) to Dunnigan, Arbuckle and vicinity, and reports that he had never seen better crop prospects. Summer-fallow is especially promising. The grain is as strong, green and healthy on the foothills west of Dunnigan and Arbuckle as it is on the level lands.

Napa County.—Calistoga—Fruit of all kinds will be a light crop. Recent reports show French prunes will be one-third to one-half crop; grapes on low lands, very small crop. Owing to frosts on higher lands, crops are reported not setting well, and much shortage will result therefrom.

Solano County.—Denverton—The rains have been gentle in character, but plentiful, with the weather quite cool, retarding the growth of vines and fruits. Winter sown grain doing nicely; summer-fallow fine.

Solano County.—Denverton—Cool weather still continues, and is very favorable for late-sown grain; rainfall .43 of an inch for the week. *Vacaville*—The weather continues cold and damp, which is more or less injurious to all kinds of fruit. We sadly need warm, mild, sunny weather.

Sonoma County.—Forestville—Grain is somewhat retarded in growth. Grapes at this date have received no injury, as was at first reported. The ground is yet too cold to plant corn

Hyde Ranch, near Cornwall, Contra Costa Co.—The cool weather and showers have been a great benefit to this portion of the county.

Santa Clara County.—Santa Clara—The warmer mornings and evenings have been beneficial. What is now wanted is good weather for the hay crop. *Gilroy* crops are looking well, especially late-sown grain.

Alameda County.—Alvarado—The weather has been cool except two days, with over an inch of rain. Prospects for grain, hay, fruit and vegetables are generally good; no frosts the past week. Sugar beets coming up very well. Prospects are very flattering for all kinds of crops. *Niles*—The outlook for grain in this vicinity is good. Peaches light; cherries light; apricots average; almonds fair; and prunes a fair crop. The cool weather, while not forcing fruit, will be beneficial to all kinds here.

Stanislaus County.—Turlock—Crops of all kinds have made a wonderful improvement since my last report. It has been too cool and cloudy for ripening strawberries and mulberries. *Modesto*—If any danger since my last report, it is in the weeds taking possession of many grain fields.

San Joaquin County.—Lodi—Highest and lowest temperatures, 76 and 38, with southwesterly winds prevailing. Haying just begun in a small way, two weeks later than usual; crop light; acreage rather more than usual. Some fields that were sown to wheat are full of oats and will be cut for hay; recent rains have improved the wheat, which is now heading out; the straw will be short. *Stockton*—High winds have prevailed on the 10th, 11th and 12th; but owing to the low temperature, have caused no damage to the grain crop.

Calaveras County.—Milton—Cool weather with rain has kept hay back and favored the growth of all late-sown grain, which is very backward.

Fresno County.—Selma—The weather continues unusually cool and favorable for the grain crop, which now promises well. Fruit is looking well, and an enormous crop developing, making extensive thinning necessary.

Tulare County.—Visalia—The past week has been favorable to nearly all crops. Everything the last rain helped at all is doing very well.

Amador County.—Quartz Mountain—The late rains have resulted disastrously for some of the crops around this vicinity, and have been a decided benefit to the late crops and feed on the ranges. *Baville*: Four inches of snow fell here during the last storm. Earthquakes have been quite numerous up at French Camp. They have been so severe as to run people out of their houses. *Shenandoah Valley*—The weather has been very stormy for some time, there not being a clear day during the week.

Monterey County.—Jolon—The wheat crop has improved greatly since the last rain, but fears are entertained that the continued cold northerly winds prevailing will damage crops to some extent. *San Ardo*—The past week has been favorable to the grain and fruit crops. Grain is recovering well after the severe trial it had. With favorable weather, there will be an average crop.

San Luis Obispo County.—Edna—The last rain and cool days have helped out the late-sown grain, so that there will be an average crop; fruit trees looking well, and bid fair for a good yield. *San Luis Obispo*—All crops doing finely; the land is in splendid condition for beans and other green crops. Grain is looking well; the dairymen are well pleased. The rains have given a fresh growth to feed and grasses; only a few acres of cut hay has been damaged. Paso Robles *Leader*: The rain of the past week has been worth thousands of dollars to the farmers of San Luis Obispo county. What was an almost total failure two weeks since will now make a fair yield.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—The rains have been favorable for all vegetation. Grain crops will, however, not come up to the average. Beans and corn are being planted rapidly; some well up and the ground in a good and clean condition. Fruit is holding its own. In some localities frost has affected it, while in other sections it remains untouched. J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Santa Barbara County.—Lompoc—Threatening weather prevailed during the past week, accompanied by heavy winds which dried the land prepared for beans, but did not injure growing grain. Hay-cutting has commenced; no rain fell.

Ventura County.—Hueneme—The rains of last week will require some beans to be replanted. The weather has been favorable to growing crops during the past week. Haying still continues. *Bardsdale*—The hay harvest is under way, and the crop is very good. The bean crop was injured by last week's rain and much of it will have to be replanted. The general prospects are most excellent. Considerable cool, cloudy weather occurred during the week.

Los Angeles County.—Lancaster—Rain fell on the 6th; since then cool winds have prevailed, which are very beneficial to grain, and the prospects for a good harvest are improving. *Rodeo de los Aguas Ranch*—Grain is filling out finely. This promises to be the best season for all crops that we have had for several years. Corn, beans and sugar beets are growing finely. Farmers are busy cultivating and haying. *Monrovia*—Cool, cloudy weather prevailed, which was injurious to the berry and fruit crops, but was beneficial to freshly planted fruit trees. *Duarte*—The weather has been cool and cloudy most of the week. The growing fruit looks well; peaches are overloaded and must be thinned. *Pomona*—The rainfall for the season beginning August 16, 1891, is 14.19 inches. The late rains did immense good and little harm; clouds every day for over a week, detrimental only to hay-making. Oranges are still being shipped by carloads, and are giving good satisfaction to buyers.

San Bernardino County.—Ontario—Hay-cutting is well under way, and the present weather is very favorable for curing. Fruit is developing finely.

Orange County.—Anaheim—The weather has been partly cloudy, with a few sprinkles of rain. Vegetable and orange shipments are still going on, and the reapers are busy cutting hay which was not damaged by the late rains. *Tustin*—The weather for the past week has been cool and cloudy, but crops are growing well. The rain of the week before damaged hay on the ground somewhat, but it was of much benefit to pasture, late grain, corn and other crops. Oranges are still being shipped, and with a better market. Cabbages and potatoes are going forward to Eastern points. G. E. FRANCKLIN.

FRUIT MARKETING.

The San Jose Convention of Fruit Producers.

Steps Toward an Organization and a Fruit Exchange.

We alluded last week to the significance of the convention held in San Jose, May 7th, and promised details, which may be found below:

There were about 400 in attendance, some coming from considerable distances. The meeting was called to order by F. M. Righter, president of the Campbell Horticultural Association. Colonel R. P. McGlincey of Campbell was chosen chairman of the convention, D. W. Miller and S. G. Rodeck were chosen secretaries, and, on the suggestion of Colonel McGlincey, D. C. Vestal and Captain E. A. Wheeler were unanimously elected vice-presidents.

Chairman McGlincey read the call issued by the Campbell and Doyle fruit growers for the convention. This call sets forth that the objects of the exchange will be to establish a fruit exchange, for selling our products for cash at home, or at the terminal shipping point of this valley; second, to adopt a uniform method of preparing our fruits for market; third, to devise some means of consuming our products; fourth, to devise some means of obtaining reliable information of the supply and demand, both domestic and foreign; fifth, to adopt some measure tending to preclude the competition, now so injurious among the growers; sixth, to obtain for our products what the law of supply and demand entitles us to; seventh, to have a voice in establishing and maintaining the price of our products; eighth, to provide storage room, issue warehouse receipts for stored fruits, and make advances on same; ninth, to establish and maintain a brand of fruit, if possible, of unequaled excellence; tenth, to buy for members of this Fruit Exchange in large quantities, and, consequently, at wholesale prices, such indispensable articles as sulphur, sacks, trays, boxes, etc.; eleventh, to secure more favorable freight rates; twelfth, to discuss the propriety of an exhibit at the World's Fair at Chicago in the interests of the fruit growers themselves; thirteenth, to obtain reliable statistics of this year's crops and a comparison with last; fourteenth, to discuss such additional measures as will subserve our further mutual interests.

On motion of Mr. Adams of Wrights, two committees, one on organization and order of business, and the other on the Dried Fruit Exchange, were appointed, as follows:

Organization—Colonel E. G. Hall of Doyle, E. H. Hazelton of Evergreen, J. J. Shaner of Saratoga, W. H. Wright of San Jose, and George Blaine of the Willows.

Dried Fruit Organization—C. C. Agee of Solano, A. L. Bancroft of San Francisco, Col. Philo Hersey of Doyle, F. M. Righter of Campbell, and I. A. Wilcox of Santa Clara.

The committees were about to retire when Colonel Hersey was called upon to speak. He responded by making a clear statement of the workings of the West Side Fruit Association. He stated that about one year ago the fruit growers in Cupertino district were troubled about handling fruit profitably. There were numerous talks and several meetings, with the result that the association was organized. It is a joint stock association, and last year handled between $40,000 and $50,000 worth of fruit in a manner to the satisfaction of all interested. He advocated the formation of an exchange immediately, for the reason, as he said, that inside of, or at the end of five years, Santa Clara valley would ship more dried prunes in one season than have been consumed in the United States in any one year. The advantage, he said, was to do away with individual competition.

The convention adjourned till 2 o'clock to allow the committees time to prepare their reports.

Upon reassembling at 2 o'clock, the committee on permanent organization made its report, as follows:

"We, your committee on permanent organization, beg leave to report, as follows: We recommend that an exchange be formed, consisting of the fruit growers and driers of Santa Clara county and those to whom San Jose is the natural terminal point.

"That its name shall be the Fruit-Growers' Exchange of Santa Clara county.

"That the exchange incorporate and that the capital stock be $200,000, divided into $20,000 shares of $10 each.

"That the object of the exchange be the grading, handling and marketing of dried fruits owned or controlled by its members, and that any person owning one or more shares of the capital stock of the exchange shall be entitled to all the benefits of said corporation.

"We further recommend that the corporation be managed by a board of directors, consisting of not more than nine members, and that the chair appoint a committee of five to draft a constitution and by-laws for the exchange.

"We also recommend that a list be circulated at once for subscriptions to the capital stock of the proposed corporation. All of which is respectfully submitted.

G. BLAINE,
E. H. HALL,
J. J. SHANER,
E. H. HAZELTON,
W. H. WRIGHT."

The report was adopted, and as a committee to draft a set of by-laws, the chairman appointed the following: Col. Philo Hersey, F. M. Righter, Adonis Ball, G. W. Tarleton. Colonel McGlincey was added to the committee.

The report of the committee on the organization of a Fruit Exchange was then read and adopted, as follows:

"Your committee on the establishment of a fruit organization or exchange beg leave to make the following report:

"First—For the purposes for which this meeting was called, considering the extent of territory to which the call applies, your committee recommend the organization of districts throughout Santa Clara county, with a central organization for the sale of the products. The plan of the organization of the West Side Fruit-Growers' Association is approved, as far as we understand it, and we believe the interests of the fruit growers will be benefited by such corporations.

"Second—Your committee further believe that the fruit-growers' interests will be further subserved by a State organization, combining all the localities of the State where fruit is grown and prepared for the market. Said organization being for the product and making and enlarging the market, as well as having authority to establish market prices. And we approve of the call recommended by the committee of the State Horticultural Society, as published in the PACIFIC RURAL PRESS of May 7th.

PHILO HERSEY, Chairman,
A. L. BANCROFT,
F. M. RIGHTER,
C. C. AGEE,
I. A. WILCOX."

C. H. Allen then brought up the matter of the State Fruit-Growers' Convention, which is to be held here November 22d, and upon his suggestion a committee of ten was appointed to make arrangements for the convention. It is expected that there will be about 800 people present from different parts of the State at the convention. Following is the committee appointed: S. P. Saunders, F. Dunne, D. C. Vestal, G. Duncan, C. W. Proctor, W. L. Worthen, J. Shaw, J. S. Selby, H. W. Edwards and Mr. Crandall.

The convention then adjourned to meet in two weeks. After the adjournment of the convention the committee appointed to make arrangements for the State Fruit-Growers' Convention, which will be held in this city, met and elected Colonel R. P. McGlincey, chairman, and C. H. Allen, secretary. The committee then agreed to meet again immediately after the adjournment of the convention, which will be held May 21st.

THROUGH SHIPMENTS TO LIVERPOOL.—Arrangements have been made by the California Fruit Transportation Co. of Chicago with the White Star Line by which weekly shipments of the fresh summer fruits of California will go out to England. The four steamers Teutonic, Majestic, Britanic and Germanic are being fitted up with special refrigerator room, capable of holding up to five carloads, and each week through the summer this quantity will probably go out to Liverpool, commencing just as soon as the fruit is ready, some time next month, probably. This arrangement, we are informed by the C. F. T. people, has been made by them for the benefit of all, and no one shipper is to have an advantage over others. A through rate per car will probably be made from California to Liverpool, and it is not expected that the time will take more than 16 days from the Pacific coast to the English market.

POULTRY YARD.

Ostrich Farming in California.

NORWALK, LOS ANGELES CO.

TO THE EDITOR:—It is now ten years since the first ostriches were imported into California and located at Anaheim, in Los Angeles county. Owing to the interest taken in these birds by tourists, ostrich "farming," in its literal sense, has been somewhat neglected, the owners of birds securing locations near large cities and pleasure resorts, where the admission fees of visitors form the principal item of profit. At my farm here, at Norwalk, these form quite a secondary consideration, the production of feathers and chicks being my chief aim.

A short account of my ranch and the treatment of the birds will be of interest to your readers. I brought my ostriches from Africa in 1887, so have had considerable experience in the business, and have proved that they can be raised successfully in California and will hold their own as a source of profit with any other kind of stock.

I have now 49 birds and, as this is the laying season, expect to hatch several more in the next few weeks. Eight pairs or trios are coralled off as "breeders," each pen being about 100x150 feet; the balance run together in a paddock of about one acre, with the exception of those under six months, which are again kept separately. The fences are made with two 1x4 inch boards, the highest about four feet from the ground.

I have twenty acres of land; eight are planted to young fruit trees—between these I grow sugar beets and corn—and the balance in alfalfa. On this small farm I can raise enough alfalfa and beets to feed 100 ostriches. Beets being now out of season, I am feeding alfalfa hay, cut up and thoroughly moistened—four pounds of hay to each bird is the daily ration. The laying birds have, in addition, one pound of corn each. When feeding beets I allow ten pounds to each ostrich.

Now, as to the returns. The figures I give are the prices obtained at wholesale rates, as I sell direct to manufacturers who make plumes, boas and tips for sale to milliners, who retail to the public at a large advance. The chicks are plucked at six months old, and at intervals of seven months thereafter; the first plucking realizes an average of $4 per bird, the second $12, and the third and afterwards $20, the annual produce of a full grown ostrich, from feathers alone, being $35.

It is difficult to calculate the increase. Some birds lay almost every egg fertile, while in other cases 75 per cent will not hatch. A fair estimate would be eight chicks from a pair in a year. I once raised 30 from a trio and 23 from a pair. When hatched and allowed to run on a patch of alfalfa, they almost invariably live and thrive with very little attention.

I use incubators made by the Petaluma Incubator Co., and they answer their purpose admirably, a fertile egg always producing a chick. The birds will set on their own eggs, but by artificial incubation double the number of eggs can be obtained. The unfertile eggs have a ready sale at $15 per dozen.

The labor question is a small one. I do all the work here myself, except at plucking time, when extra help is advisable, although not necessary, as I took the plumes from 40 birds last November without assistance. I drive the birds into a chute, having a plucking pen—about 3x6 feet—at the top, with a door at each end. As soon as a bird gets into this pen I slip a hood over its head, and, thus blindfolded, it gives little trouble.

At the present time there are in Cape Colony 150,000 domesticated ostriches, and that country has almost the monopoly of the industry. Auction sales are held in London every two months. In March 42,000 pounds of feathers were sold for £92,200 ($461,000), all being imported from South Africa. A duty of 25 per cent levied on raw feathers imported into the United States gives farmers here an additional profit. This industry has been thought so valuable to Cape Colony that the Government has levied a duty of $500 on every ostrich exported.

One of the reasons why ostrich farming has not become more popular in California is the high prices birds have been held at, and the exaggerated accounts that have been published of the profits to be made. I have, however, sold between 60 and 70 birds, and have supplied the stock to start the farms at Santa Barbara, Arizona and the Sandwich Islands. In each of these instances many chicks have been raised.

From the above short account of this interesting industry any one can estimate the profits, and, although not fabulous, they will compare favorably with those to be realized from any other kind of stock. EDWIN CAWSTON.

THE DAIRY.

Good Cows in Plumas County.

BECKWITH PASS.

TO THE EDITOR:—I was much interested in the amount of milk and butter given by different cows at several State Fairs, as told by Mr. Ashburner in his article "Red, White and Roan," in the RURAL PRESS of April 23d. I was somewhat surprised at the amounts of milk being no larger than they were, as I had no idea to what cows would be expected to attain which would win premiums at State Fairs. I am glad to know what may be expected of a first-class dairy cow. It would certainly be "a consumation devoutly to be wished," if more people knew exactly what their cows would do.

My husband has always been a believer in good stock. Our cows are graded Shorthorns. We occasionally have cows give over fifty pounds of milk a day some little time after coming in. Happening to be at the ranch of one of our nearest neighbors one evening at milking time, our neighbor, a Swiss gentleman, was weighing the milk from two of his cows, and they had given 52 and 53 pounds of milk in 24 hours. At one time, I remember we had a large full-blood Shorthorn heifer which was three years old some time after having her first calf. We weighed her milk 33 times during the first six months after she came in. We have no way to test milk except in the glass testing-tubes. Of course we do not keep cows whose milk does not give a good amount of cream. Counting 20 pounds of milk make a pound of butter, we made 216 pounds of butter from this heifer in six months. Her milk was not kept separate, but from weighing it the 33 times in six months, and counting 20 pounds of milk a pound of butter, we made our calculations. She averaged 33 pounds of milk a day for the first three months, and 24 4-5 pounds a day for the next three months, from April 1st to Oct. 1st. The largest amount given at any one milking was 28 pounds. Of course she gave milk some time longer. By weighing frequently, we considered we made 260 lbs of butter from the heifer with her first calf.

Another heifer, a three-quarters Durham, according to the same method of figuring, made 223 pounds of butter with her first calf.

We have weighed some of our cows' milk at regular intervals through the season, and have had results of from 200 to 270 pounds in a season, though we have had some better milkers whose milk we have not weighed regularly, not always having time to attend to the weighing of milk at regular intervals. Recently I weighed a cow's milk repeatedly after she had been giving milk ten months. She gave from 20 to 22 pounds a day. These results were when cows had only sagebrush pasture. We often wonder why more people do not tell what they are doing with their dairies. MARY P. ARMS.

ENTOMOLOGICAL.

The Cankerworm in the Orchard.

Fruit Notes from Santa Clara Valley.

The cankerworm is with us in greater numbers than last season, and promises to increase and multiply still more in the years to come. That we must fight them is self evident, if we would save our trees, and how to do it most effectually is not easy to determine. We are not favorably impressed with the idea of spraying our trees with Paris green or other poisonous preparations, even if by doing so a general killing of the cankerworm would result. It seems that trees that have supported the worms for a time, until the leaves are more or less perforated, are much more liable to injury from spraying than when the leaves are entire. Whether spraying with material strong enough to kill the the worms will also kill the lady bugs or not is a question, but we who have been so greatly benefited by them are in no hurry to see them go. We would prefer to fight the cankerworm some other way, and not give the scale a shadow of an excuse to return to our orchards. While our chickens have been some help both last fall and now, it seems that they cannot keep them in check without help, so we are helping them in the way generally adopted in this valley. First the trees are banded with a strip of paraffine paper about five inches wide. The band is put about the trunk just below the branches, and held in place by two tacks driven through the ends where they overlap. Second, fine earth is thrown into the tree with a shovel, and most of the worms fall to the ground or are left hanging by the web. Those left hanging are cut off, after a vigorous shaking of the tree, and then the band is painted with printer's ink. The printer's ink that we use is a very cheap grade, costing 12⅔ cents per pound in 20 pound lots. We thin it with whale oil until it flows nicely from the brush. It is an effectual barrier, and if every worm could be shaken from the trees, the extermination of this pest would be only a question of expense. But many worms remain in the trees even after two or three shakings, and, although not enough to do any serious damage to foliage or fruit, there are enough to produce altogether too many worms next year. Banding the trees in the winter has been tried by a number of fruit growers in this section with generally good results. After the first rains in the fall, the female, which has no wings, ascends the tree to deposit her eggs, and she is not stingy with them, either, for, if the conditions are favorable for a good hatch, the work of one specimen will loom up in the spring as 300 or more healthy worms with hearty and increasing appetites.

If the banks could be kept moist and sticky during the winter, that would be the best time to fight them, and I am inclined to think that it is, anyway; but after a rain, if the bands are not immediately painted with fresh ink, the little pests will go up the tree without any trouble.

The cankerworm in our orchards seems to prefer the apricot and the apple, English walnut, cherry and prune in their order. They do not trouble the peach at all. Up to this date the English walnut has had no enemies, and on the strength of that fact, no doubt, many trees have been planted. It therefore behooves every one who has a walnut grove to be on the lookout for the cankerworm, and not allow it to spread.

Thinning Apricots.—In addition to fighting the cankerworm, the usual orchard work is going on, cultivating, hoeing around the trees and fences, etc. Next week we will begin to thin apricots, which with us are a very uneven crop this year. Probably half of our trees are well loaded, a quarter with half a crop, and the remainder very scattering. Thinning apricots requires judgment and experience to do the work well and rapidly. A general rule is to leave only one 'cot in a place and separated two to eight inches, according to location on the tree. The short, vigorous spurs on the larger branches will sustain more fruit according to space occupied than farther out on the smaller and longer branches. It pays well to thin apricots properly. The fruit is of better size and color; about the same weight of fruit will grow on a tree, and with less effort, as there are not so many seeds to produce. Well-thinned fruit is better for drying, canning, or shipping green, and, above all, trees that are not allowed to become overloaded will grow larger and better each year, thus increasing the value of the orchard.—H. G. Keesling in California Cultivator.

THE FIELD.

The Squirrel Bounty.

The squirrel bounty is stimulating increased activity among rodent hunters at this season of the year. Last month over 36,000 squirrel vouchers were received by the county clerk, one party from Bradley sending 21,755 tails. The exact amount paid out on squirrel tails received for April was $1085.37. This is a good time of the year to destroy the pests, as every one destroyed now is as good as a dozen destroyed in the fall. Although the bounty makes something of a vacuum in the county treasury, the increase of assessable property from the destruction of these crop destroyers will eventually more than fill the hole. Those who vigorously made war on the squirrels last year find a satisfactory decrease of the squirrel population on their places this year. As squirrels are colonizing brutes, the killing of them in sparsely settled regions is a benefit to the more thickly settled sections. It is barely possible that the county is paying for imported squirrel tails. When this county was paying bounty on scalps and San Benito on tails, it was charged that the tails from this county all went to Hollister and the scalps from San Benito county all came to Salinas, and that the squirrel hunters, as the gambler would say, were double-shotting the turn. Consequently, this county took a tail hold on the squirrel question. For a variety of reasons, the best evidence of a dead squirrel would be his pelt. It is stated that an important industry in the sewers of Paris is the destruction of rats to get the wherewithal for fine French kid gloves, and it is further stated that the pelt of a squirrel is infinitely superior to that of a rat in strength and fineness of texture. It would no doubt be a judicious departure if our county fathers would offer their bounty for the pelts, so that some enterprising individual might engage in the manufacture of French kid gloves in California, and protection to home industry and American labor be thereby effectually secured. The county would then be getting rid of its squirrels, and the enterprising American workman would be getting $1.50 a pair for his squirrel skin French kids, and there would be an exemplification of the old adage of killing two birds with one rock—getting rid of the squirrels and making the squirrels pay for the ammunition to compass their own destruction. The showing on the face of the returns is suggestive of the necessity of general legislation upon the subject of squirrel extermination. The agriculturists of all the counties in the State appreciate the necessity of action for the eradication of these pests, but not all of the counties offer bounties. The philosophy of the situation amounts to bounty-paying counties putting up for the dead squirrels of the nonbounty paying counties. San Benito county pays a five-cent bounty, and it is stated that there are citizens of this county base enough to export the home product to our sister county for the extra two cents of bounty. To be sure, the venue of the killing has to be laid, and men have to swear that it was done within the municipal jurisdiction where the bounty is claimed, but the yawning doors of the penitentiary seem to have no terrors to seekers for public plunder. A squirrel bounty law that is not adopted by all counties, and is not uniform in the counties adopting it, seems to work like the coyote scalp law of the State, which brings in scalps from Arizona, Nevada, New Mexico and Colorado. These scalps are coming in countless throngs to the authorities of every county of the State. The offer of a bounty on coyotes, the exterminators of squirrels and rabbits without fee or reward, and the payment of a bounty on squirrel scalps is like sowing money with both hands. It is a contradiction of economic terms. Its futility is comprehensively expressed by ex-Supervisor Pinkerton, who says he will give $5 for every able-bodied live coyote brought to his place.—Salinas Index.

The Assessment of Hop Roots.

Just as we went to press last week there came a dispatch from Sacramento stating that the State Board of Equalization would hold to its decision to tax hop roots apart from the land. The following fuller statement of the subject is found in the Sacramento *Bee* of May 10:

In January last, the State Board of Equalization issued a circular directing county assessors, in assessing "improvements," to place a separate valuation on "trees and vines." Hop growers, it appears, inferred from this that the assessments on their vines were to be increased, and on yesterday a committee, consisting of Dr. Durst of Wheatland, L. F. Long of Mendocino, Daniel Flint and E. J. Croly of Sacramento, waited on the State Board in reference to the matter. County Assessor Irvine was in attendance by invitation.

The members of the Board explained to the committee that the object of the portion of the circular referred to was that county assessors must segregate "improvements"—that is, that they should not aggregate under that head fences, houses, vines, etc. For the information of the committee, the law defining "improvements" was read, and included are "all fruit, nut-bearing or ornamental trees and vines not of natural growth. The decision of the Supreme Court in the case of Cottle *vs.* Spitzer (65 Cal., page 456) was also read.

During the discussion, Chairman Moorhouse said that he had been informed that Mr. Long, a member of the committee, had threatened that he would not obey the law; that he would not pay a tax on his hop roots, and that he would appeal the matter to the supreme court.

Mr. Long acknowledged that he had so stated, but said he had modified his views after hearing the law and decision read.

County Assessor Ireine also took advantage of the occa-

sion to deny that he had ever said that the State Board had ever fixed a rate for the assessment of hop roots and alfalfa.

The committee departed satisfied that their visit had been occasioned by a misunderstanding. It is certain, however, that they are not satisfied with the situation. A prominent hop grower said to a *Bee* reporter this morning that he cannot see the justice in assessing a hopman's crop before it is produced, and then assessing it again after it is produced and in the bale. In the first place, he declared, they assess something that is not tangible, as they simply put on so much per acre, and without knowledge as to whether there will be a good crop or none at all. Then, after the crop is harvested, the baled hops are assessed again. County Assessor Irvine assessed over $21,000 worth of baled hops last year, and in San Francisco over $27,000 worth were assessed. It is quite likely that an effort will be made to have hop roots included in the list of growing crops.

THE APIARY.

Another Glucose Story.

NORTH TEMESCAL, May 13, 1892.

TO THE EDITOR:—An Eastern correspondent of *Gleanings in Bee Culture* makes a very serious charge against the honesty of California canned goods, especially of jellies and honey. The indictment is too serious to pass unnoticed. If not run down and proved false, it will do the industry much injury throughout the country, as it will be no doubt copied into other publications. If the charge is as stated, our horticultural societies should see that the practice is at once stopped.

The correspondent referred to, says in *Gleanings* that his brother, who has worked in canning factories in California, writes that "all their jellies and all their extracted honey" put up where he worked were three-fourths glucose. This Californian brother further informs his Eastern kinsman that he "was never so surprised, for he thought where such a supply of pure product was obtainable, such things as adulterants were never used."

Well, it is no wonder that he was, provided that what he states about glucose is true. I doubt very much if it is so, and the writer of *Gleanings* has done the fruit and honey industries of this State a great injury by publishing such a statement without any evidence to maintain it. As there is a Beekeepers' Union which prosecutes all who injure beekeepers, and, also, defend them against unjust lawsuits, this matter might have been quietly turned over to this union for investigation.

I shall not assign any wrong motives to *Gleanings* for using the above statements; in truth, that journal seems to have done it in the interests of beekeepers, for it tacks on an editorial footnote stating that it is not satisfied to let the matter rest here; that it would like to have affidavits and legal advice from California. Yet, in my mind, this is a case where we might exclaim, "Save us from our friends."

A story almost like the above was started in the East about 13 years ago, and at that time I called the attention of the RURAL PRESS to the matter. The editor noticed my communication editorially, and, if I remember rightly, held that as the pure articles were cheaper here than the adulterants, it was not likely that fraud would be practiced by placing spurious articles on the market. Again, in 1883, I noticed in these columns an attack in *Chamber's* (London and Edinburgh) *Journal* on American canned fruits, and, more especially, honey, which the writer in the *Journal* asserted was adulterated before it was shipped to England.

For the fair name of our State let canners be very careful in putting up their goods; use nothing in the way of adulterants, or anything that will depreciate the value or merit of our California products. Let eternal vigilance be the watchword of every canning establishment. See that everything that goes into a can or glass jar is genuine—the natural product, as far as possible, of the great God-blessed fruitful land. W. A. PRYAL.

Fruit and Bees.

MT. BLOOM APIARY, MURPHYS, May 10, 1892.

TO THE EDITOR.—Throughout the blooming of the fruit, there has been a steady fall of rain; in consequence the fruit notes of the RURAL show from a partial crop to an entire failure throughout the State. In some sections this is due to the frosts, but in most sections is charged, as in past years, to the rains.

In the report of the fruit prospects of Sonoma Co., a fruit grower states that, "Just as the fruit was coming out of the bloom, and before the fall of the flower, there was a light dust which nourishes the fruit until it is able to draw its substance from the parent stem, a heavy fall of rain at this period washed off this dust and the fruit failed to mature." That is but one of the many ways in which the failure of the fruit to "set" is charged to the washing away of the pollen by the rains.

That fruit will be fertilized to some extent by the winds spreading the pollen, is a fact, and that this wind fertilization cannot be carried out when the pollen is wet, will be admitted, but the loss is mainly from another source, which is entirely unnoticed, and which, when generally known and acted upon, must make uniform fruit crops the rule, instead of the exception.

In my trips throughout the State, in the interests of the PACIFIC RURAL PRESS, I have found a degree of ignorance among the fruit growers as a class, in regard to the offices of the bee. Prominent fruit growers, men of far more than average intelligence on every other subject, have assured me that, "the fruit growers should be protected as well as the sheepmen and every hive of bees be banished from the State."

Now I claim that the loss of fruit, other than that resulting from the frosts, was due directly to the fact that owing to the storm, the bees did not fly; did not reach the orchards and fertilize the blooms save in brief intervals between storms, which did not permit of a general fertilization of all the blooms.

In proof of the fact that the bees remained in their hives is the fact that I was compelled to feed the swarms all through the blooming season, or they would have starved to death, as did the bees of my neighbor, who did not feed. That bees fertilize the bloom is an established fact. That orchards bore more uniformly before the woods were cleared away and the wild bees driven to the mountains, is well known. That orchards in which bees are kept, produce uniform crops is due to the fact that, be the weather what it may, if the trees are convenient, the bees will reach them in the intervals of the storm while those more remote will scarcely be visited. The nurserymen and florists have long since utilized the bee to fertilize the blooms in their conservatories and nurseries.

Noticing some bee stands in the Barren Hill nursery, I asked its intelligent owner, "What is your yield of honey per stand?" and he replied "I don't keep them for their honey but to fertilize the blooms—."

In some portions of the world it was found impossible to raise seed from clover until the American bumble bee was imported. It is not necessary to go out of our own State for proof. Frank Benton in *Sunset Life* states; "In Vaca Valley, Solano Co., the cherry crop became poor, though in former years, when the wild bees were plentiful, the crop was good. The failure was attributed to north winds, chilling rains, etc. Messrs. Bassford of Cherry Glen, reasoned that the absence of the wild bees accounted for the failure of their cherry crop and to test the matter in 1890, placed stands of bees in their cherry orchard, with a striking result, for while their orchard bore heavily, other orchards but five miles distant, where no bees were kept, reported a partial or entire failure of crop. In 1891, Messrs. Bassford placed 60 hives of bees in their orchards and wrote the *Entomologist*, as the result, "Our crop was good this season and we attribute it to the bees," and added, "Since we have kept bees in our orchard our crop of cherries has been much larger, while other orchards where bees are not kept, have produced but light crops." Other orchardists are procuring bees to effect the fertilization of the blossoms, having concluded that to succeed in cherry culture a beehive and cherry tree must be planted side by side.

This is true of the cherry crop at Vacaville, where it is profitable because of the candiness of the cherries in that section. It is also true of the entire fruit crop throughout the State.

Darwin very logically explained the matter in his statement that, "Without cats you cannot have clover. The cats kill the field mice which, if not destroyed, eat the comb of the bumble bee, and by destroying the bees, prevent the fertilization of the clover."

In the same way the bee keeper produces the fruit in his section by furnishing the bees to fertilize the blooms in the neighboring orchards. E. H. SCHAEFFLE.

SHEEP AND WOOL.

Future Wool Values.

Will the recent advance in prices of wool be sustained at the June sales? The future value of wool is a question of serious concern, and while, of course, the future cannot be predicted with any positiveness, it may not be amiss to look into the present situation and analyze the factors which are likely to exert an influence upon future values. When we permitted ourselves in the early weeks of last autumn to indulge in predictions concerning prices to prevail at the January sale, we based our predictions upon an excess in supply, arising partly out of a large increase in the world's clip and partly out of a large decrease in consumptive demand, owing to the diminished earning capacity of Europe. There was no doubt as to the correctness of these premises—the only possible doubt being the condition of supplies in hands of manufacturers. The January sales confirmed our predictions.

The recent advance was probably a matter of surprise to many, but a presentation of the true inwardness of this advance will show that it was a logical result of the situation. The sale has made evident one fact—that Europeans have been running the past few months on scant supplies, and tempted by the low prices prevailing, with a reasonable assurance that prices were close to rock bottom, they were easily encouraged to go in and purchase in anticipation of future needs. The combination or agreement of German manufacturers to restrict production, and in this way to make higher prices for mannfactured goods, was undoubtedly a potent factor in advancing prices. Then, again, the increased demand from this country—a larger representation of American buyers than ever before being present—and the slightly improved tone of general trade consequent upon the promises of spring (the death of winter and the birth of spring always quickens hope) must not be left out of consideration.

Under the influence of a more active demand, the course of the market was logical; but now that the excitement of the first few weeks of the sale has passed, and calm judgment has resumed its proper sphere, the thought arises: Does the situation warrant a continuance of present prices? In answering this question, one is confronted by an array of facts very similar to those which presented themselves during the autumn months of last year. The question of supplies still remains the same—the quantity of wool available, minus the amount gone into consumption since the first of the year, is essentially unchanged. Ths solution of the question lies with the probable demand—has the latter increased, and, if so, is the increase permanent? That there is an improvement in business all through Europe is evident—it is manifest in many directions, but to what extent it will be developed or how widespread it is to be, is to be determined only by the future.

It should be borne in mind that the depression in trade throughout Europe has been exceptionally severe, and that a recovery from it must necessarily be slow, and not the work of a day or month. With earning powers greatly crippled, having for the last year, or nearly so, drawn from surpluses accumulated in previous years, the people are not yet in position to return again to normal consumptive requirements. This much for their home demand. As pertains to the demand from this side for manufactured goods, any advance in price must necessarily curtail exportations proportionately to the increase—a factor having practically no bearing, as it merely shifts the manufacturing from that side to this. In view of these facts, it would seem as though prices had much to contend against before advancing permanently.—American Wool Reporter.

HORTICULTURE.

Preparation of Fruit Specimens for the Columbian Exposition.

UNIVERSITY EXPERIMENT STATION,
Berkeley, Cal., May 13, 1892.

[The summary information given below is issued in transient form in response to an urgent demand on the part of intending exhibitors.]

The conservation of fruit samples for the Columbian Exposition, that are therefore to remain in good condition for over a year, necessarily involves more care and precautions than need be employed for exhibits that are to serve simply for one Fair season. Nor is it possible to give one sweeping formula that will serve equally well for all fruits, without any brainwork on the part of the operator. This should be distinctly understood from the outset; and the consideration that the Columbian Exposition is an extraordinary occasion, of unusual importance, should justify the exertion of an exceptional degree of care in putting up samples. This involves, not merely the following out of a set rule, but the exercise of some discretion and skill on the part of those desiring to be, and to remain, well represented at the great Fair by their products.

In the first place, the fruit should be properly selected; neither too unripe to show its distinctive features, nor so ripe as to be readily bruised in transportation. The rule should be to take the fruit *as unripe as is consistent with a proper exhibition of the size, surface texture and color.* The greatest care should be taken that in gathering and handling (the latter restricted as much as possible) not the least bruise is inflicted. It is best not to touch the fruit with the hand at all, but to handle it in a piece of tissue paper, such as is used for wrapping fruit. This can be done by holding the paper close under the chosen specimen and cutting the stem with a pair of shears, avoiding any jar or pressure. Immediately before placing it in the preservative fluid it should be thoroughly rinsed in a jet of clean water, so as to remove all dust and fungous germs as much as possible.

The *preservative fluid* must not only preserve the fruit from decay, but also from shrinkage or bursting. The latter two conditions can, for the purpose now in view, only be fulfilled by ascertaining the density of the juice by means of a "must spindle," such as is familiar to all wine-makers and can be found in any winery. The operator must then give the preservative fluid the same density as that of the juice. I have heretofore attempted to give a rule by which this density can be approximately estimated; but for such long conservation as is desired for the Columbian Fair, no approximation short of that which can be attained by the use of an ordinary spindle will serve the purpose, except, perhaps, in the case of citrus fruits, whose thick rind prevents, to a considerable extent, the shrinkage or bursting that is almost certain to befall all other fruits, unless the condition of "equal density" of the juice inside and the preservative fluid outside is fulfilled. The condemnation by the users of some of the best preservative agents has resulted from a failure to attend to this point.

The juice of fruit as unripe as that which should be used in this case will rarely have a greater density than *six degrees of the must spindle.* Those who are absolutely unable to obtain the use of such a spindle may, at a guess, be successful by making *that* the density of their fluid, according to the rule given below. It will then at least not burst the fruit, although it may shrink it a little. If the juice cannot readily be pressed for the test, it can be got out by stewing the fruit, as in jelly-making, in a jar covered so as to completely prevent evaporation.

The best substance for the purpose of *increasing the density* of the fluid to the proper point is glycerine, which can now be obtained in commerce cheaply enough for all those who make up their minds to exhibit at Chicago. Pure refined sugar, made into clear syrup, may be substituted, but is much more apt to darken the color of the fluid and fruit.

As to the *proportions* to be used: Since a gallon of water weighs 128 ounces, *one* per cent of that (or each degree of the must spindle) will be, in round numbers, one and a quarter ounces, to be added to a gallon of preservative fluid for each degree shown by the spindle in the fruit juice. For example, if the spindle shows four degrees, six ounces of sugar or good commercial glycerine must be added for each gallon of preservative fluid wanted. The glycerine can be apportioned by *measure*, instead of weight, by taking *in place of each ounce by weight* that would be required, *four-fifths* of an ounce in druggists' "*fluid ounces*."

As to the preservative agent to be used, it is true that the most powerful antiseptic ordinarily available is "corrosive sublimate," now much employed in sanitary disinfection; but it is also such a powerful poison that it seems unsafe to place it in the hands of those who ordinarily will put up the fruit samples. Moreover, unless extraordinary precautions are used, it gives the fruit a dingy, ghastly aspect, arising from a whitish film that gathers on the surface. At the same time, it is the most certain of all means known to preserve fully the *form* of the fruit. If used, it requires only four parts in a thousand, or about half an ounce per gallon, to effect complete preservation. Distilled water must be used for the solution, and only a competent druggist should

make it up, and carefully label it "poison," as should also be done with all fruit thus preserved. This fluid is especially well adapted to the preservation of figs.

Common salt necessarily shrinks all fruits preserved in it and darkens their colors. *Alum*, frequently recommended, is not a good preservative because, besides shrinking the fruit, it dissolves the colors very effectively, and also changes them.

The most available preservatives, because accessible to all and not dangerous, while very effective, are *salicylic* and *sulphurous acids*—the former now readily obtained from all druggists; the latter generated from burning sulphur, as is done in bleaching fruit—the latter fact emphasizes the difficulty encountered in using sulphurous acid as a preservative for fruit samples. It inevitably bleaches the colors in the course of time, if employed of such strength as to be an effectual preservative. Nevertheless, the ease with which it can be used, and the certainty with which it acts, have made it a favorite for citrus fruits, apples and other fruits not having very delicate colors. But cherries, plums and berries of all kinds assume a bright yellowish or almost white tint when so preserved for a length of time.

The solution is most readily prepared in the following manner: Fill a clean keg or barrel half full of clean, clear water, bunghole up, and introduce a cellarmen's "sulphur strip" (cotton stuff passed through melted sulphur), leaving it to burn as long as it will, while closing the hole with the hand or mop. When the strip goes out, withdraw it, close the bunghole, and give the cask rolling shakes until, within a minute, the gas is all absorbed. Then blow in fresh air with a bellows, and repeat the burning of sulphur strip ten or twelve times; this takes about an hour's time. Then keep the barrel well bunged up until the fruit is to be put up, when the proper amount of glycerine can be added to each jar of different fruit, or to the whole if no difference is to be made.

Or, according to the method used at the rooms of the State Board of Trade, an iron pan is floated on the water in a (40-gallon) barrel open at one end and three-quarters full. Then sulphur is burnt in the pan, two or three tablespoonfuls at a time and the water well stirred each time, until about two pounds of sulphur has been consumed. The barrel-head is of course laid on while the sulphur burns. The fluid thus obtained is of about the same strength (.1%) as that obtained by twelve burnings of sulphur-strip in a barrel half full.

Instead of the gas, the solid "bi-sulphite of soda," which can be had of most druggists, may be used. The acid of the fruit soon liberates the sulphurous acid to a sufficient extent for preservative purposes, as has been shown by the use of the same substance under the name of "California fruit salt." Half an ounce of this compound per gallon of fluid is probably ample for the preservation of fruit not too ripe for the purposes of exhibition, and the bleaching effects are not nearly as great as when the gas is used.

Salicylic acid exerts no bleaching action and is a very energetic preservative, even at the moderate rate of one-fifth of an ounce to the gallon of water, or one ounce to five gallons; the dissolution of the acid is best effected in boiling water. But for the purpose of long conservation, it is best to increase its solubility by using one and one-half ounces to every five gallons, dissolving the extra half ounce by the cautious addition to the (boiling) water of enough salsoda to make it clear, and to make it remain so after cooling. It is of the greatest importance that not a particle more salsoda be used than is just sufficient to dissolve the last flake of the acid; the least excess of soda will tend to soften the fruit and spoil its color.

The solution so prepared may be preserved indefinitely, and the glycerine (or white sugar if glycerine cannot be had) can be added to the extent that may be indicated by the spindle in the fruit juice.

While salicylic acid does not affect the color of fruit as to *tint*, the solution nevertheless gradually extracts the color of cherries and berries, coloring the fluid. Thus at least a measure of the original color remains; while nothing is left in the fruit preserved with sulphurous acid, after a few months. Salicylated fruit also preserves in a measure its taste, while the other does not.

It is absolutely essential that the jars containing the fruit be hermetically sealed. Glass-stoppered jars can be made tight with "canning wax" or paraffine. A very good way to prevent mold on the surface of the fluid in case a little air should get in, is to put a few drops of best coal oil on the surface before sealing. E. W. HILGARD.

Orchard Cultivation.

Nothing will give us better returns for our labor than the cultivation of our orchards, we cannot plant a garden or a field of corn and expect to reap any very large returns unless we cultivate the soil; neither should we expect to have fine orchards unless we give our orchards the very best of cultivation.

Now, one of the main points in orchard cultivation is to keep the ground level. We aim never to plow the soil to or from the trees twice in succession, but at each plowing to plow a different way, if we have thrown the soil to the trees this year, next year we will throw it away. Before we begin to plow, we have our men to dig all of the weeds and trash away from around the trees for a space of two feet, by so doing we can work very close to the trees with the plow, in fact this is all of the hand cultivation that we need to do, all of the balance of the work can be done with the plow.

We will now begin by using a one-horse plow and throw the soil to the trees, after we have plowed two furrows to the trees we will then use a two-horse plow and plow two more furrows, now we are about four feet from our trees, and we will use a three-horse plow and plow as deep as we can; the depth of each plow will be as follows: 4 inches for the one-horse plow, 6 inches for the two-horse plow, and for the balance of the strip between the trees we will plow 10 inches deep and when the strip is done we will throw two furrows back in the furrow so as to leave no dead furrow. The next year we will just reverse the order of plowing, commencing in the middle with the large plow and throw the soil toward the center and plow a little shallower as we work toward the trees, and when we get our strip down to about five feet we will use our one-horse plow; but before we begin to plow we will take away all of the weeds and trash from around the trees; when we are done plowing we will throw two furrows back against the tree so as to have no dead furrow next to the trees. At each year's pruning we will leave the soil as rough as possible until after all of the heavy rains are over, or until the weeds have begun to grow, then we will run a sharp tooth harrow over the soil and if we have many clods to contend with, we will use a board clod masher or pulverizer. The main object is to get the soil well pulverized, after this has been accomplished we will not have any trouble to cultivate. Among the fine implements for orchard cultivation we would mention the Acme harrow, the San Jose cultivator and the Cassaday harrow; with any of these implements the opeator can ride and if very careful can work as close to the trees as it is safe to go. We will cultivate at least three times and go in a different direction at each cultivation. The most important object in view is to keep the ground perfectly level. The third year we will plow at right angle to the two previous plowings, and throw the soil to the trees and the fourth year will plow the same direction and throw the soil away from the trees.

By plowing deep in the center and shallow near the trees, we cut away all surface feeders and cause all roots to strike deep in the ground, consequently our trees will be longer lived, and will not be affected by drouths. By proper pruning and proper cultivation, all insects can be kept under control. Our fruit will be finer and much easier to gather, and last but not least, we will get the highest price for our production in the market.—J. Luther Bowers in Ukiah Press.

THE STOCK YARD.

Variations in Yield.

Since the invention of the Babcock test a great many people are are skeptical of its merits, because it records such variations in the yield of fat in the same cows from day to day on the same feed and care. If the test is handled with skill and care there is no cause for being surprised at this. If any person will take the milk of a single cow and cream and churn it day after day he will find surprising variations in the yield of butter. So it is to a certain extent with the milk of herds, though the variation is less than with individuals.

The same perplexing variation is seen in the weight of the fattening steers. The Pennsylvania Experiment Station publishes the following record. The weight of the two lots varied the first week as here recorded:

	Lot 1.	Lot 2.
Dec. 17	3,145	3,165
Dec. 18	3,195	3,165
Dec. 19	3,213	3,180
Dec. 20	3,178	3,215
Dec. 21	3 205	3.505
Dec. 22	3,220	3,210
Dec. 23	3,255	3,250

For instance lot 1 fluctuated from 3145 pounds. Dec. 17th to 3213 pounds Dec. 19th, and then dropped back to 3178 pounds the next day. An increase in 48 hours of 68 pounds and a decrease of 35 pounds in 24 hours.

When exact methods of weighing cattle every day or the more exact work of chemically testing the milk every day is practiced certain facts about the variation of each are brought out. Then it is that farmers who have never taken an exact record of anything in their lives, who have always been guessing at everything, come forward and dispute the reasonableness of the tests.—*Hoard's Dairyman.*

"The eye of the master fatteneth the ox" is an old but true saying, but should "the master" not have that "eye" for discriminating between profitable and unprofitable feeders, whether for beef or milk, there is no reason why, in these days of improved mechanical appliances to every branch of agriculture, that he should both feed and judge of the results by guesswork.

For a really practical man it is not necessary to weigh everything of both food and products all the time, but when he has doubts about a beast being a profitable consumer of the food of the farm there is an easy method of settling the matter by the use of the scales.

Some beasts are so noticeably profitable to any man of ordinary judgment that to go to the trouble of weighing in order to find out the fact of this being so is wholly unnecessary, but as an object lesson in finding out what some animals can be made to do, it is sometimes expedient, and there is at least a pleasure in owning a number of animals of that kind, whose almost daily growth is observable to the experienced eye, if beef animals, but if used for the dairy the results and variations are easily obtainable by the frequent, if not daily, use of the scales.

That these are valuable agents in weeding out unprofitable animals there can be no doubt, for in weighing *both* food consumed and the daily produce of milk, and increase in weight of an animal, can true loss or gain be accounted for. We sometimes hear of very large yields of milk and butter from such and such cows, but how very seldom do we hear anything of the cost of those productions, without which they are meaningless to a really practical dairyman, who, in order to make a profit, must count both ways.

The Battle of the Breeds and the Battle in the Breeds.

The "battle of the breeds" is best fought by a battle in the breeds—a battle against all inferior or worthless animals. Especially is this true of the milch breeds of cattle. There is always an upward and downward tendency in all breeds. Skillful care and breeding are constantly improving them and unskilful care and breeding as constantly working the opposite. The extremes of superiority and inferiority are constantly widening and the process goes on much more rapidly than is generally supposed. Francis Morris, many years ago, put this fact in a concrete and graphic form. We quote from him:

"Take," said he, "two Durham calves from cows of equal purity, and sired by the same bull. Send one into green fields and pasture new; stable it in cold weather, and give it all it can need for its health and comfort. Turn the other out to pick its living on a bleak and rocky barren, to shiver with cold and to search wearily for the few blades of sickly grass that grow in granite clefts. Then at the end of the year compare them. The first will be a fat, sturdy, handsome fellow, sleek, bright, erect of head, straight of limb, courageous, intelligent; the other a miserable, melancholy runt, without pluck or beauty, lean, small and showing scarcely a trace of blood. Take two more calves of the same parentage and turn the fat one's brother out upon the hills and the lean one's brother into the rich pasture and warm stables; feed them precisely as their relatives were fed before, and it will be found that the brothers look nothing alike, while those of different parentage look like brothers. Now try to fatten them all alike. The two that were well treated will thrive, but the others, though they may improve, will never attain their proper size, or be anything but runts; *nor will they be fit for breeding purposes comparatively.*"

We have taken the liberty of italicizing the closing words. They cover a great secret. Changing circumstances of life are constantly changing the characteristics of the different breeds, through the secret law of transmission from parent to offspring, of what is gained or what is lost by their training, handling, feeding, etc.; in other words, by their environment. The Jersey breed in America is, in many respects, a different breed from what it was when it first came from the island of Jersey; and the Holstein-Friesian breed, though handled in this country comparatively but a few years, is already undergoing changes quite as great. These changes in the dairy breeds are wrought along different lines and by different means than the changes in the beef breeds. In the former, training is the most potent—training for milk and for butter production. If we were to lay down three rules for improving the dairy breeds, the first would be training, the second feeding and the third care, and we would put the three together under the general head—training. This training, however, may go on with marked success, even though feeding and care is moderate. Hence the dairy breeds afford a better field for the exercise of skill by breeders of moderate means, and this class of breeders often produce dairy animals of the highest value. Many of this class assist in milking their own cows and come into closer relations with their cattle than do breeders of larger means. Many of them are also close observers, and they learn lessons that are unknown to those who may be of higher scientific attainments. While we have no thought of disparaging the work of the latter, we believe the work of the former should be recognized and encouraged. They should be brought in line and made to feel a common interest in this "battle of the breeds."

By the "battle of the breeds," we do not mean an ungenerous and vicious fight such as is often manifest, but a kind and generous competition conducted in the fairest possible ways, in which all are credited for their diverse and full values. It is not necessarily the breed that gives the largest quantity of milk that is the best breed, nor the breed that gives the richest milk. To determine the comparative value of the breeds, we should know the quality of milk and the quantity of milk generally produced by each, and the food and care required for such production. Further, we should also know the general characteristics of each, whether hardy or not, the comparative liabilities to diseases dangerous alike to cattle and to the consumers of their products, and we should also know its other values to dairymen beyond its milking qualities. Every merit and every demerit should be known and fairly weighed. A fairly drawn battle can only be along the whole line of merits and demerits. There is altogether too much maneuvering for undue advantages. We see this in the proposed rules for the Columbian Exhibition to be held next year in Chicago. Such maneuvering shows a lack of confidence in favorite breeds, on the part of those who labor for such advantages. In saying this, we do not oppose the exhibition. We hope all of the breeds will be fully represented in it. Yet no such exhibition can settle the "battle of the breeds." The necessary limits of such exhibitions preclude investigations into all the various merits and demerits of dairy cattle. Nevertheless, this battle is to be fought out in this country. From time to time, there will be partial victories and partial defeats for each and every breed, but eventually each will be given its rightful rank and position. The methods by which this battle will be fought and won we leave for a future article.—S. Hoxie in Holstein-Friesian Register.

Various Topics.

ALESSANDRO, May 8, 1892.

TO THE EDITOR:—In looking over the hay letters I do not see any mention made of beardless barley for hay. This grain makes first-class hay and does away with the objectionable beards. Some people get beardless and bald barley confused. Bald barley has a hard grain which is confined in a husk, or chaff, like wheat, but the beardless is like the ordinary grain, minus the beards, and can be used for any purpose for which it is used. The seed is always scarce and high here, and there is but little of it raised.

I see considerable mention of Egyptian corn in the RURAL lately. Will some one who has had experience with it, tell us through its columns how to cure it so as to get the most good out of it? We are trying some of it this season, and as there are so many contradictory stories as to its virtues, we have concluded that the secret must be in the time of harvesting and manner of curing it.

We have had a good rain during the past week and it will help the late grain and summer crops wonderfully.

The frost did no damage along the foothills. Bean vines are loaded with string beans and new potatoes are getting large enough to eat. Trees and vines are starting out finely, as though to bid defiance to rabbits and hoppers. The weather is somewhat cloudy, but quite warm. Haying will begin in earnest in a few days. L. S. LYMAN.

The Home Circle.

At the Stone House.

Marsh Grant, Contra Costa County.—In May.

Written for the RURAL PRESS by L. H. S.

A narrow valley opens to the plain
With low hills circling round. A quiet stream
Glides ever on beneath its bowers of green,
And spreading oaks adorn the fields of grain.
An old stone house of early English style
Looks from this vale in beauty's silent power;
A "house of seven gables," curious windowed tower,
And long, wide porch, ground-paved in Spanish tile.
Round this deep porch, with many pillars quaint,
The long grain billows in the changeful breeze;
The lark pours out his silvery joy to please;
The late spring showers flee with shadows faint,
And all day long there trembles through the trees
The sad, sweet music of the dove's complaint.

That Ugly Man.

Written for the RURAL PRESS by CLARA SPALDING BROWN.

"How came such a beautiful woman to marry that ugly man," exclaimed a stranger in the city, as the wedding party came from the church.

"Because she knows what real beauty is," said a gentle faced old lady as she passed.

I knew the story. I knew Salome Marden when she married at 18 a man who had more than his share of personal graces, and I knew what a life she led for the next fifteen years—not necessarily because she had married a handsome man, but because in his case beauty was only "skin deep." She had an inkling of the fact once when, for a trifling fault, he lashed the horse that he was driving unmercifully. It jarred upon her seriously, but could she break an engagement for a little thing like that? She had yet to learn that a cruel, unreasonable temper can destroy the happiness of a home. She also discovered that her handsome husband was too much engrossed with himself to take any interest in her pursuits. On her experiences I will not dwell. The martyrdom of a neglected, ill-treated wife is far more common than the world realizes.

After Salome became a widow, she had no lack of admirers. A few had some attraction for her at first, then a chance act or word would dispel her illusion. Warned by the past, she took heed when Mr. Prince sneered at a ragged old woman, and Mr. Means kicked an injured dog which had crawled to his feet, and Mr. Sterne could not see the sense of fussing over flowers or reading poetry, and Mr. Pomposity thought women were getting so that they knew too much, and Mr. Gayfair occasionally took too much wine.

One Sunday morning, as she took her seat in church, she caught sight of the ugliest little man, positively the very ugliest, she thought, that she had ever set eyes on. He was short, and red faced, and bald-headed, and had a turned-up nose, and a big mouth and scraggly red whiskers. He sat in the seat directly behind her, and her first feeling was one of thankfulness that he did not sit in front of her. By and bye she noticed that he joined in the hymns with a hearty bass voice, and he actually said the Lord's prayer right out loud at the proper time in the service. Salome had not been accustomed to hearing a man pray. She respected the ugly creature from that time forth.

Sunday after Sunday passed; she was a constant churchgoer and so was he. Then he was introduced to her at a "social," and real acquaintance began. She found that he was even more of a reader than herself, that his sympathies were quick, his perceptions delicate. She liked the manly ring in his voice and the strong grasp of his hand. His almost diffident courtesy was a change from the self-assured attentions of the other gentlemen. She was sure that he knew how ugly he was and that his unattractive appearance deprived him of much of life's pleasure. He must be forty, yet had never been married.

"Young girls are so foolish," she thought, recalling how she, as well as others, had reserved all her smiles for the best-looking young men, and more than once had snubbed some gawky, freckled face youth without regard for his good qualities.

It was rather a lively winter among the church people, and Salome often met Mr Hartwell. He seemed to take great pleasure in her society, but always maintained a certain reserve. Salome discerned that the nature of this plain little man was not one to be fathomed readily.

One evening he escorted her home from a meeting of the literary club. Almost at her doorstep she slipped on a banana peel, turned her ankle, and for an instant lost consciousness with the pain. What woman could faint long within a pair of embracing arms, with a warm kiss clinging to her lips? Not Salome Marden at any rate. Her astonishment brought her to her senses, and in another moment she was standing very straight and Mr. Hartwell was stammering an apology.

"You were falling—I caught you—and—and I lost my head. Can you forgive me?" Without waiting for an answer, he went on as if the floodgates were opened. He told her how hopelessly he had loved her, how well he knew that no woman could ever marry him; that he never meant to show his affection, but was grateful for her friendship.

Something shone in his face that was better than beauty of features. Salome wondered how she could ever have looked with pity upon this man.

"Will you come in a minute?" she asked.

Uncertain of her mood, he followed her up the steps.

She turned as they passed through the parlor door.

"You said that no woman could ever marry you, Mr. Hartwell. You must take that back, for—I can. I want to be happy," and she laid her arms about his neck.

That kiss had made things clear. Somehow it was not quite like any other kiss she had ever received, and Salome felt that it was what she had been wanting all her life. She forgot all about her aching ankle. Mr. Hartwell's emotions need not be described, but I will say this: If there is a blissful wedded couple in the universe, "that ugly man" and his beautiful Salome are the identical pair.

The Story of Mary Lee.

On the great plains of Kansas, seventy miles due north of Sheridan, there is a lonely grave on the crest of a sterile mound. It may be that no one could find the spot today, for the storms of summer and winter wash great ravines in the earth, and level even the hilltops after a time. But I saw the grave twenty years ago, and at its head stood a board on which was painted:

HERE LIES
MARY EMMA LEE,
WHO WAS
KILLED BY INDIANS
ON THIS SPOT AFTER A
HEROIC DEFENSE,
IN JULY, 1867.

As two hundred cavalrymen grouped around the lonely grave, every man uncovered his head in reverence for the dead, and the story of that young woman's death has never been told around a campfire in the West without making men's hearts ache.

This is the story: There were five or six families of emigrants journeying across the lonely plains when they were beset by hostile Indians. Mary Lee was a girl only eighteen years old, and had been brought up on the Iowa line. The family consisted of father, mother, two sisters and a brother. The attack was made very suddenly, and Mary, who was riding her own horse, was cut off from the band. When she realized this, she turned and rode away and was pursued by seven Indians. This was about nine o'clock in the morning. Her horse carried her thirty six miles before he became exhausted, and when he fell she made her way to the crest of the mound, and there scooped out a shallow rifle pit, piled stones up around it and prepared to die fighting.

The Indians were three miles behind her when her horse gave out. She had a light Winchester rifle, which was fully loaded, but no extra cartridges. Her first shot killed an Indian and her second crippled another for life. The other five dared not charge her position. On the second day she killed another Indian, and the other four posted themselves in position and waited for hunger and thirst to conquer her. On the third day, they were joined by twenty of their band, but the girl was not attacked. On this day an Indian, who was creeping up to spy upon her, was shot through the right lung, and the others contented themselves by a drooping fire at long ranges to harass her.

On the fourth day not a shot was fired. The weather was terribly hot and the sun glared down on that mound until the grass withered and shriveled and seemed about to flame up. On the fifth day, an hour after noon, the girl shot herself through the head and was dead before any one reached her. I afterwards talked with one of the warriors who was there, and he told me that she had been almost roasted alive by the fierce sun. She had neither food nor drink and was little better than a skeleton. The Indians simply stood about and looked down upon her. She had a wealth of golden hair, but they did not scalp her. She had rings on her fingers, but they left them there. They did not even take her rifle nor the saddle from her dead horse.

"White squaw—heap brave—fight hard—no scalp!"

That was her eulogy. Two or three years later her scattered bones were collected and buried by a surveying party, and to-day her dust mingles with the sterile soil fifty miles from the nearest dwelling of one of her race. Bronzed and bearded Indian fighters, reckless and desperate cowboys, stern-faced and taciturn pioneers have whispered the name of Mary Lee around the campfire a thousand times since her death, but ever and always with gentle tongue and swelling heart. She was not only a woman, but she died game.—N. Y. World.

Her Desk.

It had to be written! Of course the letter had to be written. I had told myself this many times, besides stating it in very plain terms to my sister but a half-hour before. Yet there I sat staring stupidly at my pen just as though I expected that fragile pearl implement to dictate the thing for me.

It is all very well, thought I, for Byron to speak of the gray goose quill as being

Slave to my thoughts, obedient to my will!

But when it comes to the modern jewelled bauble of silver and gold, the tables are strangely reversed, and the last line of the stanza receives a new and significant meaning:

That mighty instrument of little men!

"Go right upstairs," my good sister had said to me, "and make yourself perfectly comfortable at my desk; no one will interrupt you; the room is quiet."

Quiet, why I might have heard my ideas had I had any! I laid my half-smoked cigar on the edge of the pretty light-wood desk, and almost imagined I heard the tiny plume of smoke which curled away from it. Then I drew forth the cutlass inkstand, placed the dainty blotter at a convenient distance, and, glancing at the silver-framed calendar, began:

PHILADELPHIA, May 15.

My Dear Blanch—

But my borrowed pen sputtered on the heavy cream paper and a great blot fell almost on the name. I shuddered at the significance, and turned for a fresh sheet. Folding the paper and creasing it with a curious agate paper cutter, I began again:

Dear Blanch—

But somehow I could get no further. The bit of moss agate retained my attention, and I mused, as I examined its delicate, petrified plumes, on the beauty of the everlasting.

Changeless — endless constancy! My eyes involuntarily wandered to the pretty gold timekeeper on the top of the desk, which my sister had long ago dubbed the Wee Wag. Back and forth, back and forth, the miniature pendulum waved, marking the moments which were as nothing to the duration of time those bits of moss had laid imbedded in that smooth, transparent quartz.

Dear Blanch—

Near the Wee Wag, as though it doled out the measure of their existence, stood a bunch of purple violets. Their color was still bright, but some of the little heads drooped languidly against the glass vase which supported them, and their fugitive perfume was fleeting.

O Blanch—

I turned, half entreatingly, to the next ornament on the desk, which happened to be a bisque Amour—I say happened to be, because his dainty gilt wings were so delicately poised as to give the impression that, should I close my eyes for a moment, on looking again he would not be there. He had clustering yellow curls, and his small dimpled fingers were just touching the strings of a light blue guitar. With head thrown back, his rosy lips were parted in such a way as to make me certain, had not the silence been so profound, I might have heard him sing:

Dear Blanch—

"What great difference between the sad-blossomed violet and the feathery green moss?" I demanded of the smiling Cupid "that the one, so transitory, should last but a day, and the other be preserved for ages?"

But the cruel cupid only smiled. A faint, sweet odor arose from the violets, and the Wee Wag wagged on, and on, and—on.

I was aroused by the rustle of a woman's gown and a hand laid lightly on my shoulder.

"What, not finished yet!" was my sister's surprised exclamation. She bent forward, and I knew she was reading the address—"Dear Blanch"—but no more, for it was impossible that she could peruse the unwritten thoughts which had so perversely followed that beginning. "Little one," I said, drawing her to me, "the letter remains unwritten because I have been listening to the "Song of Time," as chanted by your Wee Wag here. I have pondered long on the cause of change—and unchange, and have propounded a question to yon porcelain god which he declines to answer.

The little sister looked very grave and sympathetic at this; with the agate paper cutter she reverently stroked the sheet of paper before me, and answered, gently: "Perhaps you have been too dilatory, too deliberate. The gods, and—women—hate indecision."

I took the hint. Snatching up the pen once more, I dashed off these lines and handed them to her to read.

PHILADELPHIA, May 15.

"*Dear Blanchard*—Please send me by the first express as many violets as you have on hand, not meaning, by the way, such wilted ones as you supplied us with the last time, most of which were so dilapidated, on arrival, that they had to be thrown away. Telegraph if you have none. Sincerely yours, —— ——."

My sister dropped the letter; she gave me a glance, a most expressive glance! Then she drew a long breath and said, very slowly: "So it has taken you just one hour to order violets for mother's reception!"

With this she whirled on her heel and left the room.

Well, it did take me a long time, but then I never could write at a woman's desk. —New York Home Journal.

San Francisco Fashions.

SAN FRANCISCO, May, 1892.

DEAR DAISY:—As usual, Easter gave us a good idea of what the summer fashions would be like; and Easter is long enough passed now to have shown what styles in the Easter toilettes were to be lasting.

Costume dresses are more in vogue than ever—shirt and outdoor jacket being made of the same material, and worn with a silk waist, which is exhibited by the jacket being left partially or wholly unbuttoned. Ladies with a taste for masculine dress prefer a starched white or colored shirt, with a man's tie and pin, to the silk waist.

Light woolen goods are now so cheap and pretty that one can buy the material for a stylish summer costume dress for very little. The cloth for a charming one I saw the other day only cost seven dollars. It was a narrow stripe of light and dark fawn, the bell skirt, which was long and plain, was edged by a number of rows of machine stitching—a dozen at least. The waist was finished off by a deep pointed belt of the cloth, into which was gathered a dark, fawn colored silk blouse. The outdoor jacket, of the same material as the skirt, was long and fitted closely at the back; it was worn open at the front to show the vest, which had a turned down collar and a necktie of the light fawn shade, tied in a bow and ends under the chin. The hat worn with this very stylish-looking costume was of ecru gauze and crushed roses, and had one long ribbon streamer drawn loosely under the chin on the right side, and fastened on the left shoulder with a bow.

In the best stores here, nearly all the summer walking costumes differ only in the trimming of the skirt, and, naturally, also in color and material, from the model just described. You cannot fail to be with the multitude if you have just such a dress; but supposing that you are in search of something new, you will prefer the Russian blouse which European and Eastern dressmakers have been describing for some months, but which to San Francisco is still almost a novelty. For one woman that you meet in a Russian blouse, you will encounter at least fifty wearing open jackets and silk vests.

"The Russian blouse is a new style of jacket or bodice, or both combined, quite long, plain, fastening over to the left side from the shoulder, and worn with a belt," is the description a fashion writer gave of it, some little time ago. But the term "Russian blouse" is now applied to all the jackets with skirts from a quarter to half a yard in depth, that are worn with belts. The skirt may be full or almost plain, but it generally opens at the side, not the front, and for the most part, buttons diagonally from one shoulder. The Russian blouse may be of the same material as the skirt, or not, but it is an absolute necessity for it to fit well.

Some of the prettiest things displayed this season are the new underskirts, necessitated by the habit of holding up the long bell skirts. These underskirts are made in the prettiest shades of silk, and are adorned with several pinked or embroidered frills; indeed, in many cases, the underskirt is more handsome than the dress itself.

If you have some old-fashioned silk, you can easily make either an entire silk skirt, or

a sateen skirt, with one or two silk frills, which will look better if you pink them. If, however, you do not possess any available silk, India silk can be bought for fifty cents a yard, and, if lined, looks very well, or the natural colored India silk at forty cents a yard is very pretty and washes excellently.

Dress skirts are still cut bell shaped, and are trimmed in an endless variety of ways—with one narrow frill of ribbon; one or two pinked silk frills; a puff of the goods cut on the bias; rows of machine stitching; lace and ribbon; a heavy fold, like a plait of hair, made of three biased folds of the material—in fact, there is no end to the variety of these trimmings, which, in most cases, are carried round the entire skirt, instead of merely across the front breadth, as formerly.

Seamless bodices are very fashionable; they are made in a variety of ways, and are trimmed extensively with ribbon and lace. China and India silk goods are now so cheap and so fashionable, that most people prefer them to cottons, which fact, however, has not prevented there being a large display of cotton dress fabrics. Some of the challies shown this season are extremely artistic, and the cheviots and light woolen goods are pretty and inexpensive.

Hats and bonnets are worn with rather stiff trimming, even the flowers being made to stand up in a formal manner. Lace stretched tightly over a wire frame to give the appearance of butterfly's wings, is a very popular trimming, often combined with flowers and streamers.

Hats are made of lace, jet, straw, or gauze, drawn over a wire frame. Of the straw hats one of the shapes most in vogue has a rounded, flat brim and a small, pointed crown. A stiff wired bow, one or two streamers and a wreath of flowers are generally used to trim this shape.

No street costume is complete without well-fitting gloves, and the rule this summer is to wear gloves of white, or the palest shades of cream, or pearl color. The fashion is expensive, as these delicate shades soil directly, but when new and fresh, light gloves heighten a costume immensely.

MARIE EVELYN.

He Made the Sale.

Exasperated Woman of the House—I have told you a dozen times I don't want the machine! Sick him, Tige!

Peddler (while the dog is gnawing his leg)—Don't wan't the machine, ma'am? Pardon me, you haven't yet seen half its good points. It washes the clothes cleaner than any other, and in less than half the time. It never tears off a button. It—

"Good heavens! Don't you see what the dog is doing?"

"Yes. Quite a playful animal. This machine, ma'am, uses less soap, takes up less room—"

"He'll tear you to pieces if you don't go! Run, for mercy's sake! He's tasted blood and I'm afraid I can't make him stop now!"

"I have to put up with such things, madam, and it's in a good cause. This machine is the best one that ever was invented. If I can succeed in introducing one into a family I feel I have done a benevolent act. You can use any kind of water, hard or soft, hot or—"

"O! O! O! He'll kill you! What is the machine worth?"

"It's worth a million dollars in any family, but I'm selling it for only $5, and—"

"Here's your money. I'll take it. Tige! Tige! Let go!"

"Let him chew, ma'am—let him chew. It's a wooden leg. I've got another one at home all ready for use when this one is worn out. Looks as if we were going to have rain."—Chicago Daily Tribune.

—He bought a guitar and practiced for six long weary months. But at the end of that time a smile of joy lit up his warm and weary face, and his brow grew radiant with joy as he inspected the corns on the thumb of his right hand. The hour was 10 P. M., and as he wandered through the stilly night to the boarding-house where she lived, and directly under the window which had been so often sanctified by her presence, he commenced to toot: (Twang, twang, bim). "I wandered b-i-i the brookside (cling, clang, boo), I wandered b-i-i the mill"—and the sash was gently raised with a crash, and a deep bass voice yelled out: "I vish as you fall into your brook off your brookside and trown yourself in dose mill, odor I plow my vissil and call a polizeidiener." It was cruel of her to have changed her room without letting him know.

—Dolly—"Oh, yes. I quite believe there is a fool in every family. Don't you?" The Captain—"Well—er—my opinion is rather biased. You see, I'm the only member of our family."

Young Folks' Column.

The Fishhawk, or Osprey.

Written for RURAL PRESS by CAROLINE E SANDERS.

Harry Sanford had always lived in a large city and scarcely remembered ever having been out of it until he was about 12 years of age, when his father took him to pass his summer vacation near the Atlantic coast. They first stopped to spend a few weeks with his uncle who lived on a farm upon the bank of a stream in which was considered excellent fishing. If there was ever a happy boy in the world he was Harry when told he could wade around in the water, or fish as much as he pleased. As soon as it was light in the morning he was off with his dip-net or fishing pole.

One day at the breakfast table his aunt said, "you are quite a good fisherman, Harry, but I think those rosy cheeks are the nicest things you have caught."

"Wait till he goes to the Jersey shore," said his uncle, "and he will see fishermen that can beat him."

He alluded to the fishhawks.

A few days later when they reached the shore Harry's first interest was in watching for these birds, and he had not long to wait, for the little village where they stopped was right upon the bank of a broad shallow river, really an arm of the sea, and here they could be constantly seen either standing solemn and grave on the limb of a pine tree making up their minds to the work, or ascending into the air, sometimes until one becomes a mere speck in the sky, then he may circle around and around in descending as if uncertain where to strike his prey, though just as often from his loftiest flights descends with lightning speed and plunges head foremost into the water. When he rises with the fish in his talons he shakes the water from his feathers and is off in a hurry for his nest. They have been known to carry away fish weighing six or seven pounds.

"I should think they would get hold of one sometimes that was a little too strong for them and would pull them under," said Harry one day to an old fisherman to whom he was talking.

"Yes, my lad, they do say it happens so, and I know it must be for the tide has carried them up together, the hawk's claws still buried deep in the fish—and that I have seen."

"And do they stay here and fish all winter?" asked Harry.

The old man chuckled to himself at the city boy's ignorance as he replied, "Well, well, that's a curus' question, a body might know the poor lad wa'nt used to the sea. No, after the 21st of September not a fishhawk could you find on this coast, but on the 21st of March here they'll come flocking back; where they go is mor'n I can tell you, but if you want to know more 'bout them come along with me and I'll show you something curus'.

And curious indeed it was to Harry. It was a nest that had been blown down the night before. It appeared a great heap of sticks, corn-stalks, mullein, sea weed, etc., of which it was composed. This seemed to be about as serious a matter to the birds as having one of our dwellings swept off by a cyclone might be to us, for it is said they occupy the same nests year after year, each recognizing their own, though without door-plates.

They appeared a very distressed family this morning, perhaps in their generation never having had to build before, they hardly knew how to go to work, so they flew around uttering their shrill, wild, peculiar note, but, like people who soon learn to help themselves when compelled to, did not waste much time in useless complaint probably, for a few days later Harry reported the old homestead in good repair again.

Their nests were to be seen all around there in the forks of the trees, sometimes away up fifty feet from the ground, while others were not more than ten feet, always in strong trees, for they have the forethought to make them very heavy to resist the strong winds; they are not hollow inside, as you might suppose, but nearly flat. Their great weight seems to have a bad effect upon the trees for they soon become perfectly bare. The birds do not appear to mind their exposed position, but to understand that the fishermen who live near would protect rather than harm them. They say these birds always foretell a storm and they consider it an omen of good luck when one builds near their dwelling.

"You have not told us what they look like," said his brother, as Harry was telling them about the fishhawks after his return home.

"Oh, the young ones are beauties without paint or polish," he replied laughingly, "like other young birds, they are funny, awkward looking things, but improve as they grow older. In color they are a grayish brown, their beaks sharp and hooked, and claws long, feet and legs covered with hard scales. The old fisherman told me they would measure four or five feet and that he had seen one that was six feet across the wings. He said that he was a great deal better bird than the eagle, because he does not harm any of the other birds, and will even allow a small one called the crow blackbird to build into the sides of his nest. The eagle is their only enemy, for the reason that he is a lazy glutton who never appears to get enough to eat and will not work if he can steal. They have great battles sometimes when he waits until the fishhawk is on his way to his nest with a fine large fish, then pounces upon him and almost invariably gets it."

"I'll tell you what it is, Fred," added Harry, with a very wise look, "I don't think our forefathers and mothers did any great thing in taking the eagle as the American emblem, the fishhawk is a good deal nicer bird."

Her Practical Talent.

Written for the RURAL PRESS by DUANE MORLEY.

"How about Kensington art, Lottie?"

"Kensington is old; one day popular, the next day not, and everybody dabbles in it just enough to make it common; I cannot give it thought or time." "There's regular art, Lottie; oil, water-color or crayon; I was hoping you would take up one of them."

"Most young ladies paint, I know, but it is a fad, decidedly, as followed by the mob; the same as music is." "The same as music! Why, Lottie, you surprise me. How about your own lessons?" "My course I'll finish—even glad to, but that will be all. Since my talent is but ordinary it is useless to continue. Out of school it is a little music, a little painting, a little fancy work, and then—matrimony. I am posing for no one of them." The above conversation was between mother and daughter, and that night Mrs. Dean said to her husband: "Lottie is peculiar—not interested in Kensington, painting, or music." "She's not gone on novels, is she, wife?" "Not at all, though she devours the newspapers, even the market reports; asking me questions I cannot answer."

"Don't disturb her, wife; Lottie'll come out all right." Day's afterward a pensive look—even serious—was often see on Lottie's face, and one night when her father was home from the day's business and be-slippered by the grate, said she: "Father, where am I to get the necessary seventy five dollars with which to take a business course? I'll return it when through." "If that's what you're after Lottie, you can have it of me, certainly," was her father's ready answer. Lottie took her course; but before it was finished she had found for herself employment—for a few hours each day—as cashier at a near-by grocery. Soon afterward, when her course was completed, she was retained in the same capacity by the great house of S. B. & Co., and still later on, the weekly bills were given her to make up; all of which delighted her. In the best of houses mistakes occur, and when the blotters had gone wrong or the tally lists were crooked, they were brought to her to search. So expert did she finally become at it, that they named her "The Mistake Searcher," and business pleased her so much that often she would interrupt her father's reading hour to "talk shop" or make "trade" inquiries. One night, alone with her husband, Mrs. Dean confessed that her daughter was strongly practical. After a time, a change came in the firm of S. B. & Co., old partners drawing out and new ones coming in. One Friday—seemingly a Black Friday to Lottie—she was deposed to accomodate a son of one of the incomers, and the week which followed was distasteful to her, though she rusticated among the mountains and took a trip to Santa Monica.

One night a caller—a business caller—invaded their home circle. It was a Mr. Barman, an aged expert accountant, in quest of "The Mistake Searcher." A few days thereafter the sign of a new business firm swung out before the public: "Barman & Dean, Expert Accountants." Barman was a fine old school gentleman; as fatherly toward his feminine partner as he was faithful to the business. And so, level-headed Lottie found a calling that suited her practical talent.

—She—"My father's a bank cashier." He—"Huh! So is mine." She—"Well, my father owns a span of horses and two blocks on our street." He—"That's nothing; my father's only been a cashier six months."—Jester.

Domestic Economy.

Marmalade and Crystallized Fruit.

STOCKTON, April 17, 1892.

TO THE EDITOR:—A few weeks since I gave my method of preserving fruits, jellies, etc., to the ladies of Stockton Grange, and mentioned that if anyone wished for tested receipts of orange and fig marmalade and for crystallizing fruit, I would furnish them. Since its publication in the RURAL PRESS, I have received so many letters of inquiry that I have deemed it best to publish them.

MRS. JOS. HALE.

Fig Marmalade.—Peel figs and weigh and to every 20 pounds slice six Sicily lemons, boil the lemons in a little water, as you do in other preserves. Slice the figs and add to the lemons, boiling slowly for four hours, then add three-quarters of a pound of sugar to each pound of fruit, and boil one hour. Seal in glasses or jars.

Orange Marmalade.—One dozen large, thin-skinned oranges, five pints of water, seven pints of sugar and two Sicily lemons. Slice thin over night, throwing away most of the peel. Put the water over the fruit at night, in the morning cook two or three hours till tender, then add the sugar and cook onehalf an hour. Put in glasses or jars.

Crystallized Fruit.—Quinces, cut around in slices, removing seeds; oranges, select the thinnest skinned ones, lemons, cook the last in syrup to prevent other fruit absorbing bitterness; small white figs, whole and peeled; peaches and apricots, remove pits; pears, quarter. Make a rich syrup and work clear. Quinces, lemons and oranges should be cooked in water and water changed in the two last before cooking in the syrup. While the syrup is boiling drop the fruit in carefully, as much as the syrup will cover, and boil till it becomes transparent; drain carefully from the syrup, spread sugar in the bottom of a pan, roll each piece separately in the sugar and spread to dry in the sun on plates or earthen dishes, covering it with mosquito netting to protect it from the flies. At night take it in the house, next morning drain the syrup from it which has extracted during the day and roll again in sugar and spread to dry. Give it a final cover of sugar and put away in boxes—five or six days are required for the drying.

HAVANA SOUP.—Grate one cocoanut and simmer it in one quart of veal stock for half an hour. (Veal stock is made by simmering two pounds of veal bones in two quarts of cold water until reduced one-half, then strained.) Strain the stock to remove the cocoanut, and add to the liquor one pint of cream. Heat again, and when boiling add one heaping tablespoon corn starch mixed smoothly with one tablespoon of hot butter. Season with salt and white pepper. Beat the yolks of two eggs, add one cup of the broth, pour into the tureen, turn in the boiling broth, and mix well. Served with boiled rice.

FRICASSEED TRIPE—Cut a pound of tripe in narrow strips, put a small cup of water or milk to it, add a bit of butter the size of an egg, dredge in a large teaspoonful of flour or work it with the butter; season with pepper and salt, let it simmer gently for half an hour, serve hot. A bunch of parsley cut small and put with it is an improvement.



PATRONS OF HUSBANDRY.

Grange Notes.

What has become of the farmers of Winters? A Grange was to have been organized there some time ago. The RURAL hopes the "shake" will not keep them from organizing a Grange.

Woodland, too, is in the Grange belt. Mr. Adams, formerly of Woodland Grange, has promised to help Past Master Overhiser reorganize the Woodland Grange.

Past Master Overhiser, assisted by J. H. Bauman, is going to make an effort to get Suisun into line. The effort promises success.

The Oregon State Grange convenes in annual session this month. How many Patrons from California will attend.

Politics will not annoy the Grangers. They have fully determined not to support carpet-baggers for legislative and congressional offices. That much is settled,

J. V. Webster, Past Master of the California State Grange, and chairman of the special committee to propound conundrums to candidates for office, has called a meeting of the committee for May 21, 1892, at the office of the State Secretary, 220 Market St., S. F. There will no doubt be a full attendance of the members of the committee.

The May rains had a cooling effect on picnickers, yet the Grangers turned out in goodly numbers to hear the speakers sent by the Executive Committee.

Glen Ellen Grange had a successful "outing" May 9, 1892.

Bennett Valley Grange holds its annual reunion and picnic at its hall, on the 27th of May. They promise a good time to all who attend.

The former members of Petaluma Grange, No. 23, P. of H., and the farmers of Petaluma and vicinity, will meet at Fireman's hall, Washington street, Petaluma, on Wednesday, May 25, 1892, at 1 o'clock P.M. sharp, for the purpose of the reorganization of that Grange. Already a sufficient list of members has been secured to insure the success of the movement. Let others who desire to join Petaluma Grange send their names *at once* to A. P. Martin at Petaluma, Cal.

Healdsburg Grange will probably soon be reorganized. Prominent members of that now dormant Grange say they have been out in the cold long enough.

The Grange canvass has been a success. More members have joined the Grange during the past quarter than in any quarter for years past. And the half is not yet told.

San Diego county is calling for Grange speakers. The call will be heeded in due time, no doubt.

Past Master Coulter and Don Mills will visit the Granges of Mendocino county the last of May. They expect to do some field work while on the trip. Good speeches in the interest of farmers may be expected of these stalwart Grangers.

The Clements Picnic.

State Lecturer J. D. Huffman writes as follows from Lodi to the State Secretary:

I presume some one who is much better qualified than I will give an account of the Grange picnic at Clements May 13th. I had expected that the editor of the RURAL would have been present, but he failed to materialize. I will briefly say that there was a large attendance of Patrons and citizens, and it being a lovely day, the children and Patrons marched from the town hall to the grounds, a distance of 40 rods. The forenoon was devoted to exercises for the children, May Day festival and crowning of the May Queen, after which a barbacue dinner. After dinner, an address by Hon. J. V. Webster, who, in an able manner, portrayed the evils which, at no distant day, if not speedily checked, would soon enslave the tillers of the soil, and the Government completely placed in the hands of a few autocrats; and by way of a query, how long will this state of affairs last, or how long will the people endure it? Who can foretell?

Notice.

The regular meeting of San Joaquin Co. Pomona Grange in Lodi, May 26th, commencing at 10 A. M., and an evening session.

J. D. H., Sec'y.

Card from State Lecturer Huffman.

To the Lecturers of all Subordinate Granges in the Jurisdiction:—I find that Section IV, Paragraph 57, Page 64 of the Digest was amended at the last session of the National Grange as follows:

To wit: "It shall be the duty of the Lecturer of subordinate Granges to report to the Lecturer of the State Grange at the end of the March and September quarters, giving a report of the literary work within their Grange; the State Lecturer to summarize the same and make semiannual report to the Lecturer of the National Grange."

The plan suggested by the Lecturer of the National Grange is: The best of the original essays and papers read in subordinate or Pomona Granges by the Lecturers or others be forwarded to the Lecturer of the State Grange, who in turn forwards the best to the Lecturer of the National Grange, and he in time distribute to all parts of the United States.

Also the following questions to answer and be forwarded to the Lecturer of his or her State Grange:

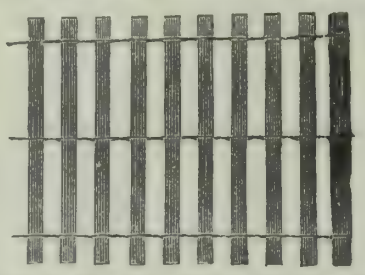
1st. Do you have lecture hour in your Grange?
2d. How often? At every meeting or only occasionally?
3d. Do you have a regular program prepared ahead of each meeting for your lecture work?
4th. Does your Grange have a printed program of its literary work for six months or a year ahead?

Fraternally, J. D. HUFFMAN, Lect.

THE degree of B. A. has been bestowed by the State University upon Worthy Master E. W. Davis. This is a compliment which he richly deserves. Some years ago he was a student at Berkeley, but was compelled to return to his duties at home before completing the course. The compliment just paid him is a handsome recognition of talents and accomplishments usefully employed in the public service.

WHEATLAND GRANGE was reorganized May 8th by Deputy B F. Frisbie, with 26 members on the list. Others will soon be initiated.

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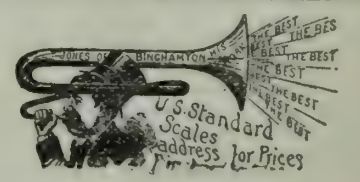


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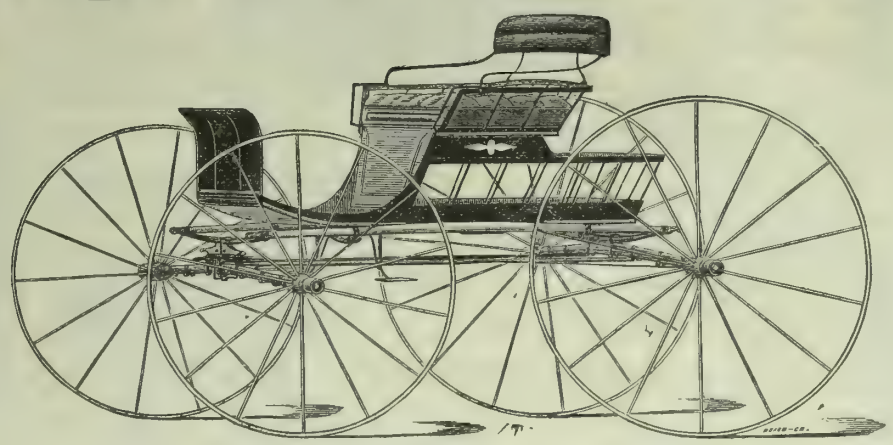
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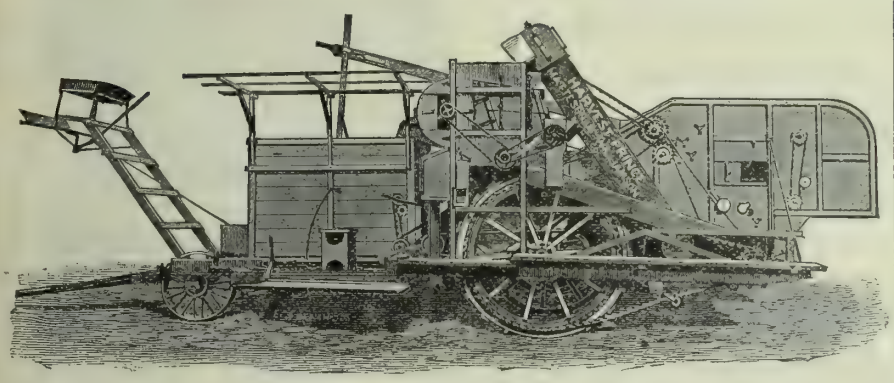
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NO. 130p ROAD WAGON, PRICE, $47.50.

We will give this wagon to the person who will send us the best and largest number of names and P. O. address of people who intend to buy vehicles and harness, so that we can send them our catalogue. The conditions of this agreement being that the number and amount of sales we make with people named in the list sent us shall decide who is entitled to the wagon.

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New Improved Belt Combined Harvester "PRINCE."



Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

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It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by ½-inch tires, with a 5-foot header wheel, renders it very easy of operation.

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This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

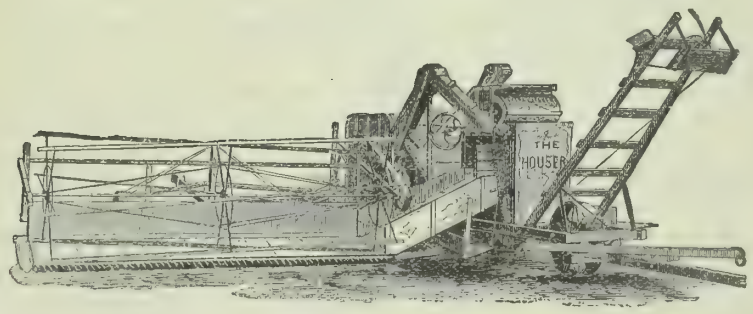
TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

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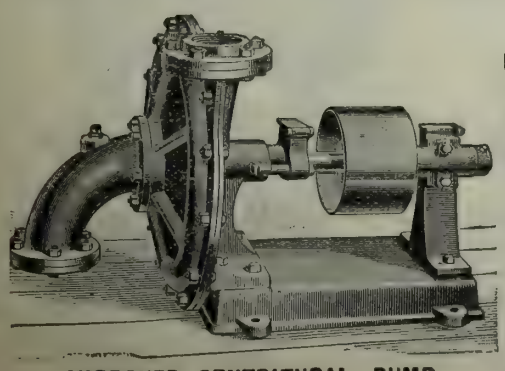
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Country Correspondence Solicited.

A Growing Section.

Colonists from England Settling in Kern County—Railroad and Other Progress.

BAKERSFIELD, April 15, 1892.

The colonization work so systematically inaugurated by the Kern County Land Company continues to produce good results, as witnessed by the arrival during the past month of a large party direct from England. A number of these new settlers had already purchased land, which is being improved for them, while the others were quickly suited and have already earnestly commenced to make homes for themselves.

A large force of men is at work in the Union Avenue Colony grading streets and doing other work. Over 1000 trees of choice varieties have already been set out along the avenue. Another model farm has been started, the first one of 20 acres having been sold to an English banker. The new farm will be 40 acres in extent, one-half of which is already set out in vines and trees, and the remainder will remain in alfalfa this season. From the grand improvements under way and already carried out and the taste displayed, it is evident that the Union Avenue Colony will be one of the beauty spots of all California, and withal one of the most fertile, for its soil cannot anywhere be excelled.

The Southern Pacific Company has begun grading a line of standard gauge railroad from this point to the asphaltum and oil deposits in the Coast Range foot-hills; also to Armona, in Tulare county, the present southern terminus of the west side branch. These two roads are one for the first 20 or 25 miles from here, this portion of the road lying through the heart of the Kern river delta.

From one point nearly due west of Bakersfield a branch runs on west to the oil field, the main line continuing northward through the famous artesian belt to Armona. Altogether there will be about 75 miles of these two roads in this county.

A gentleman who keeps himself well posted says he has reliable information to the effect that before the graders leave this county they will construct a branch of the Southern Pacific across the Coast Range to San Miguel or Templeton in San Luis Obispo county. Such a line was surveyed some years ago and the company knows exactly what work will be required to construct such a road.

The first station west of Bakersfield in this new line has already been laid out, and named Gosford, in honor of the Earl of Gosford, who is a large property owner here. The Kern County Land Company, it is understood, deeded to the railroad sufficient land for a depot, switches and town site and the outer bounds of this property have already been staked out by one of the Land company's surveying corps. It is said that the railroad company will soon lay out the site in town lots.

Never before has there been so much work in sight in this county as at the present time, says the *Echo*, and this is strictly correct. And no other county in the State has so much public work on hand as Kern has this year. An unprecedented harvest of work seems to have ripened here this spring and the summer of 1892 will long be remembered. Large forces of graders are now at work on two different railroads in Kern county and there are good grounds for the opinion that the most important work in this direction has not yet begun.

The reservoir road leading from Buena Vista reservoir to the foot-hills, a distance of 12 or 15 miles, is being constructed by Col. Geo. Stone. Long strings of ten-horse teams are going out every day loaded with ties and iron for this road.

Never in the history of the country was there so large a grain acreage as this year and never was there a more flattering outlook for an immense yield. In the mountain valleys, on the irrigated lands and out on the plains the grain is strong and the ground in fine condition,

There will also be an unusual hay-harvest. The scarcity of feed during the fall and early winter, both in this county and in Arizona, made heavy demands on the hay reserve, Arizona alone sending several hundred carloads of cattle to this "Egypt of the West" to fatten for market. These demands and those made by the canal and railroad builders have exhausted the hay supply and as a result thousands of tons must be cut and stacked this year. This means a brisk demand for labor and plenty of money in circulation.

IN South Africa Nature furnishes ready to hand a substitute for the fly paper Americans have so patiently to prepare, in the shape of a plant botanically *Roridula dentata*. It grows several feet high and is hung in rooms of the colonists to catch flies, just as the artificial article is here. It is closely allied to the Droseras, the Sun-dews of our swamps, made so memorable by Mr. Darwin's works, in which he shows that these plants catch insects for the direct purpose of eating them, that they are really carnivorous plants.

The Late Mrs. E. T. Y. Parkhurst.

Written for the RURAL PRESS by MAUDE PEASLEE.

Many readers of the RURAL will mourn the untimely demise of Mrs. Emelie T. Y. Parkhurst, who departed this life April 21, 1892.

Possessed of a brilliant intellect and with strong executive and judicial powers, she was the originator, prime adviser and indefatigable corresponding secretary of the Women's Press Association.

The faithful adviser of many literary aspirants, she was an unceasing worker herself in the literary field.

Still quite young, she had produced much valuable work, and was honored with recognition and membership of all the important literary leagues in the land.

She had the welfare of her State very deeply at heart, and constantly urged upon her coworkers in the association the deep importance of using pen and voice steadfastly for the ultimate good of California.

Much of the good that she has done will never be known, as her good influence has sunk deep in many a heart and changed the current of many idle lives.

She was the daughter of John Swett, and leaves a husband and infant daughter.

The Goods are Pure.

St Louis Journal of Agriculture.

The business of the Royal Baking Powder Company comes to us in the regular way, and is not, therefore entitled to any special mention on that account. But the fact that other baking powder companies have been making war on this company and using all manner of unfair means to injure its business is itself an appeal to the love of fair play which is a part of the character of every good American citizen.

The fact that the Royal Baking Powder Company has succeeded far beyond any of its competitors is no doubt reason enough for some of them to say anything against the Royal Baking Powder that they can get newspapers to publish. We do not know whether that sort of thing has injured the Royal's business or not. We don't suppose it has, but of one thing we are sure; when the goods of any company have been on the market, as Royal Baking Powder has, for a whole generation, and been consumed by almost the entire population to a greater or less extent, with perfect satisfaction to all, and without having injured the health of a single person, then it will take more than spite or jealousy to injure its business. The baking powders made by this Company have been tested a thousand times by the most eminent chemists, and always pronounced pure and wholesome. This, added to the experience of the millions who have used them, will stamp as absurd the attacks of other manufacturers who are prompted by jealousy of their great success to publish false statements about the Royal Company's goods.

RIVER WATER.—Analyses of river water to determine their values for fertilizing and irrigating purposes have been made recently by Mr. A. N. Pearson of Melbourne, Victoria, Chemist for Lands, Agriculture and Victorian Water Supply. The results of the 48 analyses made during the year ending June 30, 1891, are presented in the last report of the Minister of the Victorian Water Supply. The samples were from the Murray, Goulbourn, Werribee and Lerderburg rivers. Mr. Pearson states that the richness of the waters was highest during summer and lowest as winter approached; also that the waters of the Murray and Goulburn rivers, as a rule, increased in richness with sudden rises in their height. The principal fertilizing value of the waters has been found through these and previous analyses to be in the matter in solution rather than in the sediment. In most cases the sediments were so small that all the fertilizing ingredients could not be determined, but so far as could be stated, the value of the sediment was from 1-20 to 1-5 that of the solution. The tables accompanying the report show for each ingredient its weight in pounds and value in pence; the total value of the matter in sediment and solution, and the combined value of these two when either 1 or 20 inches of water is applied to an acre of land.

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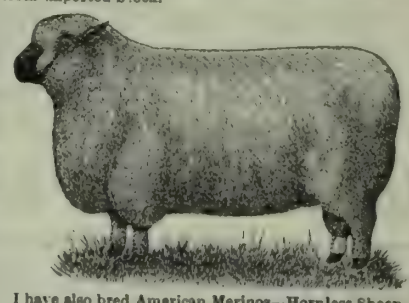
W. S. FRITCH, Petaluma.



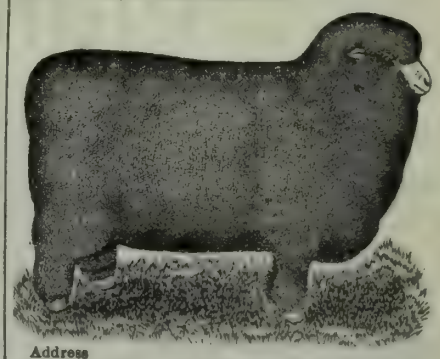
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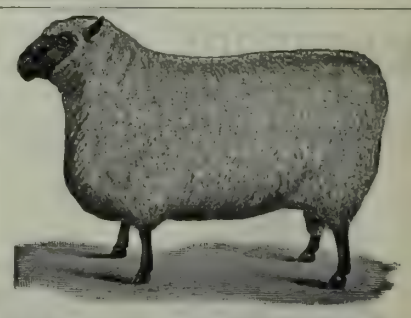
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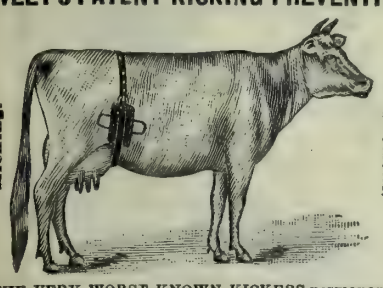
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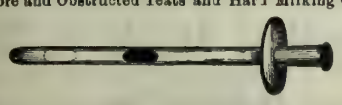


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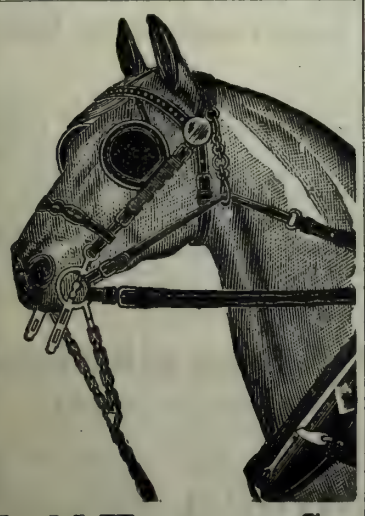
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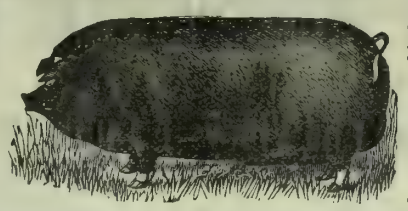
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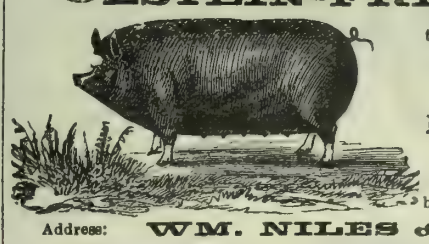
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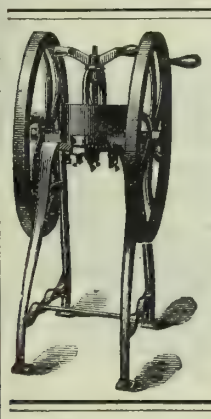
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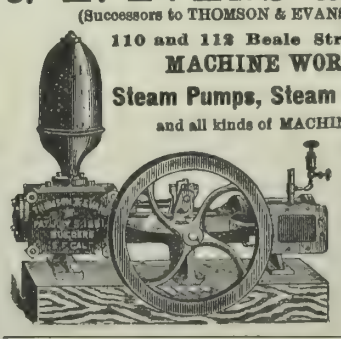
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RAINFALL RECORDS.—In the annual report for 1892 of the Berlin branch of the German Meteorological Society, Professor G. Hellmann gives an account of his continued experiments, which are summarized in *Nature*, on the effects of exposure on rainfall records, and on the determination of the distance apart that rain gauges should be erected in order to obtain an accurate account of the rainfall of any district. Simple as the question appears, the experiments, which have been carried on for seven years, have not sufficed to give a definite answer. Very considerable differences are found in the amounts recorded at stations comparatively close to each other. This result is partly owing to the effect of wind, especially in the case of snow. The following are the most important conclusions derived from the experiments: (1) The more a rain gauge is exposed to the wind, under otherwise similar circumstances, the less rainfall it records, and the higher a gauge is placed above the ground, the less rain it catches, as the disturbing influence of the wind is greater than on the surface of the ground. But if protected from the wind, a gauge will give useful results in an elevated position. The usual instructions to erect the gauge as openly as possible are therefore incorrect. (2) Even in a flat country, differences of five per cent occur in different months, at stations a quarter of a mile apart; in stormy weather, especially during thunderstorms, the difference may amount to 100 per cent. The amounts recorded at neighboring stations agree better together in spring and autumn, and also in relative wet years. Further experiments are needed, if possible by means of anemometers erected at the same level as the rain gauges, to determine more accurately the effect of wind on both rainfall and snow.

LOCOMOTIVE MILEAGE — That English locomotives sometimes make very large mileage, both per year and in total, is shown by the record of the "Charles Dickens," on the London & Northwestern Ry., which has made the round trip daily between Manchester and London (with occasional exceptions for repairs) since 1882, and on Sept. 10, 1891, completed its millionth mile. This is perhaps, says *Engineering News*, truthfully declared to be "a feat without parallel in the annals of railway traveling," as few engines complete their millionth mile, and fewer still do it in nine years, or at the rate of 111,000 miles per year. On the Pennsylvania Railroad, in 1885, the highest mileage which any passenger locomotive then had to its credit was 780,182 miles. Several had about 500,000 miles to their credit for ten years' service, and one had 41,510 miles for three months' work, or at the rate of 166,040 miles per year. The average of all passenger engines that year, however, was 45,936 miles (highest, 79,258), which is quite beyond any English precedent, and as several of the Western roads are far exceeding Eastern precedents in respect to locomotive mileage, it may be that some Western road has a locomotive in its service which has made a million miles in ten years. The New York Central has not, and it is likely to remain a very exceptional performance either in England or America until operating conditions have radically changed.

IMITATION FUR.—A recent invention of English origin is that of a looped fabric finished in such a manner as to imitate very closely the skins of bears, buffaloes, sables, foxes and other animals. In the process of making the material, the loops which constitute the pile are formed in different lengths. After the weaving of the fabric, the loops are drawn out by a revolving wire brush or card, and this process finishes the ends of the threads so as to make them finer at the points than at the roots. The pile is then formed at different lengths, consequently the resulting fur is thicker at the bottom than at the outside, thus most nearly resembling the real fur to be imitated. The fabrics made in this way are intended to be used as carriage rugs, door mats and for other purposes, the effect being, it is said, so good that the imitation cannot be detected except on close inspection.

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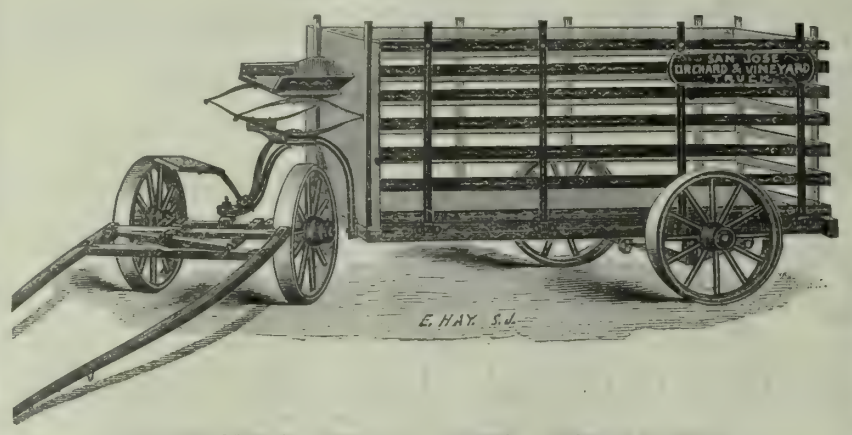
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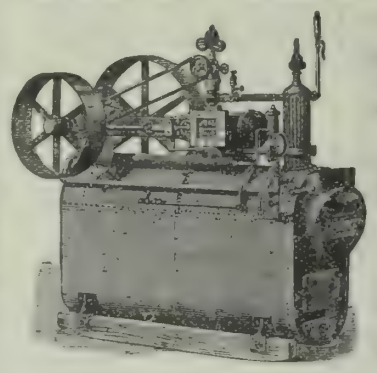
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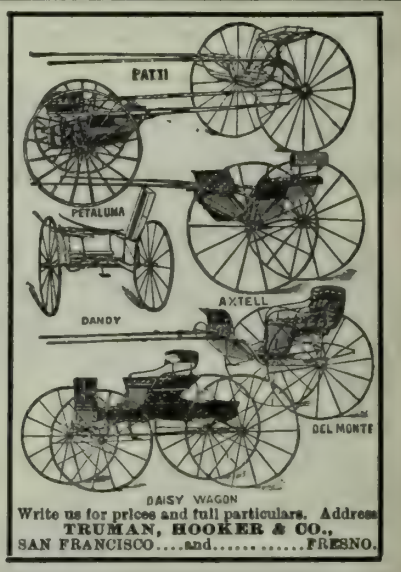
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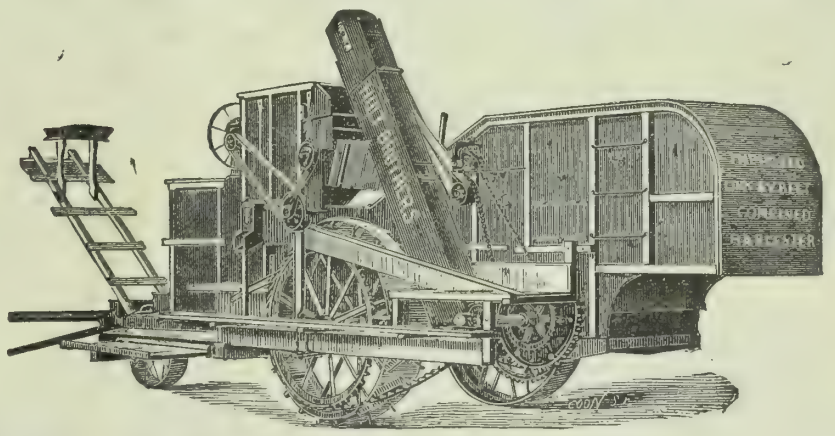
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

HOP NOTES.—Wheatland *Four Corners:* The cold weather of the past few weeks has put the crop back about ten days. The hopmen will begin to tie up in the Bear River yards about next Monday, May 16th. The vine is looking hardy, but is uneven. A few weeks of growing weather would bring them out in fine order. Work will commence on the Durst and Roddan new kilns about the middle of June. George Dalbey is putting the fine work on the Bear River hop press, which he is building for John Roddan.

WHEAT NOTES. — Biggs *Argus:* Thirty-six carloads, 635 tons, of wheat have been shipped from the brick warehouse since the first of the month, and about 1000 tons still remain in the warehouse. Of this 1000 tons, 150 tons are in the hands of the farmers, the balance being owned by millers and shippers.

Fresno.

WILD GOOSEBERRIES.—Reedley *Exponent:* The wild gooseberries of this locality, which are plentiful, are now ripe and in good condition to be gathered. The best way to gather them is to place a large pan, or several of them, on the ground under the branches and then beat the bush with a stick. This will shake the berries off and will prove a satisfactory method in every respect, as it takes but little time and save one's fingers from the thorns.

Humboldt.

CROP AND SHEEP ITEMS ON BANNER SHEEP RANGE.—Cor. Eureka *Standard:* Everything is prospering in this part of the county. Grass and grain are doing well; stock of all kinds is fat; in fact, we had good mutton all winter and our loss is a mere nothing. I don't remember as fine a winter for stock in the last 30 years. This spring has been very wet and showery, but notwithstanding that, the showing for lambs is not so bad, after all. I saved 80 per cent of mine (or the ewes did it for me) with the aid of the fine orchard grass pasture I saved for them. Hooker has done about as well as I have. My two sons at Gans have saved fully 95 per cent of the lambs from their flock of 1500 head. They are now rounding up an extra lot of beef cattle which they have sold to Siskiyou county butchers.

Kern.

TEHACHAPI CROP NOTES. — Cor. Bakersfield *Echo:* Providence seems to take especial care of this particular garden spot, for in every instance the rain has come just in the nick of time. Previous to last Saturday the outlook was not flattering. In many places the grain which was only about six inches high, had begun to joint and would have been a failure, but Saturday night a gentle rain began to fall, and showers have been frequent throughout the week, and now the crop is assured, but will undoubtedly be late, owing to the cool weather which still prevails.

FATTENING CATTLE FOR MARKET.—Bakersfield *Californian:* Mr. Ayres, an extensive cattle dealer of San Jose is shipping a lot of cattle from Arizona to be fattened for market upon the rich pasture fields of Kern Island. He is bringing in cattle by the trainload, and the amount of this kind of business that is now being done leads one to believe that one of the most solid and profitable industries in the whole world—that of making beef cattle—is a possession of Kern county's that will never feel dull times, nor suffer from the competition of glutted markets.

Napa.

ORANGES IN NAPA.—Leonard Coates in *Register:* There is no reason why Napa should not in time be as celebrated for her oranges as for her cherries, prunes and peaches. Lunching the other day at the Magnolia hotel, Calistoga, brought this forcibly to my mind, via my palate. On the table were some excellent oranges, grown in the neighborhood. Later on, while driving home, I was accosted by a peddler selling oranges. Finding that they were home grown I at once bought some, at 20 cents a dozen only. These oranges were infinitely superior in flavor to any I have bought this year from Southern California at 40 cents to 60 cents per dozen. While the rind was rather thick, the orange was of good size, very juicy, and notably free from fiber. Occasionally we have a season when orange trees will be injured by frost, but never, I think, more so than in Los Angeles. This year most of the oranges shipped to San Francisco are insipid and dry, and many of the trees killed. But this may not happen again for many years. I have eight varieties of oranges on my place, some in bearing, and they have not needed any protection from frost yet, after the first year or two. The trees should always be allowed to grow out bushy from near the ground, so that the branches and trunk are protected by the dense foliage.

Orange.

GRAPES TO THE FRONT.—Anaheim *Gazette:* Unless all signs fail, there will be a vast area set to grapes in this neighborhood next season. On all sides there is a reawakening of interest in this industry, based upon the universal impression that the vine disease has run its course. Mr. Wehmeyer's two-year-old vineyard on West street looks splendidly; the vines are filled with grapes, and there is in them evidence conclusive that the disease is at an end. Vines in different parts of the valley that have survived the mysterious malady are putting forth new growth and giving abundant evidence of returning health and vigor. They are covered with the rich glossy foliage of our vineyards of the days before the blight, and are quite sufficient to prove that the last lingering trace of the disease has vanished quite as mysteriously as it came. The vigorous growth of leaf and stem, and the putting forth of the delicate tendrils peculiar to the healthy vine, together with the branches laden with miniature clusters of grapes, is a sight calculated to make glad the heart of the old-time wine maker. It is a sight that we have not seen here in five years, and warrants the conclusion that we are at last out of the clutches of the malady. On every hand prevails the opinion that we have come out of the dread scourge, and that grape-growing will soon take on again the magnificent proportions of the past. Indeed, some of the old vineyardists are even now looking over the country for choice cuttings to plant next year.

Sacramento.

HOP CROPS BACKWARD.—SACRAMENTO, May 13: Many hopyards which last season at this date were twined, tied up and the vines growing rapidly, are now just sending out the first shoots. For the last ten days the hopmen have noted this slow growth, but attributed it to unusual cool weather. Latterly a closer examination reveals not only the fact that the vines are not growing vigorously, but that in numerous instances the top roots of the hill are decayed and only the small crown shoots are making a feeble effort to show life. It is hoped that the fine weather, which now appears to have come to stay, will bring out the backward hops, but it is certain that there is no remedy where the roots have been injured, and that this will tell on the coming crop. The reported condition of the yards is confirmed by Daniel Flint, F. V. Flint and Co., Henry Whittenbrock, J. E. Camp, Thomas Flint, T. Lovedal, Russ Flint and others. The cause of the trouble is undoubtedly due to the cold and backward season, but just how and what particular climatic condition has done the mischief is a matter of surmise. Many of the growers believe that the warm weather in February and March did the damage by awakening the dormant root stalks prematurely. Others attribute it to the drouth of last fall and the early winter. At the time hops usually begin to grow, the river was quite low and farmers feared a dry season, many of them erecting irrigating plants. The moisture in the ground was not sufficient to give the hop the nourishment which it received by subirrigation from the flood tide of the river. This season, as a result, the plants made a slow growth. Now the river is carrying a big volume of water and forcing a heavy seepage when it is least needed. The high water usually marks the gauges a month earlier than this season, and it is thought by many that derangement of the usual water supply has caused the trouble. The unfavorable weather has greatly delayed tying up, and some growers are undecided whether to tie the crown shoots or to wait for the lateral ones. One man to-day said that he proposed to be sure of vines, and proposed to tie up crowns where nothing better was growing, and if later in the season the lateral vines put out, he would prune the first ones and tie up a second time, though the work would incur a great additional expense.

San Benito.

HOLLISTER, May 10, 1892.

TO THE EDITOR:—An unusually large acreage of grain has been sown in San Benito county this season (mostly wheat). There has been an abundance of rain during the winter and spring months until within the past few weeks, when farmers begin to fear that the cold weather and scarcity of rain for a couple of weeks might injure the grain; however, on the last of April, nice warm rain began to descend upon the thirsty grain, and now farmers who have wild oat hay to cut are as anxious to see it stop as they were for it to commence. However, the rain came too late to help the growth of the wild hay, as it was too nearly matured. It is feared that he late frost this spring has injured the fruit crop here as in other sections of the State. Several slight shocks of earthquake recently around here. Alfalfa hay has been cut here over a month ago, and yields well. The orchards have not been hurt as much by cold weather as was at first supposed. Young trees are thriving nicely and grape vines are leafing out well. Haying will commence soon.—OCCASIONAL.

San Bernardino.

MODEL POULTRY FARM.—Robbie Condee in *Courier:* Geo. H. Lea's ranch is situated about two miles northeast of the city of Redlands. The poultry plant, which occupies but a small portion of Mr. Lee's large fruit ranch, covers about five acres, consisting of a brooder and a house 8x24 feet, which is heated by gasoline, and has a capacity of over 500 chicks. A large incubator is kept in operation, constantly hatching out chicks. From the incubator the chicks are removed to the brooder, where they are kept until about three weeks old. They are then moved to a larger pen. Here they remain until old enough to go on the roost, and then are given a long range, with a roosting-house 18x50 feet, which has a roosting capacity of over 500 fowls. The breeding-stock, which consists of Black Langshans, Houdans, Brown Leghorns, Light Brahmas, Buff Cochins, Barred Plymouth Rocks and Silver Wyandottes, are kept in separate yards 20x50 feet; each yard is planted to apricot trees, which afford an abundance of shade. The houses are 8x10 feet, with movable floors, so that they can be easily cleaned, The nests, which are in these houses, can be opened from the outside, making it much easier to gather the eggs. The yards, ten in all, are arranged with an alley running ning through the center, there being five yards on either side. The ends of each yard can be removed, and the yards are cultivated each year, keeping them always in good condition. Mr. Lea states that there is no better market for poultry and eggs anywhere, and there is no danger in overstocking the market.

San Diego.

IMPROVED CROPS.—Escondido *Times:* In the past ten days there has been a marked improvement in the cereal crop prospects of this valley and surrounding country. The great benefit of the splendid rains of May 2d and 3d are now more apparent. The grain which before that was considered hardly worth cutting has grown into a fair average crop, and the late grain will be fully up to the usual average. Corn has taken a new start, and with warm weather, which may now be looked for, will make a good yield. The vineyards never presented a better showing than at this time; the bloom is well set, and with the excellent cultivation and attention which has been bestowed, a large crop is assured. The same can be said of the orchards, citrus groves and small fruits. In fact, from the manner in which the ranchers now brag about the prospects, and are preparing to care for the coming crop, we are led to expect much for the season.

PLANTS FROM CUTTINGS.—Escondido *Times*: A. B. Eells writes: "Noticing directions going the rounds of the papers for growing plants from cuttings that are difficult to start, I thought it might not be amiss to give a plan that has been very successful here. A trench is dug, having sloping sides and say a foot or more in depth, in sandy soil. The cuttings, either green or dormant, are of any length from two inches to one foot, are laid thickly along the sides of the ditch and buried all but the last inch of the top end. The bottoms of the cuttings should be as near on a level as possible. Lay light boxes over the cuttings for shade and let water in the trench to an inch above the base of the cuttings twice a week, or often enough to keep them moist."

San Mateo.

CROP PROSPECTS.— Half Moon *Advocate*: A trip down the coast as far as Pescadero revealed splendid crop prospects. The valleys of Pilarcitos, Purissima, Lobitos, San Gregorio, Pomponia and Pescadero are all abloom with abundant and healthy crops. Grain is doing unusually well, and the season is equally auspicious for beans, of which a good acreage is being planted. Pasturage is excellent and stock look sleek and fat. The coast farmer is happy, and the only thing he has to pray for is the early completion of the S. F. W. S. electric road.

Santa Clara.

FRUIT CROP AT LOS GATOS.—Cor. *Mercury*: Owing to the fact that the surface moisture has not united with that of the subsoil in our deep gravelly soils around Los Gatos, there was some apprehension that the usual warm, dry weather would be rough on the fruit and make it small and destitute of flavor. The orchardists now have the utmost confidence in the prospects. Cold weather of April has caused, in some instances, the falling off of the embryo fruit, but enough is left to make a splendid crop.

ENGLISH PHEASANT EGGS.—San Jose *Mercury*: M. C. Jordan, of Santa Clara, has received from London 100 English pheasant eggs, which were forwarded by Peter J. Donohoe, the owner of the beautiful farm, who is now in London. Mr. Jordan set the eggs under hens.

Sonoma.

POULTRY PAYS.—Petaluma *Courier:* A little more than two years ago R. M. Hyatt started in the chicken business. With his land paid for with funds on hand for that purpose at the time of the purchase, he made the business pay all of its investment in the way of improvements. This included fencing the property, cultivating the land, erecting a large number of excellent chicken houses, brooders, hatching-houses, storehouses and the like, a very good barn, etc. Besides all this, the revenue from his sale of chickens and eggs has paid all the living expenses of his family and produced enough besides to build a fine residence. It may be that the poultry business does not pay in this part of the world, but there is an immense amount of evidence in support of the opposite theory. He understands how to manage every detail of the business. He has at times from 1200 to 1500 chickens on his place, the number at the present time being something over 1000.

Stanislaus.

CROPS ON THE WEST SIDE.—Newman Cor. Modesto *Herald:* The weather for the past few days has been as changeable as the mind of a blonde maiden, being windy, rainy and sunshiny all in a few hours. However, farmers have no fault to find, as this kind of weather has been most favorable to grain, and a fair crop of cereals will be harvested on this side of the San Joaquin this year. Much of the late sown grain is beyond redemption further than to make hay.

Tehama.

A LARGE GRAIN FARMER. — Napa *Register*: Eighteen years ago Mr. John Finnell went to Tehama county to engage in farming upon a larger scale than the limited area of grain land in Napa county allowed. He leased and subleased a tract of thousands of acres, made big money on the venture and then purchased the property. He now owns 22,000 acres west of the town of Tehama (having lately purchased, for $50,000, 2000 adjoining acres), rents the Walsh ranch of 20,000 acres near Chico at $35,000 per year, owns 11,000 acres 30 miles west of that, and ten miles farther away owns 10,000 acres more. This last is mountain land used principally as a range for sheep. Here is a total of 63,000 acres of land controlled by one man! Mr. Geo. Goodman, Sr., who has just returned from a week's visit from Mr. Finnell, says that not since 1880 has the prospect been so good for a large crop of grain as this year in Tehama county. Mr. Finnell expects to harvest on his own and rented lands 200,000 (130-lb.) sacks—enough to supply San Francisco with breadstuffs for one whole year. In the management of his farms he has the assistance of four sons — John, James, Bush and Simpson. A fifth son, Fountain, owns a place of between 4000 and 5000 acres just south of the Senior Finnell's Tehama Ranch. In running his machinery during the plowing and reaping seasons, mule power is used in preference to traction engine. The soil is not cropped to death, the land sown one season being summer-fallowed the next. Mr. Finnell's places carry a great many heads of live stock—500 mules, 150 brood mares, 1500 head of cattle, 14,000 sheep and lambs, and an uncounted number of hogs.

HOW TO PREVENT FROST.—T. Kindlespire in *Peoples' Cause*: I see an extract from the Colusa *Sun* headed "To Plow or Not to Plow." The writer gives a remedy to guard against frost on orchard and vineyard lands. He says that where the land was freshly cultivated it was injured, while the part uncultivated was uninjured, and gives as his reason for the uncultivated part not being affected by the frost that it was of a smooth surface and had a crust on it. I don't think the smooth surface had anything to do with it. It was simply a dry surface and the cultivated part had a damp surface That is the whole secret of the matter. Rough or smooth, if dry on the surface, frost will not damage fruit as much as when the land is freshly cultivated, as the cultivation creates a moisture that freezes. Much damage might be prevented if in frosty weather we would leave the ground uncultivated and keep the surface dry, for in the absence of moisture there will be no frost. But this we can't always do, as it will rain in the evening and clear off during the night and turn cold. The ground is then wet, the trees and vines and vegetables are wet, and that is the time our greatest injury is done. Unless land needs cultivation badly, it is better to let it alone in frosty times. The frost has injured our fruits but little, except prunes. They were in full bloom and no leaves on the trees during the first part of April, when we had the heaviest frost. The prune crop will be light. The cold and backward spring so far has made melons a failure.

CROP NOTES.—Corning *Observer*: Haying has commenced, but only on alfalfa. Mr. A. B. Aiken was about the first to have the mower out, to cut the alfalfa field adjoining the town. The hay crop will be fine generally through the country. The summer-fallowed wheat looks handsome, as it is headed out; the late rains will make the winter-sown a fine crop. Next week farmers will be a busy lot at hay-cutting.

Tulare.

LARGE NAVEL ORCHARD.—Porterville *Enterprise:* J. Curtis of Palermo, Butte Co., has been in town the last two weeks superintending the putting out of 50 acres of orange lands to Washington Navels for J. J. Cairns, whose place is ten miles west of Porterville, at Lindsay, and the trees for which, his firm supplied. He had 12 men employed four days and put out nearly 4000 trees. Mr. Curtis says he has never yet planted an orchard where he has found the ground in such fine condition and the future prospects looking so well. Mr. Cairns expresses himself exceedingly well pleased with the trees, as well as the manner in which they have been planted.

SHEEP ON THE GOVERNMENT RESERVE.—Visalia *Delta*: Stephen Barton of Kernville writes the *Delta* as follows: "Between 100,000 and 200,000 sheep have entered the land reserved for a national park by my place up to the present time (May 2d), and still they come."

ARIZONA.

A BIG HARVEST.—The Salt River valley never presented a more enchanting view than it does at the present time. In every direction is to be seen fields of waving grain which responds to the breeze like the rolling billows of Old Ocean. The many acres of grain are now rapidly nearing the time when the harvester will be set to work and the golden kernels threshed out, ready for market. The acreage this year is large, and the yield promises to be abundant, and the farmers are correspondingly happy and hopeful. The copious rains in the early part of the season, with the more recent ones, were especially conducive to an abundant crop. Many thousands of dollars are being expended in harvesting machinery, from the self-binder to the steam thresher, and soon their busy hum will be heard throughout the length and breadth of the valley. The steam hay balers are already at work taking care of the hay crop, and they will be followed by other machines now in short order. There should be an abundance of grain this year, not only for the home demand, but for shipment as well. The acreage is increasing rapidly each year, and it will not be long before this section of Arizona is known as a wheat-producing country, as well as being noted for fruit, honey, minerals, etc. The fact that the Salt River valley can produce 60 bushels of wheat per acre is a fact that can be pointed to with pride, and the people of less productive sections of the U. S. can hardly comprehend this.

STRAWBERRY CULTURE. — Phœnix *Herald:* Strawberries! The valley is teeming with them. Col. Stewart's 15 acres keep four teams busy on the road, and he is furnishing 300 boxes per day to the fruit-canning company, which is at work on the crop. Every fruit store and ice cream parlor in town is overflowing with strawberries of the finest flavor. Mr. Charles Williams is furnishing the market with an especially fine berry—the Crescent, a seedling that would make an Eastern grower turn pale with envy. From three-fourths of an acre Mr. Williams is now regularly gathering 114 boxes per day. Mr. Williams has five acres in these berries, and will double the acreage next year. Then there is the Trook Ranch with six or eight acres, and Farrington with as many more, and various others who are making a business of strawberries, when five years ago any old timer would say, "You can't raise sich truck here." In five years from this date this valley will be canning enough strawberries to supply the entire United States if some mishap does not throttle the business.

Farmers, Fruit Growers, Home Seekers

FARMERS:

Do you want to locate in a region where crops never fail?

Do you want a place where you may plow and plant in the assured certainty that you will in due time reap an abundant harvest?

Do you want a farm where you can raise every variety of cereal to perfection?

Do you want a farm where you can raise cotton, sugar-cane, tobacco, flax or ramie?

Do you want a farm where you can cut three to six crops of hay every season?

Do you want a farm where you can raise potatoes, beets and vegetables the year round?

Do you want a farm where your harvest may commence in January and continue each month until the following December.

Do you want a farm where you can raise two and even three crops on the same land in one season?

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Do you want a place where the peach, apricot, plum, pear, apple and every other deciduous fruit flourishes?

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Do you want a place where you can raise almonds, chestnuts, pecans, walnuts and all similar products?

Do you want a place where you can raise finer raisins than Spain, can show better prunes than France produces?

Do you want a place where strawberries and other small fruits are at home?

Do you want a place where the peach tree and the raisin grape bear at eighteen months from planting?

Do you want a place where every fruit produced in America grows luxuriantly and produces abundantly?

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Do you want a home in a land where there is neither snow, thunder storm or tornado?

Do you want a home in a land where the sun shines more than 300 days out of the 365?

Do you want a home where twenty acres well tilled will yield a competence and eighty will return wealth.

Do you want a home where discomfort of every kind is minimized and everything conspires to make existence a pleasure?

All this, and more, too, you may find in the great Kern River Valley of California. In this valley and in the mountains that tower above it, you may find every variety of climate, from perpetual summer to eternal winter, every variety of scenery from level plain to rugged mountains.

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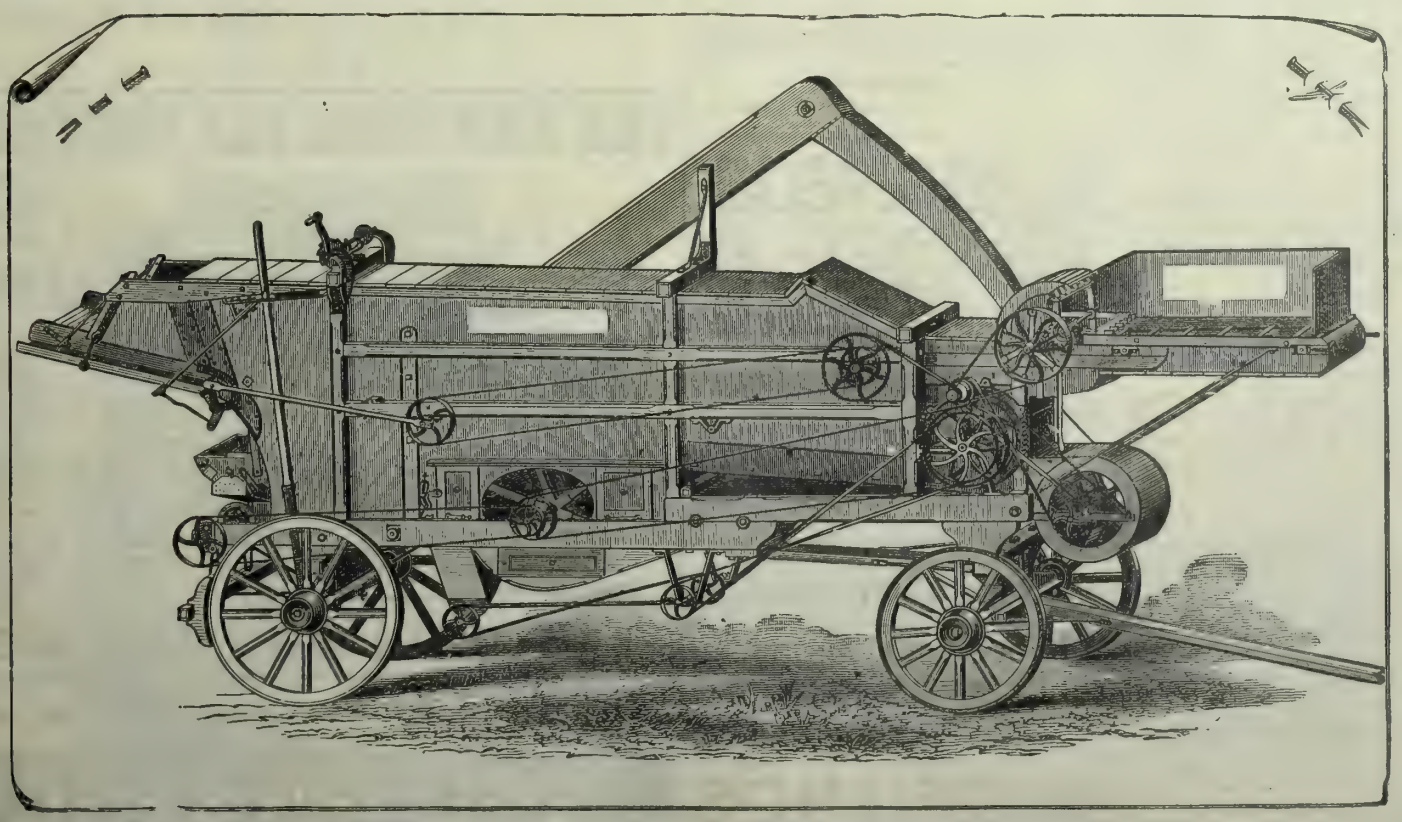
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GOOD HEALTH.

Organisms in Surface Water.

Thos. N. Drowne, in a report to the Board of Health of Newport, has the following to say on this subject: "The excessive development of vegetable organisms in surface water, with all its attendant evils, may be briefly explained by the statement that there is abundant food to support these organisms. In all surface waters these vegetable growths are found to a greater or less degree, and the reason why some bodies of water have few and some have many is that the former contain but little food for their support and the latter contain much. The analogy between poor crops on a barren, rocky soil and an abundant harvest on good soil, richly manured, is one that may serve our purpose by way of illustration.

A good deal of information on this subject has been acquired by the recent investigations conducted by the State Board of Health of Massachusetts. Some of the conclusions that have been arrived at in the course of these investigations are as follows:

1. Polluted waters of ponds and reservoirs, that is to say, water that receives readily decomposable organic matter, such us sewage or the drainage from houses, stables, manured fields and the like, is more liable to give trouble from vegetable growths than that which is free from such pollution.

2. Artificial storage reservoirs, which have not been cleaned before flooding, by the removal of all trees, shrubs, and rich surface soil, supply, by the decomposition of this vegetable matter, the conditions for an abundant development of organisms.

3. Shallow ponds and reservoirs, and those with much shallow flowage, are more liable to give trouble than deep ponds and reservoirs.

4. The larger amount of decomposable organic matter present in the water, the greater the probability of the development of blue-green algæ, which are highly nitrogenous, and give on decomposition the characteristic pig-pen odor.

SHADE TREES ON CITY STREETS.—Shade trees on city streets have been condemned by sanitarians as inducing dampness and shutting off air and sunlight. While this is perfectly right under the conditions frequently affronting us, says G. N. Bell in the *Sanitarian*, other conditions may be promoted that render tree-planting on our residence streets both advantageous and pleasing. Assume an average city street 60 feet in width and running due north and south. On each side of the roadway there will be a footway of 12 feet. Let us pave but seven feet of this. The depth of the lot, we will say, is 125 feet. Allowing 65 feet for the depth of the house, there will be 60 feet depth of yard room. Thirty-five feet in the rear ought to afford ample drying room, and we can then set our house 25 feet back from the street. From the front of the house, then, to the curbstone there will be 37 feet. Midway between the edge of the paved sidewalk and the curbstone affords a line for the location of trees over 35 feet from the front of the house. Trees at this distance from the house obstruct no air nor sunshine detrimental to residents, and the cost of the trees is comparatively small in consideration of the increased value of the adjoining properties. On streets running east and west, trees are advantageous on the north side only.

CHARACTER AND EYES.—A far-searching individual, who has apparently made a very deep study of the pigmented cells of the iris, tells us that a person's character can often be best told by the color and depth of his eyes. People do not usually apply more than four or five colors to eyes, so that any that are not blue, or black, or brown, or hazel, are called gray. Yet there are a hundred different kind of gray eyes. You seldom see a stupid person with gray eyes, but the genuine gray is always found among highly intellectual people. Steel-gray eyes with large pupils denote intense feeling; blue-gray eyes are generally possessed by people with kindly hearts. You never find a mean spirit behind a pair of blue-gray eyes. Blue eyes denote quickness of thought, and generally fine physical development when they are large and bright. About nine-tenths of our engineers, lighthouse-keepers, policemen aad army and navy officers, and many others selected for physical perfection, have blue eyes. Hazel eyes denote musical ability and grace of person; they are very pretty eyes, too. Our omniscient informant does not make it clear: Which is cause and which effect? Does individual character affect the color of the eye, or does the color of the eye affect the individual character?

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92



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1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still, that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one ($100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the AERMOTOR CO., 12th and Rockwell Sts., Chicago, or 27 and 29 Beale St., San Francisco.

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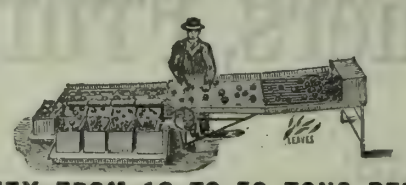
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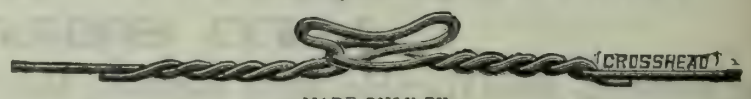
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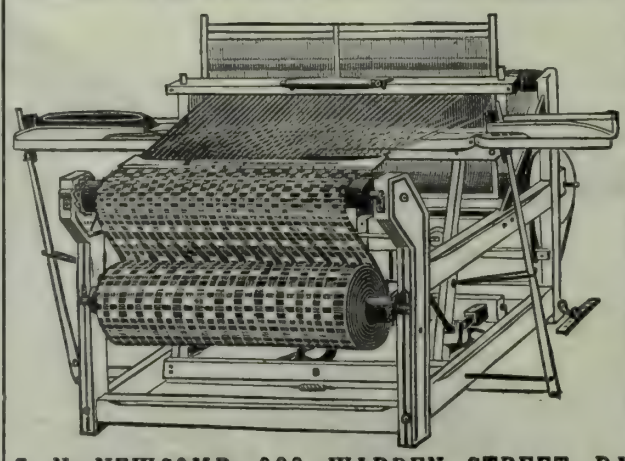
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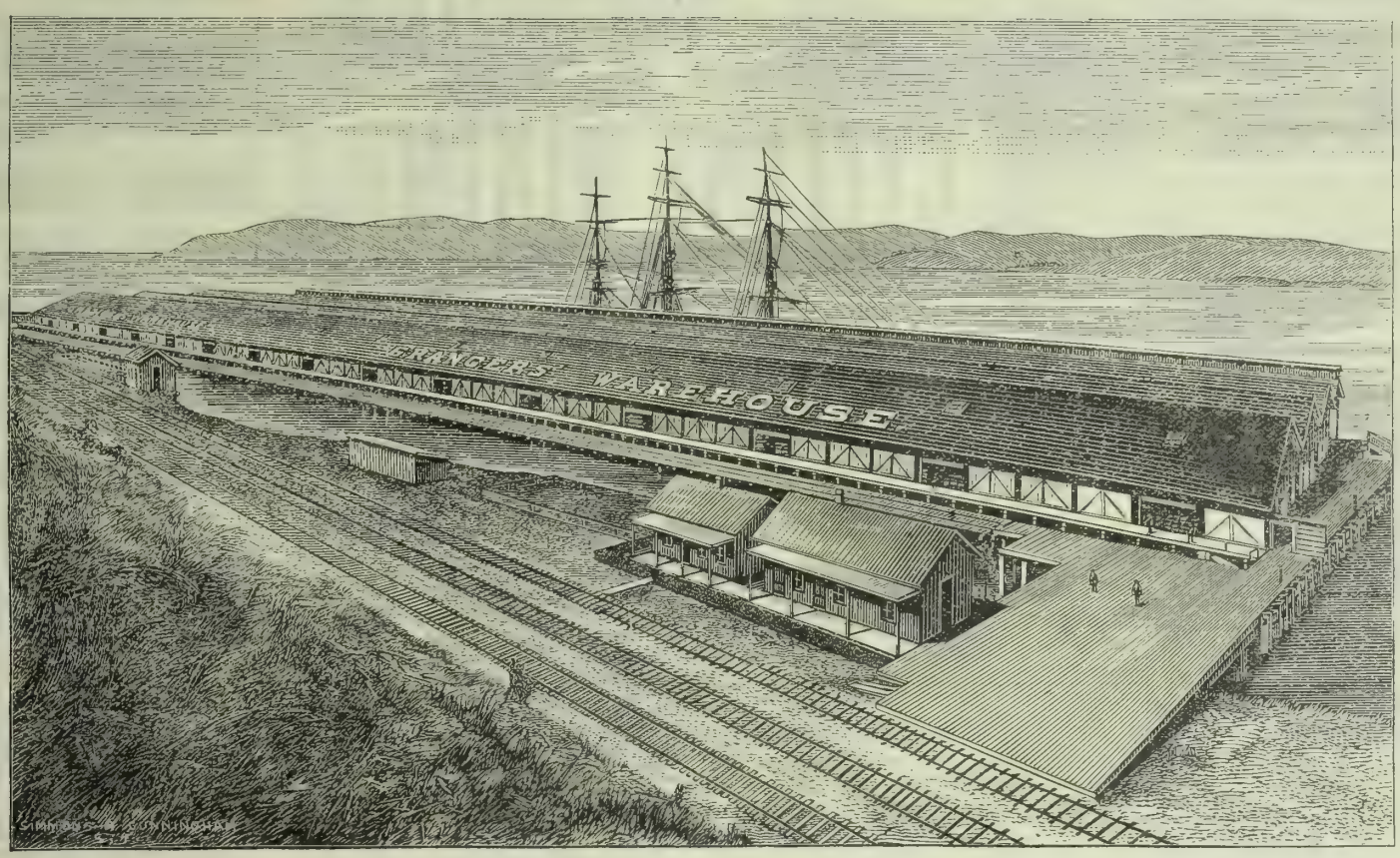
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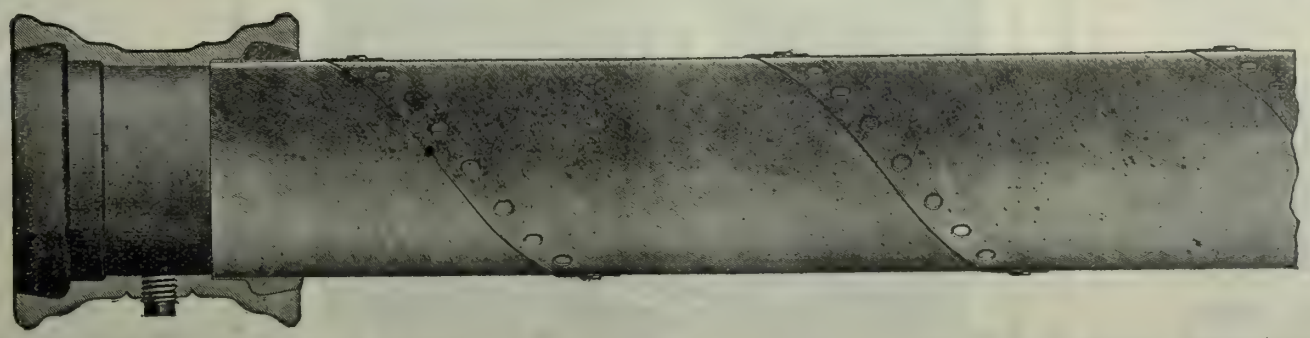
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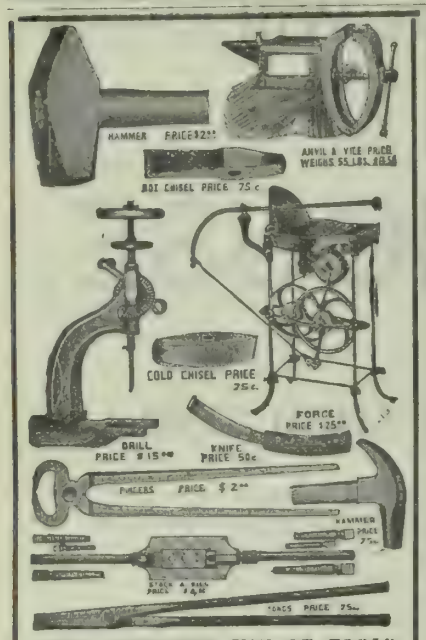
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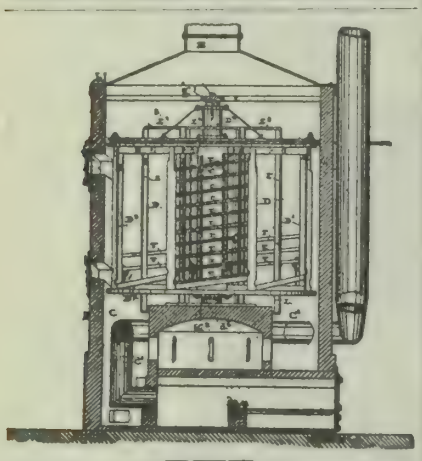
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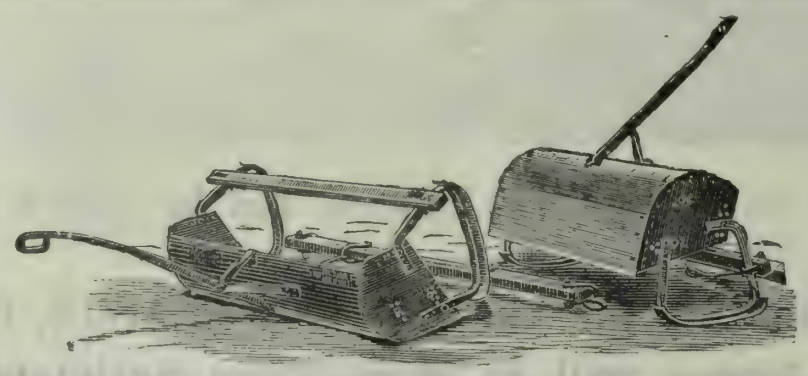
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Capital paid up and Reserve Fund	800,000
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S. F. Market Report

Market Review.

SAN FRANCISCO, May 18, 1892.

Clear skies and warmer weather, it not followed by devastating hot north winds, are doing no little in restoring general confidence by giving assurance of good crops. The local money markets continue easy and in favor of borrowers on glitedged security. There is a growing impression that there will soon set in a growing demand for funds for moving crops and speculative and other purposes.

Foreign Trade Review.

LONDON, May 16.—The Mark Lane *Express* says: There are large supplies of English wheat; prices of fine samples are maintained, but lower qualities show a decline of 6d. Foreign wheats show an average decline of 6d. Corn is in good demand at an advance of 6d. Oats are dull and barley is unchanged. At to-day's market wheat declined 6d. Flour was sluggish, values being barely maintained. Corn and oats were 3d dearer.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.	Sept.
Thursday	6s11½d	6s11 d	6s11 d	6s11½d	7s00 d
Friday	6s11½d	6s11 d	6s11½d	7s00 d	7s00½d
Saturday	6s11½d	6s11½d	6s11½d	7s00 d	7s00 d
Monday	6s11½d	6s10½d	6s11 d	6s11½d	7s00½d
Tuesday	6s 8½d	6s08½d	6s09½d	6s10 d	6s10 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	37s0d	36s d	36s d	Quiet.	Fine.
Friday	37s0d	36s d	36s d	Slow	Warmer.
Saturday	37s d	36s d	36s d	Quiet	Showery.
Monday	36s9d	36s d	36s d	Steady.	
Tuesday	37s d	36s d	36s d	Steady.	

To-day's cablegram is as follows:

LIVERPOOL, May 18.—Wheat, red very dull and white firmly held. California spot, 7s 5½d; off coast, 35s 6d; just shipped, 36s; nearly due, 36s; cargoes off coast and on passage, weaker; Mark Lane wheat, quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug
Thursday	149½	150½	151½	150⅝
Friday	150⅝	151½	152½	151⅝
Saturday	150	150⅝	15 ⅝	151½
Monday	148½	149	149½	149⅜
Tuesday	148½	148½	149½	149

The following are to-days' telegram:

NEW YORK, May 18.—Wheat, 88⅞c for May, 89½c for June, 89c for July, 80½c for August, 89⅝c for September, and 91⅛ for December.

CHICAGO, May 18.—Wheat, 81c for May and 80½c for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	149⅞	149½	144	144	140½	140
Friday	150	149⅜	....	....	140⅜	140½
Saturday	....	....	....	....	140⅜	14 ⅜
Monday	149	148⅝	145½	145½	140¼	139⅝
Tuesday	149¼	149⅛	....	....	140⅜	139⅝

The following are to-day's recorded sales on Call:

Wheat—Morning—Regular Session—Buyer season — 100 tons, $1.49½. Seller 1892—500 tons, $1.40½ per ctl.

BARLEY.

	Buyer Season.		Seller Season.		December.	
	H.	L.	H.	L	H.	L.
Thursday	9 ¾	98⅞	99¼	99¼	105	105
Friday	100½	99½	....	....	102½	103½
Saturday	99	99	99	....	....	....
Monday	97½	96	....	....	....	....
Tuesday	98	98	97½	97½	101½	100½

The following are to-days' recorded sales on Call.

Barley—Morning—Regular Session—Buyer season—300 tons, 95½c. Seller 1892, new—100 tons, 94½c; 200, 94c; 200, 93½c per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 13.—The feature of the wool markets this week is an active demand for pulled wools. The scarcity of other wools has forced manufacturers to turn their attention to this grade, and the result is that only a small amount of wool has been disposed of, but dealers have obtained prices which they could not have secured a month ago. Fine combings, which have been heretofore very dull, were freely bought at 37 cts. Supplies of B supers is about exhausted while A supers are active and firm. Fleeces are quiet, but this is, in a measure, owing to a lack of suitable stock and not demand. In Texas territories and California wools there is little doing. Australian wools are not as active as they were a week ago. Carpet wools are receiving more attention. Some large sales of Cordova wools are reported. China wools are active and firm. Dealers and manufacturers are giving considerable attention to reports from the wool sections. Advices received state that buyers are paying as high prices as they did a year ago and in some instances even more. Many leading dealers believe that there will soon be a general advance in wool values. Considering the advanced production of the mills and the large amount of wool used, such a movement seems possible, if not probable.

NEW YORK, May 16.—Wool has a shadowy sort of better condition, not that prices for present supplies are in any way improved, but because lines and remnants are going out of the way of new to such an encouraging extent. The strong tone of London is also a basis of confidence for dealers. Manufacturers however, say they must fight against a material advance in the face of goods gone out and yet to go to meet the easy-priced plane that distributors and consumers have become used to. Still it is generally conceded that wool is at bottom prices and holders who have weathered the tiresome protraction of unpaying returns have a right to feel hopeful. There has been considerable trade at primal points, but caution prevails again, and it is quite apparent the new clip will not stand hurried heavy marketing.

BOSTON, May 16.—Sales amounted to 1,486 000 domestic and 1,240,000 foreign. The sales include half a million Australian at 32@40 cts.; 25,000 California spring at 17@20 cts. and 30,000 fall at private terms.

PHILADELPHIA, May, 16.—Trading has been light, the remaining fine lots being held for more money, which restricts business.

Wheat Statistics and European Markets.

NEW YORK, May 13.—Bradstreet's statistics of available wheat stocks indicate that with a continuance of the rate of exports, reported for three weeks past, the United States will carry over about as much available and probably more invisible wheat in July than on that date in 1891. Exports of wheat for both coasts this week (and flour as wheat) equal 3,621,000 bushels, contrasted with a weekly average of 3,100,000 bushels during the previous three weeks, and with 1,941,000 bushels in the second week of May, 1892. A concensus of European expert opinion as to the prospective price of wheat is cabled as follows: It depends on the weather and crop reports, meanwhile the general opinion among European authorities is that the lowest price has been touched this season, although sufficient supplies are practically assured. European crop prospects generally are below the average, though probably not much.

Eastern Markets for Fresh Fruit.

CHICAGO, May 17.—California cherries in larger supply and easier; boxes, 8@10 lbs. white, $2@2.25; 8@10 lbs. black, $2.@2 30.

Eastern Dried Fruit Markets.

NEW YORK, May 16;—Peaches—Unpeeled are scarce and strong at 8⅛@9¼ cts. Prunes are in few hands and firm. Raisins are working out well, considerable cheap stock going west. Bags range from 3⅛@4⅛ cts.; for three-crown layers there is a wide range at 90c@$1.30. Apricots are firm at 9½@10 cts. boxes. Extras are tending upward. Small consignments of cherries have been sold at $6@6.68 per box.

CHICAGO, May 16—California dried fruits remain very steady. Raisins are quoted a little quiet and slow, but peaches, prunes and apricots of good quality all sell well. Of the latter kind the supply is small.

Eastern Hop Markets.

NEW YORK, May 16—Hops are quiet; trading is chiefly in prime at 26@27 cts.; choice State and coast are held at 28 cts. but are not offered freely; 500 bales of State were sold to liquidate an old contract. The London market is firmer, helping faith in top grades; options are quiet; June, California, bid and asked, 25@27 cts.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 16, '92, were as follows:

Flour, qr. sks	153,536	Bran, sks	12,955
Wheat, ctls	70,977	Buckwheat "	
Barley, "	11,499	Middlings "	3,539
Rye, "	996	Chicory, bbls	130
Oats, "	624	Hops, "	
Corn, "	3,476	Wool, "	1,795
*Butter, "	1,463	Hay, ton	2,722
do bxs	857	Straw, "	94
do bbls		Wine, gals	284,676
do kgs	21	Brandy, "	10,630
do tubs	10	Raisins, bxs	7,375
do ½ bxs	4 3	Honey, cs	32
†Cheese, ctls	1,026	Peanuts, sks	
do bxs	78	Walnuts "	
Eggs, doz	34,690	Almonds "	
do " Eastern	58,800	Mustard "	
Beans, sks	25,406	Flax "	
Potatoes, sks	16,506	Popcorn "	
Onions, "	3 389	Broom corn, bbls	

*Overl'd, 88 ctls. †Overland, 685 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to May 19, '91.	July 1, '91 to May 14, '92.
Flour, ½ sks	365,337	432,781
Wheat, ctls	1,361,056	1,272,513
Barley, "	269,912	51,533
Oats, "	337,047	414,528
Wool, bales	6,100	6,933
Hops, "	443	431
Rye, sks	210	3,498
Potatoes sks	99,818	136,124

Cereals.

Yesterday's cables from London report as follows: Imports into the United Kingdom for the week ending May 17th: Flour, bbls., 176,000; wheat, qrs., 202,000, Stock on hand May 1st: Wheat, 260,000@270,000 qrs; flour, 270.000@280,000 bbls. Amount of wheat and flour on passage May 17th: To United Kingdom, 2,831,000 qrs; to Continent, 1,473,000 qrs Farmers' delivery of wheat for week ending May 14th, 84,587 qrs; average price, 31s 7d.

New York mail advices to May 11 report as follows: "Cold and stormy weather in the East, West, Southwest and Northwest has reduced the volume of general trade in all but the Southern cities and set the croakers to work talking of short crops. But a good authority says, concerning the issues of the season, that it is well to refer to the crop and weather conditions of a year ago, when the greatest crop of spring wheat ever known was raised in the West. On May 8th the Signal Service reported cold weather of unusual severity prevailing over the country, and later frosts than ever previously recorded. On May 10th the Government report stated that spring plowing had been delayed first by wet weather and steadily by dry weather. The proportion of spring wheat planted was only 68.8 per cent, against 77 per cent as the average of a number of years. On May 13th the North and South Dakota crop bulletin said, in the North State seeding had been interrupted by rain and cold, and only a little more than half had been done. On May 18th a Chicago paper stated that the spring wheat seeding through Minnesota and the Dakotas had been practically completed, and the largest proportion of it was above ground. So the season is by no means too late for abundant crops."

While the above may be very well for bears to put out, yet the fact remains that there was a large falling off in the acreage seeded to wheat this season, and therefore it will not be possible to have so large a crop outturn in this year as there was in last year.

The movement of wheat at the East this year offers some food for reflection, as well as for the inner man. The arrivals at points in the Central States up to May 7 were as follows since July 1:

	1891-92.	1890-91.
Winter	66,306,000	27,248 000
Spring	158,894,000	78,885,009
Total	225,200,000	105,633,000

This movement of spring wheat of 159,000,000 bushels is from a crop of 219,000,000 bushels, while the movement of 66 000,000 bushels of winter wheat is from a crop of 391,000,000 bushels, showing that with the greatest crop on record the consumption in the thickly settled parts of the country is increasing rapidly, while the spring wheat country, which is poor and sparsely settled, has a larger margin to sell.

The official figures of the Austro-Hungarian exports for the seven months of the present cereal campaign amount to 142,000 qrs. of wheat, 120,000 qrs. of rye, against 622,000 qrs. of wheat and 5000 qrs. of rye last year.

Advices from St. Petersburg, April 25, state that prices of grain in the famine provinces are falling rapidly.

Advices from Belgium are that the growing wheat crop is in unfavorable shape and that one-fourth of the area has been replaced with oats.

The local wheat market is easy and lower under strong bear influence and a now general disposition shown by speculative holders to sell. Improved crop prospects have contributed to the weaker tone, in the face of only fairly favorable crop advices from Europe and also from the Eastern States. Several vessels were chartered during the past week for spot loading and an equally large number for new crop loading. Ships in port are held with considerable firmness. There is less disposition manifested to take up vessels to arrive, exporters contenting themselves to follow the market. This course is probably induced by reason of the large disengaged tonnage in port and the steadily increasing available supply on the way to Pacific Coast ports.

The receipts of barley have been light. The feed demand in the interior is taking unusually large quantities. The market shows a fair degree of steadiness. Crop advices are favorable. The yield will, without some unfavorable event, be much larger than had been estimated, while the grade will be fair to choice with large quantities of bright color.

Oats are in light supply with a good demand ruling. While the market shows considerable strength, no improvement in prices is expected to rule this side of new crop season.

Corn is in good supply, with a heavy tone reported. Both the export and home demand are of a sluggish character. Crop advices are more favorable.

Rye is weak and heavy.

Feedstuff.

Bran and middlings are barely steady. Rolled barley and feed meal are weaker with concessions obtainable. Notwithstanding good matured pasture the demand for ground feed continues fairly active.

Notwithstanding that there is more or less selling pressure of old and of new damaged by rains, the market holds strong under a free feeding demand. The quantity that is being fed out is said to be larger than before known. With continued clear and warm weather haying will become quite general within the next ten days. The crop outturn is as yet a disputed point; many contend that more fields will be harvested for grain than were expected, while others claim that admitting this to be correct yet the late favorable weather has made it possible to cut a larger number of fields for hay.

Dairy Produce.

Hot weather the past three days has caused a stronger selling pressure in dairy produce. The trades, as usual under such circumstances, are offish and not disposed to buy beyond immediate wants.

Butter is coming in very freely. Considerable quantities of that received show the bad effects of cows feeding more or less in weedy pastures. The warm weather causes receipts to come in soft and undesirable for the better class of trade.

Cheese continues to sink under free receipts and only a fair call. The quality averages better and more uniform than the run of former seasons.

Cool weather has admitted of Eastern eggs being brought in in most excellent condition, with the quality comparing favorably with best ranch. Now that we are having hot weather it is questionable if the quality will keep up. Strictly choice fresh laid eggs sell at a slight advance on our outside quotations for selected.

Vegetables.

Warm growing weather is forcing vegetables and consequently the markets are being liberally supplied with much better varieties. Choice canning peas are too high for free buying by canners, but commons are in ample supply and cheap. Canners will soon be able to run to full capacity. String beans are slowly sinking in price, as are summer squashes and other spring vegetables

Onions are in liberal supply and as new improve in quality, market prices set in favor of buyers.

New potatoes are fairly firm, with a free overland demand ruling. Oregon Burbanks from last year's crop sell well, provided they are in good condition.

Fruit.

A change in the weather from cool to warm is forcing early fruits to maturity, and therefore it is claimed that our market will soon be well supplied. It is very generally claimed that all varieties will show a much better quality than they did in last year. They will have a choice fruity flavor and be much better keepers owing to their being firmer.

The receipts of cherries are increasing. Prices are slowly shading off.

Berries are coming in only fairly free, barely sufficient to meet trade wants. Strawberries sold well up, but at the close they are weaker. Gooseberries and raspberries are lower. Currents are beginning to come in; the crop promises to be large.

In dried fruits and raisins there is nothing new to report.

Reports from the vineyards are more encouraging. The cool, showery weather during the past three weeks was greatly in their favor.

Lemons and limes are meeting with a better demand. Choice oranges are hard to get. The Ontario *Record* gives the following tabulated statement of the oranges and lemons shipped from that place so far in this season:

	Oranges, boxes.	Lemons, boxes.
December	400	80
January	438	268
February	305	80
March	4 780	133
April	1,957	176
Total	7,880	737

The season's total will exceed 35 carloads, more than the estimates.

Wool.

Naturally, cold, rainy weather causes the receipts of wool to fall off, but with warmer weather receipts are expected to increase. Considerable free and light wools are being picked up in the country for shipment to the East. In our market, a good market and free buying is reported. Scourers are running to full capacity. Some grades of wool are slightly firmer.

Live Stock.

The market for bullocks, mutton sheep and hogs is weak, with concessions obtainable on present quotations. Warm weather keeps retail butcher's orders confined to daily requirements, except where they are provided with cold storage facilities. Work horses for farm and railroad are meeting with a fair inquiry.

Miscellaneous.

From reliable advices up to May 11, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	242,135	260,223	*141,625	65,309
San Diego	18,869	17,591	4,061	.....
San Pedro	11,389	7,575	.....	
Oregon	25,743	36,572	18,266	16,346
Puget Sound	18.140	34,448	.....	
Totals	316,277	356,409	163,952	81,655

*Engaged for wheat, 1892, 18,075; 1891, 46,894 †For new crop loading, 14,789.

The statistics of produce exports from this port from July 1st to May 11th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,506,204	12,470 809
Flour, bbls	954,932	1,082,720
Barley, ctls	1,005,734	291,854

Poultry holds strong under moderate receipts and a good demand.

Beans continue firm, with red varieties only showing weakness. Crop advices are more favorable.

In hops there is nothing new to report. For new crop, buyers and growers are apart in their views.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@—	Wethers	7 @—
Grass fed, extra	5½@—	Ewes	6½@—
First quality	5 @—	Do Spring	8 @—
Second quality	4½@—		
Third quality	4 @—	HOGS.	
Bulls and thin Cows	2 @—	Light, ℔ lb, cents	5½@—
VEAL.		Heavy	4½@—
Range, heavy	5 @—	Feeders	3½@ 4
Do light	6 @—	Stock Hogs	3½@—
Dairy	3 @—		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, May 18, 1892

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 75
Red	2 15	@	2 40
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 20	@	2 40
Old Peas, blkeye	1 30	@	1 50
Do green	1 50	@	2 00
Do Nlles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	21
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	20
Eastern	—	@	—
CHEESE.			
Cal, choice mild	—	@	8½
Do fair to good	7	@	—
Do glit edged	—	@	9½
Young America	—	@	10
EGGS.			
Cal. ranch, doz	18	@	—
Do do selected	—	@	20
Do store	16	@	—
Eastern	16	@	18
FEED.			
Bran, ton	17 00	@18	00
Feedmeal	26 00	@28	00
Gr'd Barley	22 00	@23	50
Middlings	19 50	@21	00
Oil Cake Meal	—	@25	00
Manhattan Food ℔ cwt.	7	50	
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@15	00
Wheat and Oat	10 00	@13	50
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@12	00
Alfalfa	8 00	@10	00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	96½	@	—
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 32½	@	—
Yellow, large	1 30	@	—
Do small	1 32½	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 27½	@	—
Rye	1 37½	@	—
Wheat, milling. Gilt edged	1 52½	@	—
Do Choice	1 50	@	—
Do fair to good	1 48½	@	—
shipping, cho'ce	1 48½	@	—
Do good	1 47½	@	—
Do fair	1 45	@	—
Common	1 42½	@	—
Sonora	1 42½	@	1 50
HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 65	@	4 75
Do Country Mills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	1 75	@	2 00
Fair to Good	1 00	@	1 50
Cut	50	@	—
New Reds	50	@	90
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	50	@	70
Do do Oregon	1 00	@	1 25
Do Humboldt	40	@	75
River Reds	40	@	60
New Peerless	80	@	1 10
Early Rose	85	@	1 15
POULTRY			
Hens, doz	6 00	@	8 50
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	2 00	@	3 75
Do large	4 50	@	6 00
Fryers	6 00	@	8 00
Ducks	6 00	@	9 00
Geese, pair	1 25	@	1 50
Goslings	1 25	@	2 00
Turkeys, Gobbler	16	@	18
Turkeys, Hens	16	@	18
Manhattan Egg Food ℔ cwt	11 50	@	—
PROVISIONS			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1⅞	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	16	@	20
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Calia'y & F'th'll	15	@	18
Oregon Eastern	10	@	18
do valley	—	@	—
So'n Coast, def	10	@	12
Nevada (S ate)	15	@	17
HONEY.			
White Comb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 18, 1892.

Limes, Mex	2 00	@	3 00
Do Cal	—	@	—
Lemons, box	50	@	3 50
Do Sicily	5 00	@	—
Oranges, Seedlings			
Redlands	2 00	@	2 50
Riverside	1 50	@	2 00
Los Angeles	1 25	@	1 75
Do Navels—			
Redlands	4 00	@	5 00
Los Angeles	2 50	@	2 75
Riverside	3 00	@	4 50
Duarte	3 @	4	50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	7 00	@13	00
Sharpness	6 00	@ 8	00
Gooseberries, ℔ pound	4 @	6	
Raspberries, bkt	20 @	35	
Currants pr dr	1 00	@ 1	25
Cherries, box			
Black	1 00	@	2 25
Red	75	@	1 50
White	60	@	1 20
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green	—	@	—
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	—
Garlic, lb	8	@	12½
Squash, Mrft, tn	12 00	@15	00
Do Summer, box	1 00	@	2 00
Tomatoes, box	2	@	3 50
Asparagus, box	1 00	@	—
Do choice to ex.	2 00	@	—
Peas, green, sk	50	@	—
Do sweet	50	@	1 00
Rhubarb, box	30	@	75
String Beans	6	@	8
Do do wax	6	@	8
Cucumbers, doz	50	@	1 25
Mushrooms	10	@	30
Egg Plant, lb	—	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	2	@	4
Do unstemmed	1	@	2½
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	5	@	6
White, sun-dried	4	@	6
Do evaporated	6	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	2½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap, unpe'l'd, choice	7	@	—
Do do fancy	8	@	—
Sun-dr, pi'd, prime, bl	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap, peeled, in boxes, choice	15	@	—
Do do fancy	16	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	8
Do ring do	10	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ℔ bx	$1	50	@ —
Do fancy, do	1	75	@ —
Layers, ℔ bx	1	25	@ —
Loose Muscatels, common, ℔ bx	1	00	@ —
Do choice, do	1	20	@1 30
Do fancy, do	1	50	@ —
Unstem'ed Muscatels, in sacks, ℔ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ℔ 20-lb bx	1	15	@ —
Sultanas, unbl, bxs	1	15	@1 40
Do bleached, in bxs	1	30	@1 60
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes			

Grain and Wool Bags.

Calcutta, spot	7⅞	@	7¾
Do, June-July	7⅞	@	7¾
Wool Bags	36	@	38

A Sweet Story.

Once there was a widower, left with three children, who concluded, instead of rewiving to take a bachelor brother to superintend his house, and be, so far as he could, a house-parent to the little ones.

"If you come to me," says widower John, "I will do as well by you as I did by Mary. You will reign supreme in my home, and I will lay my fortune at your feet."

"Fortune, where is it?" says innocent bachelor William. "Will you make it over to me in writing?"

"I mean," says John, explaining, "that I will provide the table liberally, dress you handsomely, get you meerchaums and canes, and generally do my best to make you happy."

"But that wouldn't do," says bachelor William. "I have never been considered extravagant in my habits, but I can imagine desires to arise which neither meerschaums, canes, nor unlimited credit at my tailor's would wholly cover."

"Oh, don't be afraid," says the widower kindly. "If you learn how to coax as well as Mary did, you will get no end of odd change to spend in your little vanities. You are my youngest brother, and I have always been fond of you. Just 'lay your sweet hands in mine and trust to me.'"

"It wouldn't do," says William; "it would kill my self-respect. I would rather have $50 a month at my own disposal than $500 dribbled out to me for the asking."

"I am disappointed in you, brother," said the kind widower. "I had thought there was such a beautiful fraternal relation between us that you would be above caring which of us held the money. Mary didn't mind."

"Are you so sure of that?" said the bachelor brother, thoughtfully.—Working Woman's Journal.

HASHED POTATOES.—Cut the potatoes as for a pie; put them in a pan, with a little chopped onion, pepper and salt; add a little butter, allowing about half an ounce to each pound of potatoes, and quarter of a pint of water; cover the pan, and let them stew moderately about 30 or 35 minutes.

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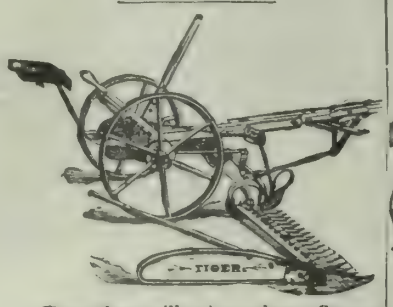
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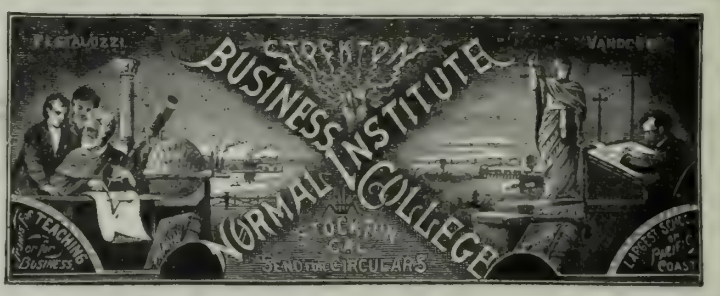
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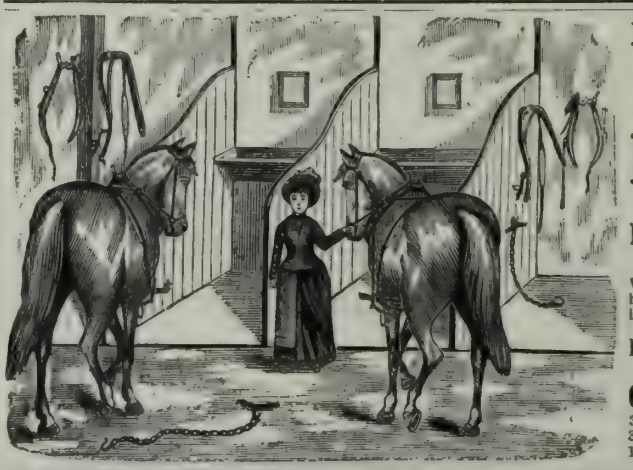


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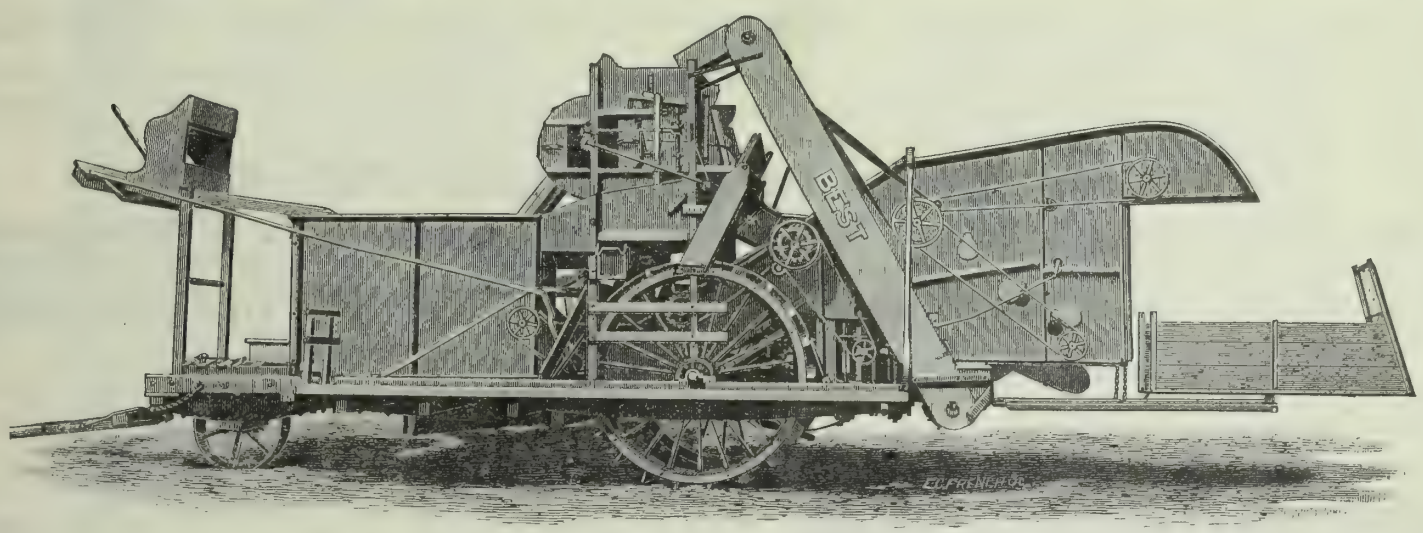
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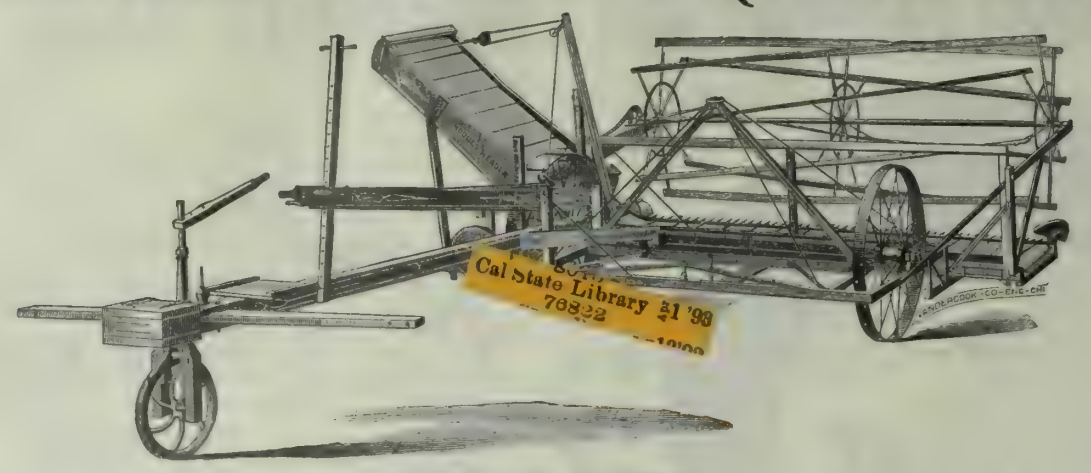
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PRICE LIST:

10-foot cut, 40-inch Draper, Weight	2450 lbs	$300 00
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10-foot cut, 36-inch Draper, Weight	2450 lbs	$315 00
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HOLLISTER, CAL., Sept. 7, 1891.

DEERE IMPLEMENT CO., San Francisco, Cal.

GENTLEMEN:—I have run all kinds of Headers, but the Hodges Steel Frame beats them all. I ran it this season in the San Juan Valley, in big mustard and down grain, and it worked so well that I believe every farmer who saw it running would purchase no other kind.

Yours truly,
JAMES MILES.

DEERE IMPLEMENT CO, San Francisco, Cal.

CRESTON, CAL., Dec. 7, 1891.

DEAR SIRS:—I purchased of your agents, Messrs. W. S. Lewis & Co., of Paso Robles, a 12-foot, Steel Frame Hodges Header, and cut about 700 acres of heavy grain without any expense for Extras, and will not want any Extras to start in on another crop. I have farmed for 20 years, and have used nearly all other makes of Headers, and will say you have the lightest draft, strongest and most complete Header I ever saw, and highly recommend them to all farmers. The elevation is perfect.

Yours, free, gratis, for nothing, J. E. MOSHER.

The Hodges' Steel Frame Single Gear Headers.

At the urgent request of many dealers and ranchers we shall have for this year's trade, a Single Gear Header, with "CENTER DRIVE SICKLE" and with "STOP DRAPER," which will allow the operator to drive around standing trees or other obstructions without the usual scattering of grain. This will be of great advantage in some localities in this State.

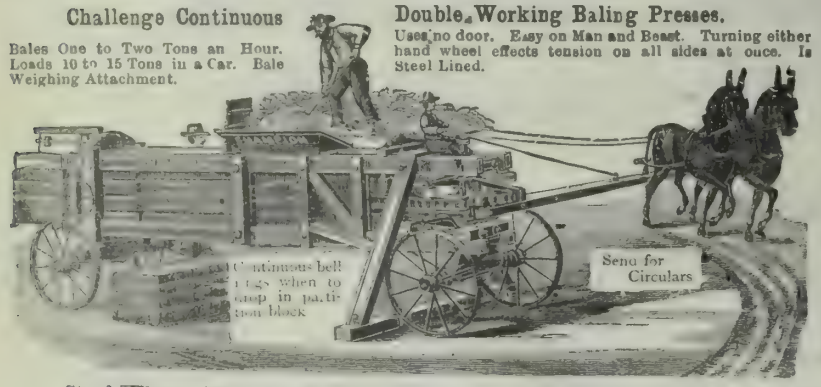
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Bales One to Two Tons an Hour. Loads 10 to 15 Tons in a Car. Bale Weighing Attachment.

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Steel Wheels With 5-inch Tires on Truck. Size 18x22 inches. Steel Lined. Weight 3600 lbs.

Most Powerful, Rapid and Durable Press in America.

WIT DOUBLE-ACTING REBOUND PLUNGER POWER and QUICK RELIEF CONTINUOUS BALE CHAMBER,

—WITH—

Bell Attachment which rings when to drop in Partition Block for Hay, Straw, Moss, Etc.

Challenge Double-Acting Continuous Baling Press BALE WEIGHING ATTACHMENT.

By the use of same, each bale can be weighed accurately as it passes out of the press, which is very desirable when wanting the correct weight of each bale. Being attached to the press, is always ready and no trouble to move it about, as is the case when using a platform scale, yet it is just as correct. (warranted.)

SEE IT! TRY IT! AND YOU WILL BE SURE TO BUY IT!

Everything Ready for Work—Even a Fork Wherewith to Feed It.

CONTINUOUS, Making Bales Without Intermission.

NO STOPPING TO TIE. NO DOORS USED, TO BE HANDLED 1,200 TO 2,000 TIMES A DAY.

The Best is the Cheapest. Complete With the Best Bale Weighing Attachment.

Agents for the Challenge Detached Power Press, Challenge Full Circle Press, Challenge Belt Power Press, Petaluma and Monarch Presses.

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TRUMAN, HOOKER & CO'S PATENT STEEL WIRE BALE TIES.
BETTER THAN WIRE AND CHEAPER THAN ROPE.

THE OLIVER DERRICK.



Description.

The base occupies a ground space of 8x14 feet, mast 27 feet high, boom 22 feet long. Boom is suspended by flexible steel wire rope. Its operation is positive and will not get out of order. The boom is extended (as shown by dotted lines in cut) by simply checking a chord; when load is dropped, boom automatically returns to its normal position.

We claim for this machine:

First—It is the only Derrick having an extension boom, whereby load can be deposited at any point on a very large rick.

Second—It is the only Derrick that can be easily and quickly folded for transportation. Horse used for hoisting hay can elevate mast and man can lower the same.

Third—It is the only THOROUGHLY PRACTICAL Derrick on the market. It is well made of good material, and we will send it anywhere, guaranteeing satisfaction.

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Celebrated Randolph Steel Header, Best in the World. Buggies and Vehicles in great variety. Agricultural Implements of Every Description.

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PACIFIC RURAL PRESS

Vol. XLIII. No. 22. SAN FRANCISCO, SATURDAY, MAY 28, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Rural Improvement.

There are many indications that California is advancing in affairs which appeal to taste and culture, as well as in industrial development. Any one who visits interior towns or passes along country roads is convinced that the people are giving greater heed to the improvement of homes and home environment than ever before. Not only is there indication of regard for better architecture and good carpentry such as the older habitations seldom showed, but there is also a recourse to gardening and ornamental tree-planting, the absence of which in our earlier years was conspicuous.

Probably there are two agencies which can be credited with this gratifying tendency. First is the change in lines of agriculture, which is leading us farther and farther away from the ranch idea of the native Californians and of the early settlers.

One gets his mind to running upon orchard or vineyard planting and pursues neatness in planting and cleanliness in cultivation at first, because it is necessary to success. Afterward, a taste for neatness and cleanliness in natural surroundings is engendered, and the house grounds become offensive in their untidiness and neglect as contrasted with the well-kept fruit area. The result is that ornamentals for the dooryard find their way from the nurseries along with the new fruits for the orchard, and the work is begun not only on a single farm, but throughout a neighborhood or a district.

Another agency toward the improvement of California rural affairs has unquestionably been the very desirable elements of population which have been brought in during the last decade. It is well that to the traditional generosity and almost careless content with surroundings, whatever they might be, which were prevalent among the older Californians, has been added the more exacting and calculating taste requirements of the newer Californians. They have brought money and expended it in finer buildings than satisfied us for rural dwellings, and around their country dwellings, whether mansions or cottages, they displayed their delight in ornamental gardening. Their achievements and their example have had much to do with the improved aspect which the country wears.

The same tastes which are bringing us handsomer homes are also influential in advancing our educational interests. It is clear to all engaged in the work of instruction that the interest in higher education was never so acute or widespreading as at present. Fortunately, too, we were never in a position to satisfy such an impulse as we are at present. The improvement and extension of university facilities, the multiplication of high schools, and the activity in all lines of intellectual effort, coupled with the indications of growing taste for home improvement, are all sureties that California prosperity is not alone in material interests.

SOCIAL AND INDUSTRIAL.—It is becoming quite the thing to celebrate the opening of important industrial concerns, in which communities are interested, with pleasant social festivities. We gave recently the opening of a creamery in Humboldt Co. which was made a picnic and literary entertainment. We now acknowledge receipt of an invitation to a grand benefit ball for the Santa Maria Cannery, Cannery Building, Santa Maria, Friday evening, June 3, 1892. This cannery is the property of the Santa Maria Packing Co., which includes the leading fruit growers of the progressive country around Santa Maria. The directors issued a circular April 18th, announcing that work was progressing satisfactorily, aiming to have the plant ready for operation by the opening of the season. A most desirable location was secured and paid for in stock. A thoroughly competent man was engaged to take charge of construction and also the operating of the cannery for this season. The directors are guarding against all needless expenses and have decided to pay as they go. Material and labor must be paid for in cash every week.



SCENE AT THE STATE FLORAL SOCIETY'S SHOW IN THE MECHANICS' PAVILION, SAN FRANCISCO.

At the State Flower Show.

The engraving on this page, made from a photograph by the California View Co., will give distant readers some idea of the extent and beauty of the State Floral Society's flower show which was held in the Mechanics' Pavilion in this city during the second week of the present month. The view is from the front gallery of the pavilion looking down the length of the main floor. It does not include nearly all of the space filled by the exhibits, but it is the greatest extent to be commanded from a single point of view.

In the foreground, and extending through the middle ground of the picture, are the masses of foliage plants. Though the display seems almost continuous and similar, it was not so. The plants comprised several distinct exhibits, and were in great variety in character. Between these exhibits were spacious walks, and the fullest opportunity was given to view the masses from all sides.

All along the sides were the exhibits of potted plants and cut flowers well diversified. Of these the picture gives intimation, but not presentation. On the right was a large transept, which was filled with the wonderfully large collections of pressed wild flowers, in which there was sharp competition for the awards.

In the background of the picture—that is, at the most distant parts of the pavilion, were the largest collections of cut roses; and on the left were the decorative displays of table and room adornment.

The display, as a whole, was, as we have previously said, the greatest systematic exhibition of plants and flowers ever held in the State. The effort on the part of the State Floral Society was a commendable one, and it was successful from all points of view except perhaps the financial one, for we understand that the receipts did not quite equal the expenditures. That is not surprising for a first effort of so great extent, and that the public did not quite understand the undertaking and patronize it more generously is not wonderful. The Society has demonstrated its ability to produce a first-class flower show worthy of the State, and it should take courage from such a success. It will not be long before such exhibitions are appreciated here as they are in older communities, and as the Floral Society is doing an educational work, it should press forward upon the success of its last undertaking in full confidence that the public will appreciate and bear the cost of the work.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 50 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square)	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 28, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Pacific Grove—Rev. T. H. Sinex, Monterey.
Berkshire Swine—Sessions & Co., Los Angeles.
Shorthorn Bulls—R. Ashburner, San Mateo.
Fruit Drier—Cal. Fruit Evaporating and M'f'g Co., Los Angeles.
Holstein Cattle—F. H. Burke.
Poultry—C. Blow, St. Helena.

See Advertising Columns.

The Week.

The heated term has given a sudden impulse to flight from the close rooms and heated pavements of the city. The calendar date for such a rush is just at hand, so that the yearning for the shady haunts and breezy beaches of mountain and coast line is not ill-timed. The schools are closing and the owners of summer resorts and camping grounds are throwing their doors open. Few who can afford a change of scene and surroundings can resist the present impulse.

Though the heat of last week has been replaced along the coast by acceptable fogs and cool winds, the interior still endures high marks on the thermometer. The "June drop" in the fruit orchard has been advanced into May by the sudden temperature changes and our reports indicate a decrease of the burden upon many kinds of fruit. Peaches seem especially to have suffered, From all points of view it is becoming clear that we are not likely to have too much fruit this year and anything like a fair demand should bring good prices. It is well to be somewhat deaf to the reports of excessive fruit crops which are peddled about by buyers at this time of the year. We do not know of any such excessive yield of any kind of fruit.

The excursion of Eastern newspaper people reached this city safely on Monday, and the "trying San Francisco climate" was very acceptable after the baking and broiling which had been undergone. Before this reaches the reader the visitors will have started on their homeward journey, convinced as never before, we hope, of the vastness and variety of Uncle Sam's domain.

FOR THE STATE FAIR.—The movement for the improvement of the State Fair in industrial lines, to which we alluded last week, is progressing. A meeting was held in Sacramento on Monday evening of this week, the Directors of the State Society meeting with the new promoting organization. Various new projects were agreed upon. A committee was provided for, to consist of three members of the Board of Agriculture and three from the Industrial Association, and the Secretary was directed to respectfully request the naming of a similar committee for the World's Fair Commission and the Mechanics' Institute, all to meet at an early day for the purpose of consulting with reference to exhibits, to the end that additional encouragement may be given the producers of California and to urge their speedy action in gathering exhibits for the fair.

Another Trial of Silk Culture.

We have just received from Washington, a copy of a report made May 11th by the Agricultural Committee of the House of Representatives which favors an appropriation for renewed experiments in silk culture. The report says that the Government has already expended considerable money in a desultory and unmethodical way in experiments at reeling silk and disseminating information as to the rearing of mulberry trees and the production of silk, but the time seems now to have come when experimentation should give place to actual results, and the committee have thought proper to give this work into the hands of the Secretary of Agriculture, who is authorized to clothe five agricultural colleges with power and resources to develop the industry, distribute mulberry seeds and trees, silkworm eggs, and by practical demonstration prove to the public that raw silk can be profitably produced in the United States. An appropriation of $30,000 for this purpose.

The Committee also makes a part of its report some testimony presented by Joseph Neumann of California, as to the probability and desirability of silk-forming.

Certainly, if people could and would do it, there is opportunity to replace a vast value of importations by home-grown silk. It has not yet appeared that they were disposed to do this to any great extent, but of course it is possible that they may be shown the way. The report cites the facts that for eight months ending February 28, 1891, there was imported, free of duty, 2,980,635 pounds of raw silk. During the same period, to February 29, 1892, there was imported to the United States through the regular channels, free of duty, 5,186,390 pounds of raw or reeled silk.

For eight months ending February 29, 1892, there was imported under a duty averaging 50 per centum ad valorem, $21,697,435 worth of manufactured silks, and to that date for a period of 12 months there was imported $33,159,404 worth of manufactured silks. On this the United States paid a total duty of $16,579,702.

During the period of 12 months ending December 31, 1891, there was of cocoons, raw and waste silks, imported free of duty, $24,183,372 worth, making a total of $40,763,074 paid for raw silks and as duty on such goods imported, annually going out of this country.

The people of the United States annually send abroad for about $200,000,000 worth of silk goods of all kinds, while those who would be producers are deprived of a corresponding amount, less the cost of production.

Mr. Cannon's Letter.

To carry out the plan of a full and free discussion of the canal question, we recently invited Mr. Cannon, of the Farmers' Alliance, to contribute his views, and this week we have his answer in the form of a plain and straightforward letter. With much that he says we are quite ready to agree, but in our judgment his mistake is in attempting to carry reform of the pending measure to impracticable lengths. The end to be desired is Government control of the canal, and this cannot be secured unless the Government has for its majority ownership also a majority vote in the directory. For the Government to provide the major part of the money and then to hold only a minor vote in the Board of Directors would be contrary to all business policy, and, as Mr. Cannon says, it would not secure Government control. From the beginning the RURAL has contended that the bill should be modified to assure this control, and this we believe to be a practical contention. But Mr. Cannon goes further (although there are some signs of relenting in the latter part of his letter), and insists that the Government must absolutely own the canal. This, we believe, under all the circumstances, is out of the question, and we hold that those who insist upon it are trying to get what is impossible. Since, with Mr. Berwick, we are for the canal in any honest shape, we do not insist upon impossible conditions, and we think Mr. Cannon and those who are with him in this discussion are wrong in holding out for what cannot possibly be secured.

Those Small-Fruit Letters.

Letters on small-fruit growing in competition for the June prizes which the RURAL offers, are arriving. Readers will remember that there are still some days left and that any letter bearing a postmark of June 1 will be included in the awards. We choose this testimony of the postmark so that distant writers shall have as much time as those near by. We trust that we shall receive a host of letters in competition for these awards. Those who may have begun and then laid the paper aside should now take it up and finish. We want these contests to draw out the fullest possible local experience to the end that RURAL subscribers shall get a fuller knowledge of successful western practice in the growth of special crops than has been possible hitherto. These practical letters will be of the greatest value to those who desire to try new crops and have not the detailed, explicit instructions which will help them to do it. The writers who enter these contests are not merely trying for a prize; they are rendering public industrial service of the most direct value. Therefore, let all contribute the results of their experience and light the way to success, to the end that general prosperity may be promoted.

A Glance Over the Markets.

In the produce market, wheat continues lifeless, notwithstanding the large disengaged tonnage in port and also the large and steadily increasing tonnage on the way to this and neighboring ports. While a decided improvement in crop prospects in this State, Oregon and Washington contributes to the weak and inactive market, yet the prime factors in producing the present condition are heavy purchases of Indian wheat for forward delivery, based on a low silver value, a prospective fair crop in Russia, a total absence of speculation at home and abroad, and the uncertainty which hangs over European crops. It is said that holders in this State have become tired and are throwing their old wheat on the market, which is being picked up at low figures. For new crop delivery we are not advised of any contracts having been drawn, but it is said that buyers are willing to contract at the rate of a little over $1.45 per cental, Port Costa delivery, for No. 1 white shipping.

The bears on 'Change continue to hammer barley futures, which creates an easier market for spot and also for near by delivery. The present promising outlook for a larger crop outturn than was harvested in last year, is used as a lever for securing lower prices. It is claimed by many dealers that, although the yield will probably be larger than it was in 1891, there is a decided increase in the quantity consumed, and that this will fully offset any increase in the crop. It now looks as if we shall, in the coming season, enjoy a fair export trade.

In oats and corn trading is only fair. The crop prospects for the former are of a fairly encouraging character, while that for the latter has greatly improved. Unless better crop weather is experienced in the Central States between now and the middle of June (even with favorable weather only a certain variety of corn can be planted which will assure any degree of certainty for a fair yield) the outturn east of the Rocky mountains will aggregate very considerably less than it was in 1891. With a smaller crop in the Central States, the market on this coast should hold to profitable figures for farmers.

Heavy shipments of potatoes are being made to distributive points in several of the Central and Southern States. These shipments cause fairly remunerative prices to be maintained. It is quite generally claimed that the crop this year will fall very considerably below the total of 1891. Oregon, it is said, will not have much, if any, over an average crop. If these estimates shall prove to be correct, then we can reasonably look for prices not to average so low in the season of 1892–93 as they did in the season of 1891–92.

Tomatoes and pea crops will probably not be so large as they were last year, yet prices will rule lower owing to the certainty of a falling off in the demand from canners. This falling off is said to be due to heavy stocks of 1891 pack in the hands of both wholesale and retail merchants. It is claimed that this supply is fully equal to a nine months, or even longer, consumption

Wool is coming in fairly free. The larger proportion of receipts at this city are scoured before being shipped to the East. Better results, it is claimed, are secured by having the wools graded, scoured and properly packed. Considerable buying is reported in the country, with sales made as high as 19 cents a pound for desirable clips. So far as we are able to learn, there is less disposition on the part of growers to hold their wool for better prices. Interest, storage, and in some cases shrinkage in weight, fully offsets an advance unless the market should move up two or more cents a pound.

It has been many years since strawberries have sold at such high prices as are now current. It is conceded that prices for all kinds of berries will average higher than they did last year. The crop in this State will probably fall below that in last year. At the East the weather so far in this year has been decidedly against even a fair yield. Plums will be scarce, and consequently command good prices. Regarding other fruit crops opinions differ, but the majority of persons who are in position to secure the best of crop information claim that other tree fruit crops will probably be from a fair to a full average outturn. In some localities there promises to be an almost total failure of one or more kinds and fair to large of the other kinds, while in other localities the crops will show a contrary yield. Reports are current of sales of orchared, but par-

ticulars, so far as to form a basis for quotations, are withheld.

The grape crop will undoubtedly be short. This applies more particularly to wine than to raisin and table grapes, although the two latter varieties are said to have suffered slightly. Better market prices are predicted with considerable degree of confidence by growers and buyers.

Butter is selling at lower ranges in prices. This is largely due to a continued large manufacture and a falling off in the distributive orders. If it were not for heavy packing in this city and at the dairies, prices would be very low. The grode of butter averages better and more uniform than ever before. The market for cheese continues weak under free offering and free receipts.

In hops there is nothing new to report. The stock of old is not large, neither is the demand, owing to cold weather. Crops are being closely watched at home and abroad.

New hay has put in an appearance, but the quality is poor, and in consequence sales are hard to make except at low prices. So far as we are able to learn, there have been very few large crop sales for future delivery. It is said that feeders will not contract at the prices asked by farmers.

The State Press.

Santa Cruz *Sentinel*: "In showing how the Pacific Mail Steamship Company has violated the contract under which it receives a subsidy for carrying the mails, Representative Bowers has brought prominently before the country the nature and effects of the iniquitous arrangement between it and the transcontinental railroads, whereby the latter is enabled to monopolize the carrying trade between the oceans and deprive the people of this coast of the benefits of water transportation. * * * During the 14 years prior to March 1st last, the Pacific Mail Company received $14,655,000 as a subsidy from the transcontinental railroad companies, and is now receiving $75,000 per month from these companies."

Amador County *Record*: "The American people are willing and anxious to furnish the means to build the Nicaragua canal, for they fully realize the great benefit it will be to them, providing they, the people, can control and operate it for the general weal; but it will be a cold day for any Congress pretending to represent them that is led away from its duty by this huge advertising dodge of what are unjustly called the leading newspapers of the country. Our space is too limited to do justice to the subject, but as a closing remark would it not be pertinent to inquire who is furnishing the funds to pay these papers for the lies they tell in favor of this, the most stupendous swindle—for enriching a few at the expense of many—ever concocted during the long years of the nineteenth century?"

The Kern County *Echo* is strong for the toll railroad proposition. It remarks: "A road on this plan must be open to all companies or individuals who want to run cars over it. If the grain farmers can put on cars and haul their own crops to tide water cheaper than regular transportation companies offer to do it, they would have the opportunity. And this brings us to a word as to how such a road might be operated. The station agents would be in the employ of the road-bed company, their duties being similar to those of an agent now, namely, to receive and forward all freight offered. There would be perhaps two schedules—one for regular trains and one for specials. Both would be under the control and guidance of a division superintendent, the same as at present. Trains could not, of course, be run haphazard, as wagons are driven over county roads; they must and could easily be operated under the guiding hand of some one in authority."

President Cannon's Position.

He Reviews the Letters of Messrs. Doyle and Merry on the Canal Question.

VENTURA, May 21, 1892.

TO THE EDITOR:—In compliance with your request, I will endeavor to give you my position on the Nicaragua Canal Company's effort to get the indorsement of the Government for $100,000,000 to build that canal for them, and in doing this I will review the letter of Mr. Doyle and Mr. Merry.

My position is fairly stated in the resolutions I submitted to the Canal Convention in San Francisco last March, and which were treated with so much contempt by Mr. Doyle, Merry and Estee. I stood upon the floor of that convention, a representative of more than 100,000 wealth-producers in this State, and over 10,000,000 in the United States, and I was denied five minutes' time to advocate their cause by this same John T. Doyle. Who did he represent? Simply the Canal Company. Who did all the attorneys and politicians represent in that convention? These kid-glove and plug-hat gentry were all there in the interest of the canal. Not a dozen of them ever produced enough to support an inmate of the Almshouse, yet when the President of the Farmers' Alliance of this great State stood upon that floor to advocate the rights of the wealth producers, he was choked off, and next morning the papers in large headlines proclaimed "The President of the Farmers' Alliance was sat down on." Yes, he was "sat down on," but I have had the satisfaction of sitting down on the Canal Company ever since. I fully understand the odds against me in this contest. The best talent of the United States is at their beck and call for coin. The shrewdest politicians of the nation are at their command, while a plain old farmer is pitted against them—a man "half educated," "stubborn," and whose principal characteristic is "mulishness." I thank Mr. Pool and Mr. Berwick for their assistance, and I trust that, before this $100,000,000 is filched from the people many more patriotic citizens will raise their voices against hatching out a new brood of Canal millionaires.

Now to Mr. Doyle's letters. He says, "as to the canal across Nicaragua, built and owned by the United States, I, too, was in favor of that plan, so long as it was a possible thing," and then goes on and states how President Arthur negotiated the treaty with Nicaragua, and how the Senate of the United States had not acted upon it when Cleveland was inaugurated, and how Cleveland, before he had warmed his seat, snatched it out of the Senate "*and pigeon-holed it forever.*" Well, I want the people to understand that no one man is big enough in the United States to *pigeonhole* anything forever, and I desire this canal company to understand that this Government is strong enough to take things out of pigeonholes when they deem proper.

Not long ago a level-headed Congressman offered a resolution to take the charter away from this canal company, and it only lacked a few votes of being carried. So you see that one man by pigeon-holing that treaty did not forever settle the question. He says, further, "the day when a canal built and owned by our Government was possible, passed forever when Cleveland withdrew the Nicaragua treaty from the Senate, never to return it again." This seems to be a *wail of sorrow.* Well, I hope for the good of the country that Cleveland will never have an opportunity to "return it again." But hear him, "we might, at this time, just as well wish for the moon as ask for a canal so built." "If we seriously desire to see the canal built at all, we must help the present company build it." We do not desire the moon at this time, but we could seize it by the horns and control its course in the heavens as certain as we could control this canal company, under the bill now before Congress. This canal company stands before the country like a big bully, demanding tribute. When the language of its advocates is stripped of all its fine plumage, it leaves it like a highwayman demanding Wells-Fargo's treasure box, on the condition that he will not go through the passengers in detail. They, in effect, say, "we have the drop on you, and, if you will club together and make up $100,000,000, we will agree not to rob the people in detail in our charge for passing through the canal." If you don't do this, look out. John Sherman, their bugleman in the Senate, and the man that drafted the bill now before Congress, says: "If the Government don't come to the relief of the canal company, it will cost not less than $250,000,000, and might extend to $400,000,000." The revised estimate of the chief engineer for the construction of the canal amounts to $73,176,308. This estimate does not include the stealings or profits of the construction company. But suppose the canal can be built for the estimate of the chief engineer, and John Sherman's estimate is $400,000,000, if built by this canal company, where does the balance go to, amounting to $326,823,692. Some of it no doubt will go to parties writing fine articles for the press to boost the scheme. An army of politicians and lawyers must get their fees, and then there's the expense of holding conventions to act as a lobby upon Congress. And when the Farmers' Alliance grapples with this monster, a set of cowards rush to the front and yell "Surrender, Surrender," "it is the best we can do." "If we don't surrender Uncle Sam's cash box, they will go through all of us." Well, the Farmers' Alliance will not surrender until it has a black eye; we don't capitulate until the battle is lost.

But Mr. Doyle says: "These countries have sold to this Maritime Canal Co. the exclusive right to build the canal, and given 20 years to do it in." Now, he might as well have told the truth, because it is bound to come out before we get through with this contest. He cannot deceive any one by stating that the franchise runs 198 years, and that they have 20 years in which to build the canal. He and Merry both know this is far from the truth; that the facts are as follows: The Government of Nicaragua granted them a franchise for 99 years, with two provisos or upon two conditions: First—The company should spend $2,000,000 within a certain time, and, second—The canal must be completed within ten years, so that vessels could pass from ocean to ocean. In case the two conditions were not fulfilled, the franchise was forfeited. This franchise was granted on the 25th of April, 1887, according to John Sherman. Consequently, it has less than five years to run, unless the canal is completed. The canal cannot be completed in five years. This is one of the reasons why they want the Government to become interested in the scheme; they think they would have a better chance to get an extension of the time when the five years expire.

But Nicaragua stipulates in the bond that, in consideration of the large amount of money that may be expended, she *may* extend the time ten years. She holds it in her power to close out the canal, and if she renews the franchise, she will demand her pound of flesh. I would advise Mr. John T. Doyle and Merry to tell the truth when they go into print.

Mr. Doyle and Merry lay a great deal of stress upon the fact that the Government has deposited with it $70,000,000 in shares of stocks, and, consequently, it could control the election of the Board of Directors. I will prick this bubble for them and show up their deception.

Doyle says: "If Mr. Cannon or Mr. Pool were the owners of six millions of stock in a corporation, and one of their neighbors owned seventy millions of it, would they seriously contemplate grasping the management against the wish of the majority owner?" Under an *honest* deal, no; but if the law said there should be fifteen (15) directors, and that a party holding as security seventy millions was entitled to but six of them, and even they are not elected by the stockholders, but appointed by the President of the United States, we would most assuredly hold the fort. To still further expose the deception practiced by this Canal Co., I desire to quote from the act before Congress: SEC. 9. "The Secretary of the Treasury, on behalf of the United States, *may at his discretion vote said stock,*" Again, Sec. 10. "That to secure the proper application of the aid to be furnished by the United States by this act, Sec. 4 of of the act approved Feb. 20, 1889, entitled an act to incorporate the Maritime Canal Co. of Nicaragua is so amended that six of the fifteen directors of said company shall be appointed by the President of the United States," and the Government pledges itself not to foreclose the lien for five years after the completion of the canal, provided the Maritime Canal Co. remains under the control of said company.

I will quote that part of Sec. 5: "But until the expiration of five years after the said canal shall be put in operation, and so long as during said five years the canal shall be in operation, *and remain under the control of the Maritime Canal Co. of Nicaragua,* this subrogated lien and right of the United States, as aforesaid, shall not be enforced by foreclosure or otherwise of the said mortgage against the property covered by said mortgage." Now I don't think it is worth my time to follow this matter any further. No man of any sense, after reading the bill before Congress, will for a moment claim that the United States can ever control, nor was it ever intended that it should control the canal. The claim these men are making that the Government can control the canal under the Sherman bill they know to be absurd.

Now let me give them a little horse sense. Suppose they insert in the bill that the President of the United States shall appoint fourteen (14) directors instead of six (6), and that upon all occasions the Secretary of the Treasury *shall* vote the stock in the interests of the United States! But will these men agree to this? I think they will. The canal is now on its last legs, and it is "Oh Lord, anything!" with them.

Last year they spent less than half a million dollars, and on Sherman's estimate it would take them eight hundred years to complete it at that rate.

Now, gentlemen, if you are so anxious that the Government should control the canal, amend the Sherman bill by inserting in Sec. 10, "fourteen" for "six" directors. If you refuse to do this, don't write any more long-winded letters in favor of Government control.

MARION CANNON,
State President.

A Cold Swindle.

An old reader of the RURAL, who now lives in Florida, asks our opinion about an advertisement which he says is circulating in Eastern papers to this effect:

A Chance to Make Money. California Cold Process for Keeping Fruit Perfectly Fresh, Without Heating or Sealing. Can Put Up a Bushel in Ten Minutes. Cost About One Cent a Quart. Can Get Directions.

The only cold process about the above is the way the swindler will probably draw much money from credulous Eastern people. No such thing is done in California, although some years ago there was a rascal out here trying to sell some such thing which he then called a "preservative powder from Canada." It was an out and out swindle—a bare-faced fraud. Such, too, is the "cold process" mentioned above. We are not surprised to know that it hails from a point in Ohio. There is a nest of petty swindlers in Ohio which the Government should put in the penitentiary for thieving through the mails. Every few months they use a new bait, but it is the same old trap. They are very artful in sending their notices to the papers, and some of our contemporaries help in their games unwittingly. We can tell their ear marks from a long distance. The use of the name California in their contemptible business is a new departure. Let no one be deceived thereby.

Further Work by the San Jose Fruit Convention.

The adjourned meeting of the Convention of May 7th, of which a report was given in the last RURAL, has pushed the organization along another step. The *Mercury* of May 22d says there was a large attendance at the meeting of the previous day, Col. R. P. McGlincy presiding and D. W. Miller, of the Doyle district, Secretary.

Col. Philo Hersey, as Chairman of the Committee on Constitution and By-Laws, read the Committee's report, and it was taken up by sections, and the entire morning and most of the afternoon sessions consumed in discussion.

The capital stock was fixed at $200,000, divided in 20,000 shares at $10 each, 10 per cent payable at the time of subscription. It was also decided that no person should be allowed to subscribe for more than 100 shares of stock.

The following committee was appointed to select nine names such as would be suitable to hold the place of directors: O. Holridier, M. Wingate, J. R. Johns, E. F. Adams, H. C. Morrell, F. H. Babb, J. J. Shaner, F. W. Crandall, D. C. Vestal, F. Dunne, G. Blaine, E. H. Hogelton, J. Shaw, W. H. Wright and Col. P. Hersey.

As one gentleman thought the Committee had been appointed a little too soon to select directors intelligently, and several of those who constituted the Committee stated they did not feel competent to select directors, the Committee was resolved into one for the purpose of circulating subscription lists during the coming week, and having all sign who intended to take any stock in the Association.

The Convention then adjourned to meet Saturday morning, May 28th, at 10 o'clock, when officers and directors will be elected and a corporation will be formed.

One Use for the Boys.

DIAMANTE, CAL.

TO THE EDITOR:—Some weeks ago a gentleman lamented in RURAL PRESS over our poor boys of 10 to 18 years. I will help him along with mention of an old system which prevailed in my old home. At the age of 14 (which is the time he leaves school) the boy is sent to a master to learn a trade. From three to four years are the terms. The father furnishes clothing, the mother washing. The master furnishes board and lodging but no wages. For four long years the youth is taught. It is his hardest time in life, but he learns a trade by which he can make his living. Take this for a suggestion: Send the boys to learn a trade in the above way.

There are thousands who will teach but can't pay a cook. A good cook is an artist. It takes years to get ideas of good cooking. We have thousands of cooks in the State but how many are cooks? Ask them where did you learn, and 99 of 100 will answer: "I picked it up." For your own sake supply the trade with willing boys to learn the important and well-paid trade of a cook, and not be obliged to eat the refuse of the so-called cook.

A. LEVY.

Holstein-Friesian Cattle.

Mr. F. H. Burke, proprietor of the La Siesta stock farm at Menlo Park, San Mateo county, has just issued a very very complete and exhaustive catalogue of this justly celebrated breed of cattle, of which Mr. Burke is one of the largest importers and breeders in the United States. All farmers and dairymen who are striving to improve their herds should secure a catalogue at once, which can be done by writing to F. H. Burke, No. 626 Market St., San Francisco.

ANOTHER RICH HORSEMAN.—Charles Fair, son of ex-Senator Fair, has become a horse fancier and has recently spent $60,000 for good young stock, paying one-half of that sum for Yo El Rey and six other Hooker yearlings to Theodore Winters, now of Nevada. Mr. Fair has not yet fully determined where his stud shall be permanently located. Richard Havey, who rode Norfolk and who has an excellent reputation, will train the youngsters near Petaluma, where the string will be quartered for the present.

Weather and Crop Bulletin for Week Ending May 20th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Lassen County.—Susanville—Good weather. Everything doing finely. Danger from frost now past.

Humboldt County.—Phillipsville—Heavy rains caused much fruit to drop. Farmers much behind with their work. *Hydesville*—Rainfall .90 of an inch; highest and lowest temperature, 68 degrees and 40 degrees; warm, sunshiny weather needed. *Vance's Orchard, Mad River*—Weather changeable; crops growing fast; farm work delayed; sunshine needed. *Eureka*—1.30 inches of rain; good weather latter part week; corn being planted rapidly; cherries and peaches poor crop; apples and prunes an average crop. *Upper Mattole*—Only moderate crops of fruit and grain expected. *Blocksburg*—Past week stormy; 1.63 inches of rain measured; highest and lowest temperature, 86 degrees and 38 degrees; warmer weather needed for all crops.

Mendocino County.—Mendocino—Crops doing well; those on high land better than those on low lands; rainfall 1.25 inches and cold; apples, pears and plums about half a crop.

Lake County.—Upper Lake—Rainfall 1.73 inches. Alfalfa-hay needs cutting, but the rains have retarded the work; the yield will be large of both hay and grain; fruit and grapes doing well.

Shasta County.—Redding—Weather warm; highest temperature 92 degrees, lowest temperature 45 degrees, and rainfall 1.40 inches; vegetation advancing rapidly: crops of all kinds promise well. *Anderson*—Rainfall 1.50 inches; highest and lowest temperatures, 96 degrees and 50 degrees; rainfall for season, 30.10; all crops looking fine.

Tehama County.—Red Bluff—Fruits and grains greatly benefited by the week's weather; apricots peaches and prunes about half a crop.

Butte County.—Chico—All crops favorably affected by the weather. *Palermo*—1.43 inches of rain, which has improved the outlook.

Glenn County.—Willows—Hot weather just what is needed. Hay damaged; peach crop abundant. *Williams*—1.23 inches of rain and 12 25 inches for the season, and conditions continue favorable.

Colusa County.—Colusa—Rainfall 2.32 inches, and prospects continue favorable.

Sutter County.—West Butte—1.50 inches of rain; hay damaged; melons late, owing to backwardness of the season. *Yuba City*—Rainfall 1.65 inches; highest temperature, 87 degrees; all crops doing well.

Yuba County.—Wheatland—Rainfall 1.4 inches, which lodged some grain, but warm, dry weather will soon start it up; weather now all that could be wished for.

Solano County.—Vacaville—Weather warm; just what is needed for all crops in this vicinity.

Nevada County.—Nevada City—Warm weather very beneficial to all crops; fruit crop short; peaches, pears and early varieties of apples are nearly all destroyed.

Placer County.—Newcastle—Warm weather beneficial to all crops; rainfall 1.89 inches, and has apparently done no damage to the hay and fruit crop.

Sonoma County.—Sonoma—Rainfall 1.25 inches. Rain, as a whole, has been beneficial. Hot wave reached here; Wednesday 93 degrees, Thursday 90 degrees, and early this morning the mercury is higher than yesterday, probably another hot day. Haying commenced; corn planted; fruit ripening finely; grapes will be a light crop. *Santa Rosa*—Highest temperature 90 degrees. If the present hot, dry weather continues, much damage will result to all grain and grass. *Forestville*—Weather getting warmer. Hop growers complain of backwardness. Rainfall 2.02 inches. *Healdsburg*—Rainfall 3.15 inches. It did not do damage to grainfields as was supposed was done. The barley fields are looking well and about two weeks ahead of oats. Pulverized fields and hills have run together; need reworking.

Sacramento County.—Franklin—The rain of the fore part of the week slightly damaged the hay that was cut. The grain is very rank, and in some places, is falling down.

Amador County.—Oleta—This week has been unusually favorable for all crops, and they are coming forward with a rush.

Yolo County.—Briggs' Vineyard—The weather has been cool, except two days. With over an inch of rain, prospects for grain, hay and fruit are good. *Winters*—Crops are ripening rapidly.

El Dorado County.—Coloma—Highest and lowest temperature 98 and 65 degrees, the weather has been very beneficial to all kinds of fruits and vegetables. The best warm and bright sunshine will be needed here for several weeks to come to make any great showing in advancement.

Napa County.—Napa City—Highest and lowest temperature 90 and 48 and 1.09 inches of rain; all crops doing well.

Alameda County.—Alvarado—Rainfall 1.15 inches, accompanied by high winds that blew the grain down badly and injured hay that was cut. Temperature (highest) 86. The warm weather favorable to all crops. *Livermore*—Haying in full blast, crops generally good; rainfall, .80 of an inch and no damage done. *Niles*—Rainfall .72 of an inch. The high temperatures have been beneficial to growing corn. Apricots all thinned, peaches being thinned. The rain assures a big crop.

Calaveras County.—Milton—Rainfall .90 of an inch, which damaged hay and lodged some grain, but the north wind was beneficial and reduced the damage very much.

Santa Clara County.—Gilroy—Rainfall 1.08 inches and damaged cut hay and matured grain. The hot spell has done much good to grain and fruit. *Blacks*—The present warm spell has been favorable to all crops, and everything the last rain helped is doing well. *Madison*—The grain is filling out finely and this promises to be the best season for all crops we have had for several years.

Contra Costa County.—Cromwell Station—The rain of Sunday was beneficial to wheat and barley. There has not been any hay damaged. The heat of past three days dries up everything.

San Luis Obispo County.—San Luis Obispo—Rainfall, 75 hundreths of an inch and was beneficial to all crops, but has damaged some hay that was just cut. The warm weather for the last two days will almost recuperate the hay. The rain will be a great benefit to late crops, also to the beans and other crops just now about half planted.

Fresno County.—Selma—Rainfall, 21 hundredths of an inch. In the midst of the hot wave we are suffering less than other sections, but grain is ripening rapidly.

Monterey County.—Salinas—Crops good and will be an average yield. Rainfall .41 of an inch and no damage done. *Jolon*—The wheat and barley crop have greatly improved since the rains and promise a fair field. *San Ardo*—Rainfall .90 of an inch and the ground is looking well. There was some fear of the hot spell injuring early sown grain; fruit prospects good; highest temperature 97.

San Joaquin County.—Lodi—Highest and lowest temperatures 91 and 46; rainfall .92 of an inch, and followed by warm days, is rapidly bringing forward all vegetation and wheat improving. Barley filling out well, no damage by the rains. Watermelons poor stand and very backward; fruit doing well, but late. *Stockton*—Grain lodged by the rains; the high temperature of the 18th, 19th and 20th was very trying on grain where the heads are now forming.

Tulare County.—Visalia—Rainfall .22 of an inch; highest temperature 95 and all crops are looking extremely well since last rain.

Yolo County.—Rumsey—Rainfall 1.20 inches. The rain and hot weather has been very beneficial to crops of all kinds.

Sacramento County.—Sacramento—Rainfall 1.16 inches; highest temperature 94.5 on the 20th. The warm wave has done no harm, but good, to all crops. River 26 feet and 3 inches and is very near the danger line, with much danger of levees being broken.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—Weather exceptionally hot, 95 at noon of the 17th, and not favorable for crops, except fruit which have been benefited by the sun and heat.

San Bernardino County.—Arlington Heights—(Riverside Fruit Company) near Riverside. We are now having a hot wave, 17th, 98, 18th, 100, 19th, 96 at 1 P. M.; yesterday the 18th, the thermometer registered at the Orange Co's. Camp, near the Temescal foothills, three miles west of us, 102; in the city of Riverside 103, and at Colton 107; up to this hot spell we have had an unusually cold spring; very little growth; buds have been generally dormant, growths now commencing in good earnest. The hay crop in our immediate vicinity is exceedingly light, some being harvested will run about one-fifth of a ton to the acre, and one-half the crop area will not be cut; too light. South Riverside has a fair crop and big acreage. San Bernardino has a good hay crop. Berries are a poor crop. Elsinore valley is reported to have had 3 inches of rain during the last storm, and in the mountains adjacent 6 inches; at our place 1.16 inches.

J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The warm wave of the last few days has a tendency to cause a little shrinkage in the late-sown grain and ripen barley fast. Heading is in progress. *Bardsdale*—An east wind prevailed the latter part of the week, ripening the grain and drying vegetation perceptibly. The weather is now warm, clear and favorable.

Los Angeles County.—Lancaster—The warm weather has been injurious to grain, but the extent of the injury is not yet known. The first crop of alfalfa is being cut, and is yielding 3¼ tons to the acre, and is bringing $12.50 per ton. *The Palms*—All varieties of trees are growing finely. Corn is looking well, and the prospect is for a good crop. *Verdugo*—The hot weather of the past three days will dry up natural grass rapidly and hasten the ripening of late grain. Barley is being generally cut for hay. The deciduous fruit crop promises to be good. *Duarte*—Harvesting is well under way; fruits are growing rapidly; peaches are overloaded, and will have to be thinned. Highest temperature 100 degrees; lowest 47 degrees. *Covina*—The May rains greatly improved the late grain, and put trees in fine condition. Oranges are holding on finely, with a prospect for a fine crop. First crop of strawberries about gone, and the next will be ripe in about three weeks.

San Bernardino County.—Ontario—The past week has been very warm, the temperature ranging from 90 to 95 degrees. The heat was favorable to curing grain and beneficial to young orange orchards. *Chino*—The unusually hot weather this week has damaged the quality of hay now being cut. Beets are growing vigorously, and a heavy crop is well assured. *Riverside*—The temperature for the past three days has been very high; 100.5 degrees was recorded on the 17th; 105 degrees on the 18th; and 101.5 degrees on the 19th, with a hot north wind on the 17th and 18th. Hay is all cut, but the crop is very light. Oranges promise a fair crop. *Alessandro*. Hot, dry winds have prevailed. The temperature varied from 100 to 105 degrees; the lowest was 50 degrees. Drought has slightly injured hay and grain.

Orange County.—Anaheim—The extreme heat of the last three days, the temperature ranging up to 100 degrees, has not damaged any growing crops, and will tend to ripen early fruits. *Santa Ana*—Three days this week were quite warm; the temperature ranged from 94 to 98 degrees. With an abundance of water, everything has grown rapidly. The outlook is good. *Tustin*—Hot spell on the 17th, 18th and 19th, the temperature reaching 96 degrees. The warm weather is beneficial. Apricots are heavily loaded and need thinning; peaches promise well; prunes a light crop.

San Diego County.—Vineyard—Warm weather has prevailed, with some dry east wind, and slightly damaged the grain crop, which is now in the dough. Haying has commenced; the yield will be good. The season has been good for young orchards. G. E. FRANCKLIN.

OREGON WEATHER-CROP BULLETIN FOR WEEK ENDING SATURDAY, MAY 21, 1892.

Western Oregon.—The week opened cool and rainy and closed with continuous sunshine and unusually warm weather. On Friday, the 20th, the maximum temperature ranged from 85 to 95 degrees, except, of course, along the immediate coast.

The total rainfall on Sunday, Monday and Tuesday ranged from .30 to .60 of an inch.

The winds for last three days have been northerly and very dry. Crops—The hot weather on the 20th scalded wheat on wet lands and baked the soil on low ground; other than this, the weather was just what was needed. Farmers have been unable to finish spring work, which was delayed fully one month; vegetation is growing rapidly and promising well. The beneficial effect of the desirable change in the weather is shown in all vegetation, except that on low lands.

The effects of the April frosts are now being shown by the young fruit falling from the trees. In some localities there has been practically no damage to the fruit, while in others there has been general loss and there will be a short crop, especially peaches; the latter conditions are principally on the low lands.

Acreage of spring sown grain is below the average. Strawberries are ripening in all sections.

Eastern Oregon.—From the first of the month up to the 15th, rains fell in the Columbia River valley while rain and snow squalls occurred south of the Blue mountains. Since the 15th, there has been warmer weather and more sunshine.

About normal weather conditions now exist. In the latter part of the week there was a decided rise in the temperature. On the 20th, the maximum temperature ranged from 80 to 90 degrees, with dry east to north winds. From .14 to .36 of an inch of rain fell during the week. Crops—There has been a marked improvement in the growth and development of all vegetation. Wheat, especially, is doing finely; in sections the heads are three feet high. Spring grain is about sown, and corn-planting is being finished. Some early planted corn rotted in the ground. In Sherman county the corn is from six to ten inches high. Every county reports very wet soil and unusually good prospects. The present weather conditions are welcomed by all. Sheep-shearing has been greatly delayed, but is now in full progress. The weather retarded shearing and some contracts for mutton could not be filled.

B. S. PAGUE,
Observer U. S. Weather Bureau.

POULTRY YARD.

Advice to Beginners.

LODI, May 23, 1892.

TO THE EDITOR:—I am now and then in receipt of letters inquiring, among other things, how a poultry ranch should be started and conducted in order to make it a paying and an agreeable business. Without being one, it can hardly be the other, as, if it don't pay, it will fail to be agreeable; and if not agreeable business for one who engages in it, it will be almost sure not to pay.

If one desires to make a success of it, one's heart, so to say, must be in it. There must be sufficient liking for the business to cause the owner to attend faithfully and thoroughly to all details of the business, however unnecessary they may appear to be, for this business perhaps more than any other requires strict attention to minor details. A little neglect throws a fowl out of condition very promptly, and it then fails to be productive; while on the contrary, care for all the little needs of fowls, as well as their more important ones, is always repaid in the well-being and productiveness of the flock, pleasing to the eye and satisfying to the pocket.

In other words, care and untiring watchfulness in studying their needs and in supplying them promptly, as far as practicable, is strictly necessary if one would be successful as a poultry raiser. A few fowls, say a dozen or so, may be kept with comparatively very little care, and yet be productive. A handful or so of grain, a few scraps from the table, access to the water trough and a convenient tree to roost in, seems to satisfy all their requirements, and one need not go far to find the reason for this—a few kept together do not crowd each other unhealthfully. Having abundant range, they find all they want, where several hundred kept in one place would soon exhaust the fitness of the range for them. Wherever fowls are kept in large numbers they may, for a limited time, be trusted to forage for their gravel, animal food and green stuff in season; but it soon becomes necessary to supply them otherwise and to provide liberally and fully for them all that they would find for themselves were they where they could. So it becomes necessary to watch their condition carefully and to supply them with what they need, and to know what they need, requires constant study of fowl nature.

In a general way, the requirements of fowls in confinement or in limited range are, first, a liberal supply of healthy food such as, during the cold months, a morning meal of a stiff mush of middlings as warm as they will eat it, and with meat scraps liberally mixed with it, and three or four times a week have it liberally seasoned with cayenne or red peppers and onions. This may be varied by substituting for a mush of middlings one composed of part middlings, or bran if you prefer, and small potatoes boiled and mashed and mixed with it and well seasoned. Vegetables of almost any kind prove very acceptable to them, and a meal of cabbage, turnips, beets or carrots boiled with meat scraps they relish very much. Still, I do not think it necessary to boil it for them, although no doubt they find it more appetizing, particularly during the cold months.

The meat scraps may be fed to them separately, chopped fine, so as to be easily eaten by them, or, which is better, mixed in their mush, and their vegetables, whether beets, carrots, turnips, cabbage, onions or whatever it may be, may be fed to them through the day, as they will readily pick them to pieces and get all they want as food, to say nothing of needed exercise which they get by this manner of feeding it to them.

I have seen advocated the plan of hanging the vegetable just far enough above the reach of the fowl to cause them to jump up from the ground in order to reach it, but I think that rather a refinement of the idea; and if it is fed to them in such condition as to make it necessary for them to peck it off, they will neither eat it too fast nor too much of it at a time, and at the same time get all the exercise of that kind that they need.

Perhaps if food is cooked it will go farther, but that I think is offset by the time and fuel consumed in the preparation of it; and where fowls have not been "spoiled" by having it cooked or chopped for them, they will eat it with great relish if thrown to them without either.

So much for their morning meal, and during the cold months I think it better to feed them two hot meals a day, and a good corn or wheat feed at night. For their mush, I consider middlings better than bran, or if, as in the case of country mills generally, the middlings and bran are rich, then a mixture of two parts bran and one part middlings would be preferable.

During the warmer months, my practice is to feed grain in the morning, mush at noon and grain again at night.

Along with their food they should have an abundant supply of good, fresh, clean water, fresh from the well in the morning, with no ice in it, or, better yet, a little warm water in it to take the chill off, or, if milk is abundant, give them all they will consume of warm milk. In summer it is of course unnecessary to warm it, and all liquid supplied them should be kept in the shade, and kept fresh and in clean vessels, and frequently renewed, say twice a day, cleaning the vessels once a day thoroughly, that no slime or green stuff gather on them.

They should also have an abundant supply of coarse, sharp sand, and of shells, either ground oyster shells or the fine seashells ordinarily furnished for that purpose. Charcoal also, broken so they can readily eat it, is greatly relished by them and I think very necessary to them. They should also have an abundant supply of green stuff, which may be either carrot or other vegetable tops, cabbage, or young corn, or grass or unripe grain, chopped and fed to them.

Then, in addition to all this, and no whit less necessary, is the keeping of their quarters and roosting-places scrupulously clean, well ventilated and fresh. No henhouse should smell strongly of their droppings, when first opened in the morning. If it does, then it has not been cleaned thoroughly or sufficiently often, or it is not properly ventilated, and that state of things will result surely in disease very promptly. Prevention is always better than cure, and cure is not always possible, or at least without more or less loss and annoyance.

In all this, I have said nothing of the selection of fowls to start with, and that is a matter to be left somewhat to the taste of the one starting. It may be either Langshan, White or Brown Leghorn, Black Spanish, Black or Blue Minorcas, Polish, or any one of the "good laying" breeds, as generally eggs are the main source of income. Good young roosters, from April to nearly July, command an excellent price, but, to have them, one must set eggs when they are worth from 40 to 50 cents per dozen, and many at this time of year are not fertile, which, added to the cost of brooding, as fire is necessary, or artificial heat, and the larger percentage of loss, makes one's gains at those prices ($8 to $15) considerably less than would appear at first glance.

But the continuation of this subject will call for more time and space than you will like to give in this issue of your valuable journal.

T. B. GEFFROY.

HORTICULTURE.

Can Injury from Frost be Prevented by Irrigation or Otherwise?

The following paper was read before the Southern California Pomological Society at Redlands, on May 6, 1892, by JAMES BOYD of Riverside.

The question of preventing injury from frost is one of considerable importance to the fruit growers of California, and, indeed, to almost the whole of the civilized world, as there is hardly any part of it settled by the Caucasian race in which injury from frost is not to be feared.

The conditions in Southern California are rather peculiar, in that our leading crop, the crop of citrus fruits, is ripening during the coldest part of the season. In most other parts of the world it is generally spring frosts that are to be feared, but with one exception we have never in Southern California suffered any damage from frost in the spring. It is generally understood when vegetation is young and tender, that a much less degree of cold is injurious than is the case when fruit is nearly mature. For instance, in early winter frosts, grapes that are ripe are not injured by frost, while those that are green are very easily affected; and so in the case of oranges. If oranges are fully ripe, they are not easily injured and will stand eight degrees of cold without any injury.

Practically, the question before us will resolve itself into protection to citrus fruits against injury, and we will in this case, as in their cultivation, have to feel our way as we go along, as we cannot refer to any previous experiences on the subject.

The past winter having been exceptionally cold and the consequences very disastrous, has caused more attention to be turned to the subject than otherwise would. The idea that running water would prevent injury from frost is not entirely new, as it has been held by different parties in Riverside for several years that it would considerably mitigate its effects, partly by giving off heat in freezing, and partly by the fact that running water rarely gets chilled enough to freeze during the short time that the thermometer remains at or below the freezing point, coming, as it does, either from underground pipes or from a larger body of water in a main canal. Something, however, depends on the condition of the atmosphere, as our most destructive frosts come in a calm, just after a cold north wind. In our climate, however, we never have had extreme cold during a norther, presumably because the motion of the air produces heat, but in such cases, ice will sometimes form in an open vessel of water, exposed to the wind, when the thermometer will hardly reach the freezing point.

Judging from the testimony of competent witnesses, we can hardly doubt but that irrigation, during a freeze, will, to a great extent, prevent injury from frost, for the reasons above named, but there is a limit to the degree of cold it will counteract, and, at most, it can only make a difference of two or three degrees, but in critical cases, this is all that is required. It is, however, safe to say that if the thermometer gets much below 24 degrees, which is generally conceded to be a dangerous point, irrigation would be entirely useless. Allowing that irrigation is a preventive, the next question is, would it be practical? In answer, I unhesitatingly say no, except in exceptional and limited cases. Take, for instance, a district such as Redlands or Riverside; in case of threatened frost, it would be an utter impossibility for every one to get water at the same time, so that, were it possible, for other reasons it would not be practical. Again, take the season of 1890–91, in which it was frosty for a week or over, the thermometer ranging from 32 degrees down to 24 degrees, it is not always possible to tell what night the cold wave would be dangerous or destructive, and it is doubtful whether running for a week or ten days would not be as injurious as the frost. In most of the cases where benefit has been experienced from running water, it has been more from accident than design that the parties have been irrigating. Again, our cold snaps frequently come on without much previous warning, and as we never know just how great the degree of cold may be, we might have a great deal of trouble and labor for nothing. If we could have signal service dispatches a day or two beforehand, telling us just the degree of cold we might expect, the orange grower would rest easy at night; but as we have not got our weather service down to so close figures, we must needs work with considerable uncertainty. It sometimes happens that some of our most threatening nights come off warmer before morning, and the reverse may also happen, so that we are kept occasionally in uncertainty for a period of at least two months. On a notice of only a few hours beforehand, it will readily be seen that an orchard could not be furrowed out and water gotten through the rows in time to prevent damage.

Clearly, irrigation as a preventive is out of the question, except in a very limited degree, and we will have to look to some other method to prevent injury from frost. Where a locality is subject to frost, and a possibility of losing a crop once in two or three years, it will seriously interfere with an orchardist's profits; but as in most cases it has not been possible to tell beforehand these unfavorable conditions, the orchardist will have to make the most of it. The frost itself is so uncertain, visiting one locality one time and some other place in the immediate neighborhood the next time, that nothing sure can be predicted from past experience; but where it touches isolated spots, it is generally in very still, calm weather, and then resort can be had to a smudge or smoke from burning tar, damp weeds, brush or rubbish of some kind. If the smoke can be kept over the orchard, there can be no question, but it will have the effect of raising the temperature two or three degrees by preventing radiation of heat. Where a slight current of wind is moving and carrying off the smoke as fast as formed, it is more difficult to prevent injury. Indeed, opinions are somewhat divided as to the benefits of smoke. It is also held that in case of late spring frosts, smoke, if kept over a vineyard or orchard (while frost is likely to do damage) until after the sun is up to warm up the atmosphere, will prevent damage. Some orchardists have a system of electric alarms which will give timely notice whenever the temperature is likely to reach a dangerous point, and, where everything is in readiness, and it is perfectly calm and near sunrise, it is undoubtedly a safeguard.

Another method of preventing injury is by making large fires, and thus drawing off a stratum of cold air and replacing it with warmer air from some warmer place. This method is most effectual in low ground, where frost is liable to settle. It may, however, be understood that all of the above measures are but remedial, and when the cold is excessive for only an hour or two, or where not very extreme, as there is a degree of cold not far below 24 degrees in which no means heretofore tried will be of any avail.

If our rain makers can, as they profess, form clouds over any given section of the country, it would probably be the cheapest and best preventive, as the slightest film of cloud will immediately raise the temperature above the freezing point. As we are nearly on the northern limit of successful citrus fruit culture, we have necessarily many vicissitudes, and only under favorable conditions can they be grown at all, and if we could only find some successful method of warding off the effects of extreme cold, it would have the effect of bringing so much more land under citrus fruits, that it would be likely to interfere with their profitable cultivation.

Every kind of fruit has its limitations, and the best can only be grown under the most favorable conditions; the fact that the conditions for citrus fruits are so varied even in Southern California, gives to those who are as favorably situated as we are, advantages that will always make San Bernardino county a desirable place for investment.

Fruit Prospects Around Saratoga.

HILLSDALE, May 18, 1892.

TO THE EDITOR:—During a visit to Santa Clara County, I have noted something in relation to the outlook for fruit around Saratoga, Los Gatos and the vicinity of Almaden. The apple crop promises well, Pearmains, Smith's Cider and Newtown Pippins good. The Jonathans in some orchards are poor in consequence of lack of judicious pruning.

The recent frosts damaged the late varieties of prunes; the early varieties on high grounds escaped; the same cause has seriously affected the grapes in many localities, otherwise doing well. Pears are doing well, especially the Bartlett and Winter Nelis. The peach crop is fair, but the curl leaf is very prevalent. Almonds are well advanced in growth, but in low lands damaged by frost. Cherries are doing well. Apricots are light, in some places very seriously affected by frost. The olive industry is increasing in economic importance. Fruit trees planted out this season have done remarkably well, although in some localities many of them have been injured or destroyed by a bug or worm, the character of which I have been unable to learn. The unusual prevalence of dry north winds have caused the grounds to dry very rapidly, rendering the proper cultivation of orchards and vineyards extremely difficult.

The numerous showers have caused a continuous and thrifty growth of weeds and grasses, insured the crops of hay and grain, and covered the landscape with a lovely coating of green, illuminated by the innumerable wild flowers and the varied tints and shades of color in the mild and cultivated trees and shrubs of the mountains and valleys.

LORENZO G. YATES.

FLORIST AND GARDENER.

High-Class Garden Farming.

DOS CABEZAS, ARIZONA, May 11, 1892.

TO THE EDITOR:—At Orient, Long Island, New York, George W. Hallock owns 58 acres of land, which he and his son manage as a market garden for supplying vegetables to New York and Boston. The gross annual product of this land averages $20,000 in value, being within a fraction of $345 per acre. The net profits, though not made public, are known to be handsome. The following list gives the market crop of a single season: Strawberries, 15,880 quarts; early cabbage, 4800 barrels; early potatoes, 3300 bushels; onions, from sets, 3300 bushels; late potatoes, 1600 bushels; carrots, 9200 bushels; sweet corn, 14,000 ears; white beans, 50 bushels; onions, from seed, 4750 bushels; ears of corn, 1800 bushels; brussels sprouts, 400 bushels; Hungarian hay, 3 tons; Hubbard squash, 100 barrels; carrot seed, 25 pounds; onion seed, 100 pounds; onion sets, ten bushels, and cabbage plants 250,000.

If the weights of these crops were given, the yield per acre would seem very large. During the season two steamers are in continuous use in taking the crop to market.

I get the above figures from the New York *Christian at Work*, whose editor and proprietor is Mr. Hallock's brother, and it in turn copied them from *The Voice*.

While farmers cannot all have large cities near to buy their produce, it is possible in the most remote localities to make more out of land by treating it generously, both as to culture and manuring, than by exhausting it under a one-crop mode of mismanagement. By using dairy or fattening stock to consume the main crops, by careful saving of manures for return to the soil, fertility will beget fertility; wisely outlaid money will beget satisfying incoming money, and under good supervision, the end, which is profit, will be begotten also. With a Californian climate, plenty of water and sound farming practices on the high-tension style of the new agriculture, it is hard to estimate the possible yield of deep bottom land. Wheat yearly, wheat ever as the farmer's mainstay, is not really farming, but only soil-robbing. When time has brought the product, even of deep alluvial soils, down to a profitless basis, the folly of relying on a single-crop system will be widely admitted by the impoverished owners of worn-out lands.

JOHN DARE EMERSLEY.

Two Methods of Laying Out Grounds.

E. R. Roberts, of Tacoma, Wash., writes an essay for the *Northwest Horticulturist*, from which we quote as follows:

There are two very distinct modes of laying out grounds, known as the geometrical and natural. Various terms have been used from time to time by descriptive writers on these subjects to designate styles, but they are all easily referred to one or the other of these modes, and in the geometrical may be placed the formal Roman, architectural and ancient, the Italian, French and Dutch varieties of this style. Under the natural we may, in a similar manner, place the gardenesque, modern, irregular, English, uniform and graceful.

GEOMETRICAL STYLE.

In the early ages of the world, the possessor of wealth exhibited his riches by surrounding his residence with such improvements as were most distinctive from the common scenery of the country. Hence gardens were ornamented with ballustrated terraces of massive masonry, magnificent flights of steps, decorated arcades, costly fountains, architectural grottoes and lofty clipped hedges arranged with nitches and recesses for the display of statuary, when the less wealthy contented himself with a sloped grass bank for the stone terrace, shaped his small lake in a square or circular form, clipped his trees and shrubs into fantastic shapes.

Such a style is well fitted for immediately producing grand effects; in countries abounding in irregular and natural forms of uncultivated scenery, distinction is at once imparted by introducing perfectly level, or everything regularly sloping, surface of grounds. Trees and shrubs, planted at uniform distances apart along the driveways, walks and clumps, lakes bounded by geometrical lines, so as to leave no chance of mistaking any portion of the scene as having been the result of unassisted natural arrangement, but to convey the impression of a display of natural wealth and refinement; to indicate ownership by distinguishing the country residence from the natural, uninclosed, rude scenery of the neighborhood.

In the strictly geometrical style, everything is architecturally accurate in its lines, perfect symmetry pervades the whole, and all parts are equally balanced. Statuary of all kinds, fountains, steps, ballusters and pediments, broad and straight walks, broad and straight avenues, formal-shaped flower beds, clipped plants, shrubs and trees, all belong to this species of garden and landscape decoration.

Such style as this would have a beautiful combination, and would produce and immediately have a magnificent effect in our parks, private grounds and gardens in Western Washington, owing to our magnificent natural scenery.

THE NATURAL STYLE.

In the geometrical style the hand of the artist is in every detail, but in the natural style artificial enterprise is not so conspicuous in the disposition of the material used for the development of landscape views and scenic effects. There is nothing, so far as general impressions are concerned, to indicate where the hand of the improver has been operating, or anything appearing beyond a natural production, or what may be indigenous to the country or the locality; all natural beauties are carefully preserved, so far as consistent with objects of use or convenience, and the element of utility enters more largely, perhaps, into our ideas of the beautiful in this than in the geometrical style, and, while there is no desire to avoid the appearance of art in operative details, it is not rendered obtrusive, and the effects produced need not suggest the idea of painful and laborious operation. The perception of the beautiful ought to be the first impression, and not that of the art by which it has been produced. The beauties of nature are imitated in the disposition of trees, shrubs and plants, and, so far as general scenic effect is concerned, the arrangement might be taken for a natural group, yet a closer examination of details will lead to the discovery that the plants employed are not indigenous to the locality, and art design will be recognized. A natural footpath seen on the hillside, curving gracefully around, or on the banks of streams, embracing a thicket of trees and undergrowth, and lost in the tangled vines, then emerging and tracing its course across the land below, alternately widening and narrowing, and at times lost in the massive foliage of grasses and other natural growths, is what might truly be termed a natural footpath.

Let it be trimmed and widened, is surface be neatly graded and covered with gravel, its curves well defined, its sides made parallel, and it will have lost much of its beauty as a natural footpath; although the natural scenery has not been disturbed, nor anything impaired, it is now invested with the beauty of utility, yet for comfort and convenience we prefer its improved condition.

In arranging and preparing a natural ground for a pleasure garden, nature should be preserved in every instance possible, and never destroy the beautiful and great things of nature.

ARBORICULTURE.

A Promising Eucalyptus Sport.

NAPA, May 10, 1892.

TO THE EDITOR:—I have read with much interest the discus sion about eucalypti in your valuable paper, and appreciate fully the importance of this genus of trees for the purpose of wind-breaks and timber in this State, where they seem to be entirely at home.

Judge Stanly, on his beautiful ranch near Napa, has all

his vineyards and orchards divided into lots and surrounded with *Eucalyptus globulus*. They seem to enroach but little upon the vines and trees, and he assures me that he has found them a great protection against frost and wind. That they are also great purifiers of the atmosphere and could be planted with beneficial results as an antidote against malaria, is although well authenticated, perhaps not fully appreciated in those sections of our State where malaria prevails. But the object of the present communication is not so much to draw attention to this, as to an accidental and very beautiful sport of the well known *E. globulus*, of which I can give the full history, and of which I have secured all the seed for this season. In the winter of 1881-82, about a hundred of *E. globulus*, one year old, were planted on a ranch near Napa. All others were typical *E. globulus* trees, of which many are 80 feet high; but one of them assumed a more dense, upright form from the start, which has more and more developed, until now it is a beautiful and very striking tree about 50 feet high, about 18 inches diameter of trunk at the base, and a conical, gradually tapering crown, the branches growing upright and very dense; starting about four feet from the ground and making a beautiful pyramid, perhaps 15 feet wide, tapering gradually to the top. I can compare its shape to nothing better than a well grown specimen of *Theya aurea* the well known "Golden Arbor Vitae." Your readers can easily see what a handsome object such a tree must be, and how invaluable a row of them would prove as windbreaks. I shall sow the seed, and am very anxious to see whether the seedlings will partake of the character of the parent, or sport back to the original form.

Can any of your readers inform me whether eucalypti will grow from cuttings, and if so, at what time they should be taken? I have no doubt that this desirable variety could be propagated by budding or grafting. At any rate, I am determined to propagate it some way.

Another peculiarity is that so far only one branch has produced blossoms and seeds, all others being barren.

GEORGE HUSMANN.

The English Walnut in Ventura County.

The following well written letter to the State Board of Agriculture by N. B. Smith, the well-known horticulturist of Ventura county, and printed in the annual report, is interesting as coming from a practical grower:

I am located on Ventura avenue, three miles from the coast, in cultivating various varieties of fruit. My original idea was to have walnuts. My first purchase of land had 185 (what is known as the hard-shell) walnut trees. They began bearing at seven years old, and gave 12 pounds; at eight years, 226 pounds; at nine years, 2600 pounds; at ten years, 7200; at eleven years, 9000 pounds; at twelve years, 13,000 pounds, and at present they contine to produce about the latter figure, and are a very remunerative crop, with less labor attending cultivation and harvest than any other kinds of fruit.

The walnut seems to be confined to certain localities in California, and Ventura county soil is well adapted to its production, and particularly so in this valley. The thrifty trees and their bounteous harvest show for themselves. A few years ago a new nut, called the soft-shell, seems to have taken precedence with many, myself as well. They produce much younger. At five years old they yield a good many nuts. As my trees are young, I can hardly make a comparison with my hard-shell, so called. They were very productive last year, a fine-looking shell, and attractive, with meat white and plump, weigh several pounds more to the sack than the other variety, and command several cents more per pound. Hence, it would seem, it "was *the* nut." My soft-shells have not a fair show as yet. I have prunes and apricots between, which return immense crops, but of course they retard the growth of the nut, and, producing as they do, I am reluctant to remove them. Between the 185 old trees above mentioned were apples, but I removed them finally, and such a marvelous growth as the walnuts made the next year demonstrates the fact that they need room. Mine are 40 feet apart, but 50 feet is better, as many touch now. They need but little pruning, only to get them up. When at a proper height, I prune from the under part of the limb, for if allowed to grow to any size, it pulls the more upright ones down. We harvest the nuts in October and November. I agitate the limb with a long pole with a hook in the end. Those that are ready to drop come down easily. I then pick and dry them a few days in the sun, when they are sacked and ready for market. I make three such pickings as described. The trade seems to demand bleaching.

It is quite interesting to watch the nature of the walnut. It has its staminate and pistillate blooms separate; both occur on the same tree; the staminate develops into catkins, the pistillate into embryo nuts. Successful fruiting depends on these two forms of bloom appearing at the same time. Now, with me they have never failed to connect, but I can cite localities where they do. They are fine, healthy appearing trees, but fail to develop the embryo nuts; they form, but drop. The staminate for the coming year begins to form as the nut is developing, say the early part of July, and by the last of August they reach the state that nature has required. Thus they remain until the following spring, when they develop as I have before stated. So one can generally estimate his crop for the ensuing year, barring climatic changes. The first year my soft-shells began bearing, no catkins appeared. It was peculiar, as now they have plenty. I have thirty, four-year-old, trees that gave me last year 22 pounds of nuts. These trees were grown from seed of my hard-shells, and produce identically the same nut. Why I allude to this is, it has always been the impression they did not bear until nine years old; neither did my old ones. It is quite a freak of nature.

Walnut growing is a pleasant and agreeable occupation, and can be made very profitable, providing one gives it proper attention; but they cannot be grown in all localities by any means, although thousands have been planted where they will be worth more for wood—too exposed, cold, not moisture sufficient. My soil is a rich, sandy loam, well drained, 24 feet to water. I have trees that have given five sacks of 60 pounds, and prices range from 7 to 10½ cents. Twenty-seven trees to the acre, one can readily calculate their value. As yet we have but little competition—on this coast the Chile nut, in the East the foreign ones. Withal, I believe, when our California nut, soft or hard, is properly grown and put on the market with as much care and judgment as other fruits are given, that it will rank first on the list. I have seen many foreign nuts, but I have yet to see the walnut that compares in size, color, clearness and sweetness to the meat of the soft shell, although I have both, and the two kinds are prolific.

The English Walnut in Oregon.

Extracts from a paper read by HENRY E. DOSCH before the Oregon State Horticultural Society.

When, some years ago, I retired from business and bought the out-of-town place on which we now live, my first thought turned to the cultivation of English walnuts, though the place had been cultivated for over 40 years, and had all the other varieties of fruit growing. Knowing little or nothing of the habits and growth of the English walnut, except, when we were boys we thought our neighbor's walnuts better than our own—I began to read up, and to inquire of those whom I saw had large walnut trees growing, but was informed that Oregon was not a nut-growing country, as some of these trees were 30 years old and had never borne any fruit. I concluded that there must be some reason for this, as I could not convince myself that a country which grew every kind of fruit to such perfection as Oregon, having all the advantages in soil and climate that France and Germany have, where the English walnut flourishes abundantly, could not grow that royal fruit, and soon learned that the variety planted here was the Los Angeles, the most delicate walnut grown, which thrives on this coast only in a few counties of Southern California, brought there by the Friars of the early Spanish settlements.

Feeling that there must be other varieties, I wrote to a large grower in California for trees which he thought best suited to our climate and of such large size as he could recommend to transplant and do well. He sent me 5-year-old trees of the second generation, Proeparturiens and Serotina varieties, which were duly planted with utmost care and every attention given afterward, but did not seem to do well. Over half of them died after struggling along a year or two, and for four long years after planting, the remainder stood still, all of which was caused by the cutting of a large tap root. What few lateral roots they had, were barely sufficient to keep them alive, but last year they made some headway and bore a few nuts, which shows that the trees have finally established themselves. It was a great mistake. Had I planted yearlings I would have had better results, which I only learned, however, by actual experience. I have some three-year-old trees transplanted at yearlings, which have as large heads and are nearly as far advanced as my nine-year-old trees are, which were transplanted at the age of five.

As to varieties suitable to our climate I would name Second Generation Proeparturiens, Serotinas, Mayette, Franquette, Chaberte, and perhaps Parisienne, Vaury and Cluster, and possibly the improved soft shell walnut. The latter is claimed to prove true to seed and is growing nicely with me, but not yet in bearing, and may not be adapted to our climate, being considered rather delicate and tender.

Having made your selection of trees, put the place in which you wish to plant them in perfect order, dig the holes three feet wide by at least two feet in depth and 40 feet apart, then fill them up again, bottom soil on top, all of which can be done in the fall and winter and be ready in spring for planting, which is a very particular piece of work. Tap roots straight down, spread out each lateral root carefully as you proceed to fill the previously re-opened hole, sifting in fine dirt as you go, the tree to stand a little higher than in nursery rows, thus allowing for settling down, and when completed you may rest assured your trees will grow, and beyond cultivation, require no further attention; no spraying and no pruning.

If you wish to experiment as I have done, by planting the nuts, procure them in the fall as soon as they drop, fill some boxes with light soil and sand, half full, then put in the nuts, pointed end up, about one inch apart, cover three inches deep, and place out of reach of rats, squirrels and gophers, keeping the soil moist; on examination in the early part of April you will find that they have sprouted; that is, they throw up two sprouts from the pointed end of the nut, one of these turns down over the nut and forms the tap root and the other continues upward and forms the tree. Now remove them very carefully as these sprouts are very brittle and easily broken, which would make the plant worthless. Plant them either where you wish the tree to grow (by far the best way) or in nursery rows about five inches deep, and transplant to permanent place the following spring. There is no fruit tree that is so indifferent to location exposure or soil, as the English walnut, and gives good results even on land not fit for any other use; but it is grateful for better soil, by going into bearing sooner and yielding larger crops.

Walnuts usually go into bearing in five or six years and at 12 years are in full bearing. In Ventura Co., Cal., trees of the latter age are said on undoubted authority to have yielded from $15 to $20 worth of nuts. It is not a slow grower as I have been led to believe, four to six feet being not an uncommon growth in one season; besides it s a healthy tree, having, comparatively speaking, few pests ito molest it; and once established, lives to a good old age and proves profitable to generation after generation, with but little care. The walnut is very difficult to graft, which, according to Prof. Budd, is owing to the rapid evaporation from the scion while the slow process of uniting with the stock is going on; which also accounts for the very high price of grafted trees.

This year I planted about 300 yearlings of my own growing, and have now sprouting about 500 more of English walnuts besides butternuts, hickorynuts and pecans.

THE IRRIGATIONIST.

Hillside Irrigation in California.

T. S. Van Dyke of San Diego furnishes the following to the *Irrigation Age:*

The irrigation of heavy slopes was for many years considered impossible, even by the enterprising settlers of California, who had more money and more time to work out problems of irrigation than any other people on earth. And it is only within the last ten years, and really within the last six, that the solution of this problem may be said to have been completed.

It was, of course, known that hillsides or rolling ground of any kind could be irrigated by terracing, or by forming basins heaped up on the lower side. This was done long ago, and many fine places made in that way. But, as explained before, these methods, especially basins, are very inefficient as well as annoying and expensive in the matter of labor. The hillsides were therefore generally avoided by those who wanted irrigation both cheap and effective.

OBJECTIONABLE METHODS.

But when it was found that the hillsides generally produced the best fruit and were the freest from frost, people who were familiar with the great results produced by the small furrow system as used at Riverside, turned their attention to the heavy slopes. Most of these, such as that which is now the finest part of Redlands, were long considered worthless because of the difficulty of irrigating them. It was supposed that this was so near an impossibility that it would not pay to carry aqueducts high enough up the slope to reach such land. Flooding was manifestly out of the question, and basins on the greater part of the slopes would have to be built to an enormous height on the lower sides. Terracing so as to wet a sufficiently large area was very expensive, and, above all, came the objection that in wet weather the soil would cut all to pieces, even if the ditches left any of it.

Running a small ditch, which was made permanent, and planting along that, as had long been done by the Mexicans and Indians on a few slopes, also failed to produce good fruit and enough of it on old trees, because it did not wet enough of the ground and because there was no cultivation, the ditch never being broken up. In short, there seemed for a long time no method of wetting the whole ground evenly. And yet the problem was one of the simplest, and the marvel is, not the fine places that are now blooming on such ground and the high price it brings, but only that it should have taken so long to discover so simple a trick.

THE CURVED FURROW.

With a little practice it is as easy to plow a curved furrow as a straight one, especially when you have a line of trees to guide you. There is also no reason why trees should be planted in straight lines if it is not perfectly convenient to have them so. The symmetry of the orchard is of no consequence compared with good and cheap irrigation and tillage. The trees are therefore planted where the water will run best. That is all there is about it, and the rest of the operation differs in no respect from the system of fine streams with a long run that I have before described in these columns. The whole ground is thus evenly wet and the moisture retained by the same continuous cultivation before explained as essential to good results. The system can therefore be used on any hillside on which machinery can be used at all without terracing.

The objection that the soil is liable to cut in wet weather amounts to little if the cultivator and plow are run in the right direction and no furrows allowed up and down the hill. But in addition to this, it is almost entirely obviated by letting the grass and weeds grow in the winter. A very little growth binds the soil so as to stand the wash of the very heavy rains, which rarely come before the grass has a fair growth. It is easily cultivated out of the way, as all danger of heavy rains is over before it gets too big.

The water is delivered from a flume laid down the hillside, and fitted with cleats at each hole so as to throw off enough water at the sides, or sometimes the flume is laid in steps connected with a bit of covered flume from step to step. The latter is best for very steep hills, though, with care, the other may be used on a greater slope than one would imagine. Another flume should be laid at the end of the furrows to carry off the waste water. At Redlands small hydrants are used in many places to feed the furrows, and cement or stone ditches are used for the waste. But common redwood flumes are good enough and often cheaper.

Swales or "draws" make little or no difference when the ground is first thoroughly prepared. Whatever the shape of the hill, money will always be saved by preparing the ground in the best way. The run of the water may be determined by letting the water follow a hoe. But it is better to lay out the ground with a level at the start and then test your work with a stream of water. Then plant your trees on that contour and they will be a sufficient guide for your plow in the future.

METHOD OF CONSTRUCTION.

The contours may be laid out by any one with a carpenter's common level. Fifty-five feet to the mile is nearly right for a very fine stream on most soils. And this is about one foot in ninety-six, or two inches in sixteen feet. Therefore take a sixteen-foot plank and bevel it to a slope of two inches in its whole length. Then when the upper edge of this is level the lower edge will represent the required grade for your ditch. In this way the work can be done very rapidly.

The same thing is equally good for laying common little

flumes, cement ditches, etc. But in earth, one should determine by trial the amount of slope the soil will stand without cutting or filling up with sediment or refusing to run fast enough in case the soil is very porous. A mistake of a few inches in a hundred feet will generally not be serious, but the more nearly exact you can get it the better. Every approach to perfection in your first arrangements diminishes your future work and annoyance.

All manner of stuff is now raised in this way in California on hillsides that a few years ago, when covered with brush, seemed too steep and rough even to plow. Of course no one would attempt to raise large tracts of alfalfa for heavy profit on such ground, but many small patches for home use are grown in this way as well as upon any ground. When once made, the furrows, of course, are left in place, but the water finds its way to the center between them quite as well as on more level ground.

The proper handling of water in this way will solve the problem of irrigation in a great part of the Eastern States. People naturally think ground must be comparatively level for irrigation, and the greater portion of the irrigated ground seen in the West and on this Coast is so. As such ground in tracts of any size is quite rare on the Atlantic Coast, many naturally think irrigation there out of the question. But there are thousands of slopes on which it can be done as well as here. And any slope on which corn can be cultivated, without the soil cutting in heavy rains, may be used for anything else with safety. The irrigation water will not cut, or the rain either, if the furrows are made right and the plowing done in the right direction.

The Field.

Agriculture at the World's Fair.

CHICAGO, May 10, 1892.

TO THE EDITOR:—The agricultural exhibit at the World's Fair, it is believed, will be studied with greater interest and by more people than will almost any other division of the great Exposition. Millions are engaged in raising or dealing in agricultural products, and every one is a consumer of them. Recognizing this, the Exposition management has provided accommodations and facilities for this exhibit which dwarf such provision made at any previous World's Fair.

The Agricultural Building, an imposing and beautiful structure, situated across the main lagoon, southward from the great Manufactures Building, is rapidly approaching completion, and will be finished even to all details of ornamentation, before October 1st. It measures 500 by 800 feet, and has an annex 300 by 550 feet, and a connected assembly hall, which has a seating capacity of 1500. Close by on the south is the Dairy Building, measuring 100 by 200 feet.

The northern portion of the main floor of the building will be occupied by the agricultural and other food exhibits of foreign nations, which, it is already assured, will be extensive. Great Britain, Germany, France, Mexico, Austria, Denmark, Sweden, Japan, Paraguay, Canada and a number of other countries have already been assigned space, ranging from 1000 to 15,000 square feet each. It is expected that the agricultural exhibits by these countries will be as comprehensive as those of our own country, and will show some features which will be exceedingly instructive to Americans.

Occupying nearly all of the remainder of the main floor will be the exhibit of cereals and other farm products from the States of the Union. Every State and Territory, it is expected, will be represented by its products. Thus, upon this one vast floor, covering nearly ten acres, will be displayed, in all their variety and perfection, the pick of the farm products of the world. It is believed that the exhibit made by this country, naturally exceeding that of any other in extent, will attract great attention, also, by reason of its exceptional merit and the comprehensive information that will accompany it.

This great exhibit, or rather array of exhibits, will be made and arranged in such a systematic manner that the visitor, almost at a glance, can tell not only the appearance of each object, but what it is, where it came from, and "all about it;" for under the regulations adopted for the Department, Chief Buchanan requires that each exhibit shall be accompanied with the following data: Name of object, name of producer, where grown, character of soil, date of planting, quantity of seed planted per acre, method of cultivation, date of harvesting, yield per acre, weight, price of product at nearest market, average temperature and rain or snowfall by months between planting and harvesting, and whether or not irrigation was employed.

On the six acres of flooring in the annex, which is virtually an extension of that of the main building, will be shown every description of agricultural machinery, including not only the best and most improved now in use, but also such as will illustrate the progress of the industry, from primitive times to the present.

In the great galleries of the building, which are most novel in construction and perfect in point of availability, will be located, on the north front, the wool exhibit; on the west end the apiary display, which will include working colonies of bees; on the south front the dairy implements, and on the great central sections the exhibit of the brewing and tobacco industries and the wealth of magnificent exhibits of flours, meals, bread, pastry, sugars, confectionery, canned foods, oils, soaps, chocolates, etc.

One of the most novel, instructive and elaborate exhibits, and one that will undoubtedly attract the attention of every scientific person and scholar interested in any phase of agricultural life, will be that made by the Association of American Agricultural Colleges and Experiment Stations. This exhibit will occupy nearly 8000 square feet of space, and will be located in the southwest corner of the building, on the first floor. It will represent the entire work of a model Agricultural Station, covering entirely the field of experiment and research in crops, botany, horticulture, entomology, feeding stuffs, animal nutrition, dairy solids, milk testings and veterinary science, and will include an elaborate and complete, botanical, biological and chemical laboratory.

In addition to this, the agricultural colleges of the United States will have, in this space, a combined exhibit graphically illustrating the work and special field covered by each college. This entire exhibit is not only unique, but is something that has never been accomplished or attempted at any previous exposition. The exhibit will be put up and conducted by the directors of the different experiment stations and representatives of the different agricultural colleges of the United States, each contributing some part of the exhibit, the whole to be installed in a magnificent manner, at the expense of the United States Government. This will give to every visitor an opportunity to witness the methods by which the great advances in all phases of agricultural life and research are carried on in the colleges and experiment stations of the United States.

Outside the building will be shown several magnificent exhibits, put up at a great cost, of the irrigation systems of the great West. On the lagoon just south of the annex to the Agricultural Building will be installed traction and portable engines and a wonderfully interesting exhibit of windmill machinery.

Connected with the Agricultural Annex by a short walk will be the Dairy Building, in which will be shown dairy products, and in which will be conducted, during the entire period of the Exposition, the Dairy School, which has been extensively described, and has received cordial endorsement from all sources. Here will be conducted practical dairy tests for determining the relative value of different breeds of cattle as milk and butter producers and of methods of feeding. The records and results of this school, unquestionably, will be of lasting benefit to the dairy interests of the United States and of the world. In speaking of this, Mr. Buchanan says that too much credit cannot be given to the dairy cattle associations of the United States, which, by their generosity and public spirit, have made this excellent feature of the Exposition a certainty.

Connecting the Agricultural Building with the Machinery Hall is an artistic structure known as the Assembly Hall. This will be devoted to discussions by various agricultural societies, national organizations of farmers and live stock associations, of questions of interest to agriculturists throughout this country.

All visitors will be interested in the agricultural exhibit, but its chief value will rest upon a much broader and more significant fact. The exhibit will afford a vast amount of information to many thousands to whom it will prove of incalculable benefit. The crops best adapted to different localities and the reason therefor, the most improved methods of cultivation that are being pursued, the best results that have been secured and the manner of their securing, and the perfection of products in every line—all these will be shown and will constitute the more important lessons which the agricultural exhibit will teach. Through the thousands who learn these lessons, and are sure to make practical utilization of them, the agricultural industries will receive such an economic readjustment and impetus as will result in increased productiveness and merit, and general benefit to the entire country. OCCASIONAL.

Proposed Survey of California Valleys.

At a recent meeting of the Technical Society of the Pacific Coast, held in San Francisco, Willard D. Johnson of the United States Geological Survey, in charge of the topographical work now in progress in the gold belt of California, presented a plan for a systematic topograpic survey of the valley areas of California—a plan involving cooperation by the State Government with the Geological Survey Bureau of the Federal Government, the cost of the work to be equally shared.

It is proposed to have made a systematic and uniform contour map survey of all the valley and foothill areas of the State, to be engraved in atlas sheets of a quarter degree square each, on a scale of one inch to one mile. Each of these sheets—a quadrilateral of the earth's surface, 15 minutes extent in latitude and longitude—would include an area, varying slightly with the latitude, averaging 238 square miles, an equivalent of about 6½ townships. The paper dimensions of each sheet, with margins, would be 16 inches by 20 inches. To join these quarter degree units into a single sheet would be to give to the great central valley alone a length of 50 feet. It is estimated that for the valley and foothill areas the number of atlas sheets would be 140.

This map would be designed for general purposes. It would not be a cadastral map—that is, it would not show private property boundaries. It would be a topographic map, portraying the topography, or the relief of the surface, by the modern contour method, and exhibiting in addition the drainage system, the water bodies, the public property or political boundaries, the land survey lines (indicating the errors of position of their corners), the settlements, the railways and the public roads, and the canals and waterways not of individual ownership. In short, the map would depict on the one hand the natural features, and on the other hand the public "cultural" features.

The valley areas of California foot up about 33,000 square miles—four times the total area of Massachusetts. The cost of their survey would possibly be $200,000. The time required to do the work with thoroughness might reach six years. The expense annually would not exceed $35,000, and finished atlas sheets would be forthcoming at the rate of 20 or more a year.

To summarize the case for this State, we recognize at the first thought of comparison that California is topographically unlike the Eastern State referred to. It has a mountainous area of Alpine massiveness and roughness twice the size of all New England, and it has in addition a spread of agricultural lands four times the area of rock-encumbered Massachusetts, and not in scattered patches among hills, but in great valleys, one of them matchless in extent and promise. In the survey of the mountainous area the General Government is at present actively engaged. The work is of the highest modern type. The scale is well adapted to the country, and no expense will attach to the State. Eventually, when Congress shall authorize publication, the atlas sheets, nearly 100 in number, may be had, presumably at the cost of paper and printing—about 5 cents each. For the survey of the agricultural and habitable area, on the other hand, there is no present plan at Washington, and if there were, the resulting map, uniform with that for the mountains, would not meet the economic needs of the State, though meeting the needs of a Geological Survey. It is thus seen that, unlike the Eastern States mentioned, it is not necessary to map the entire State on the inch-to-a-mile scale; that the smaller scale is sufficient for about 125 000 square miles, and that this work is now in progress and well advanced. For the more valuable one-fifth remaining, however, a much more detailed map is needed. The precedents offered by the Eastern seaboard States presumably might be followed here, and this more detailed map secured at half cost—the additional cost of the increased scale.

Further Information Wanted on Hay Subjects.

Another Chance for a Prize Letter.

ENSENADA, LOWER CAL., May 8.

TO THE EDITOR:—I have read with much interest your "hay" articles and beg to ask that you will kindly include in your next series on that subject, answers to the following questions, incompletely answered in the present series:

1. The machine stackers most commonly used of the "Eclipse" type and which is the best in use.
2. The saving made by use of stackers over the old hay rack and fork method.
3. And, most important of all, in using sweep-rakes and stackers, can the hay be taken from the horse rake bunches and stacked at once; without waiting the usual week or ten days to permit sweating in the cock, in order to avoid molding in the stack?

If so, how long must hay lie in the windrow in the coast counties in ordinary weather, before it can be stacked, and how is the color preserved during this exposure to the sun. The advantage of stacking from the horse rake bunches, instead of from the cock, is that all the expense of hand cocks (necessary on account of our haying showers, if the hay is to be in the field even three days after cutting) is done away with. Experience here seems to prove, however, that without a week at least, in the cock, the stacked hay will mold.

Also kindly inform me as to *Chevalier* barley.

1. Why is it better than ordinary barley for hay?
2. Why is it better than bald barley for hay?
3. Why is it supplanting wheat-hay?
4. Has it the same range in climate and soil as ordinary barley?
5. Does it make the same yield as ordinary barley per acre?
6. Does it entirely do away with "sore mouth" in stock or horses fed on it?
7. Is it as good as ordinary barley in strength and yield if used for grain, instead of hay. READER.

These are good questions and should renew the hay discussion. Our offer of $5 for the best letter commenting upon the hay essays already printed, is still open. We will award it to the writer of the best letter answering the above questions.—EDS. PRESS.

Ramie Manufacture.

SAN FRANCISCO, 810 Castro St., May 16, 1892.

TO THE EDITOR:—The Department of Ramie Culture has been named by the State to have the ramie plant successfully introduced in California if possible. By correspondence, Mr. Walter T. Fowler of Atlanta, Ga., was invited to visit our State. He came, and has invested over one thousand dollars in machinery, to fully demonstrate that he can clean ramie fiber that has been decorticated and furnished him in ribbons.

Several trials of his "Patent Digester" were made in the city of San Francisco at Cor. Eighteenth and Shotwell streets. Samples of the fiber so degummed were sent to the San Jose Woolen Mills by the undersigned to test the practical working. White blankets containing half ramie and half wool were manufactured. They looked fine and soft, and no doubt will be strong and durable. Also cloth was made for gentlemen's suitings, which was good looking for spring goods, being of equal parts of ramie and wool. Much credit must be given to the enterprising manufacturers of the San Jose Woolen Mills for demonstrating the use of ramie in this manner. They say the fiber is good and works well on the machinery and blends finely with the wool, no trouble being noticeable. W. H. MURRAY,
Superintendent of Ramie Culture for California.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

THE HOME CIRCLE.

The Bivouac of the Dead.

The muffled drum's sad roll has beat
The soldier's last tatoo;
No more on life's parade shall meet
That brave and fallen few.
On Fame's eternal camping-ground
Their silent tents are spread;
But Glory guards, with solemn round,
The bivouac of the dead.

No rumor of the foe's advance,
Now swells upon the wind;
No troubled thought at midnight haunts
Of loved ones left behind;
No vision of the morrow's strife
The warrior's dream alarms;
No braying horn nor screaming fife
At dawn shall call to arms.

Their shivered swords are red with rust,
Their plumed heads are bowed;
Their haughty banner, trailed in dust,
Is now their martial shroud.
And plenteous funeral tears have washed
The red stains from each brow,
And the proud forms, by battle gashed,
Are free from anguish now.

The neighing troop, the flashing blade,
The bugle's stirring blast;
The charge, the dreadful cannonade,
The din and shout are past;
Nor war's wild note, nor glory's peal,
Shall thrill with fierce delight
Those breasts that never more may feel
The rapture of the fight.

Like the fierce northern hurricane
That sweeps his great plateau,
Flushed with the triumph yet to gain,
Came down the serried foe.
Who heard the thunder of the fray
Break o'er the field beneath,
Knew well the watchword of that day
Was "Victory or death."

Long has the doubtful conflict raged
O'er all that stricken plain,
For never fiercer fight had waged
The vengeful blood of Spain;
And still the storm of battle blew,
Still swelled the gory tide;
Not long our stout old chieftain knew,
Such odds his strength could bide.

'Twas in that hour his stern command
Called to a martyr's grave
The flower of his beloved land,
The nation's flag to save.
By rivers of their father's gore,
His first-born laurels grew,
And well he deemed the sons would pour
Their lives for glory, too.

Full many a norther's breath has swept
O'er Angostura's plain,
And long the pitying sky has wept
Above the moldering slain.
The raven's scream or eagle's flight,
Or shepherd's pensive lay,
Alone awakes each sullen hight
That frowned o'er that dread fray.

Sons of the Dark and Bloody Ground,
Ye must not slumber there,
Where stranger steps and tongues resound
Along the heedless air.
Your own proud land's heroic soil
Shall be your fitter grave;
She claims from War his richest spoil—
The ashes of her brave.

Thus, 'neath their parent turf they rest,
Far from the gory field;
Borne to a Spartan mother's breast
On many a bloody shield.
The sunshine of their native sky
Smiles sadly on them here,
And kindred eyes and hearts watch by
The heroes' sepulcher.

Rest on, embalmed and sainted dead,
Dear as the blood ye gave;
No impious footstep here shall tread
The herbage of your grave.
Nor shall your glory be forgot
While Fame her record keeps,
Or Honor points the hallowed spot
Where Valor proudly sleeps.

Yon marble minstrel's voiceless stone,
In deathless song shall tell,
When many a vanquished age hath flown,
The story how ye fell;
Nor wreck, nor change, nor winter's blight,
Nor Time's remorseless doom,
Shall dim one ray of glory's light
That gilds your deathless tomb.

Embers.

It was snowing, and Dick Snivers's old felt hat and meagre overcoat were all white and soft looking; you couldn't see the holes in the crown of the one nor the threadbare edges of the other. He shuffled slowly along the snowy path past the University, his chin buried under his coat collar, his shoulders up about his ears, his hands shoved deep into the breast pockets of his overcoat. Already there were a few lights in the windows of Matthew's, opposite, and a solitary black figure with a cape flapping about its shoulders could be seen across the yard, marching head down against the storm.

Snivers stopped in front of Weld. In one of the rooms in the north wing there was a red glow, telling of a good fire. Snivers couldn't help thinking, then, of his own poor little room in College House, with its white walls and deal table supporting a pile of battered books and a brass lamp, and its empty stove. It had been three days since he had had a fire. He couldn't afford to buy any more coal at present—he had figured on that half ton lasting longer. It wasn't so bad in the evening, because then he could sit up close to the lamp and keep pretty warm, but in the afternoon, before it was dark enough to light the lamp, it was very dreary; Snivers had rather shiver out of doors then than in his room, so here he was whitening all over like a miserable Santa Claus.

That room in Weld with the red glow in it, looked very cosy. There were curtains across the lower part of the window, so that only a bit of terra-cotta wall paper surrounding a small etching, and a yellow circle cast by a jet half turned down, were visible. The owner must have but just gone out, probably to dinner, for it was hardly dark yet, hardly six.

Snivers turned up the short path to the front of Weld, clumped through the dark, brick vestibule, and, with a creak and a thud of the door, entered the hall. It was really very cold outside, he would get warm here. It must be so comfortable to live in a place where the halls are warm, thought he, shivering underneath the gas jet, as he gazed at the sign prohibiting the building to "peddlers, beggars and book agents." He wondered if he would be taken for a beggar. Well, he was one, but a student, too—the "Beggar Student," he said aloud, with melancholy cheerfulness.

At the end of the hall there was an open door, through which, past the little vestibule, he could see the room with the terra-cotta wall paper. Over the floor flickered an orange light, flinging queer, trembling shadows about the room. "A wood fire must be burning there; I wonder if the feller'd mind if I went in," said Snivers to himself. "I guess he won't if he doesn't find me there. And such a fire as that—a wood fire—oughtn't to be wasted. To think of the feller wasting a wood fire!" With which economical reflection Snivers timidly entered the room.

There was an odor of cigarettes in the air that made the room seem all the more cosy. In one dark corner glowed the polished black front of a piano, the keys gleaming like white teeth on the grin; pictures, signs and shingles were scattered here and there on the walls, and beside a large desk in the middle of the room, littered with books, papers, tobacco and cigarette boxes and a couple of thin glasses, was a small, open steamer trunk. Before the fire there was a low arm-chair covered with a rug. With a final glance about the room, Snivers sat down upon the edge of the chair, holding his hands to the fire with a sigh of satisfaction, while the snow from his hat and coat trickled down in little streams, spoiling the rug of his unknown host.

"I'd better not turn the gas up," he soliloquized, "some of the feller's friends, or the feller himself, might see the light and come in. I'll sit in the dark—it's pleasanter anyhow with such a fire—"

Suddenly he caught sight of a little piece of paper, folded once across the middle, lying on the hearth. Mechanically he reached for it and examined it. "Why it's a check!" he exclaimed, as with trembling hands he held it in the firelight. "Pay to the order of Charles P. Graff $100," he read. It must be fine, thought he, to have $100 and to spend it on anything you wanted, as Charles P. Graff would do. Graff must be one of those fellows you see sometimes on Sunday afternoon, in long, loose overcoats and silk hats, boarding the electric cars to go into Boston. One of those fellows who think nothing of going to the theater when they want to, that can spend a whole hundred dollars on fun. Fellows that leave $100-checks lying on the hearth with the door open can't think much of $100. He, poor Snivers, had not even enough to buy a little coal. If he only had $100! and Snivers fell a-planning what he would do with so much money, staring into the fire. He wouldn't spend it all on himself, as Charles P. Graff would probably do. He would buy Tom a good fiddle, Tom who had such a genius for music—you can buy very good fiddles for $25 now. That would leave $75. He'd send his father $50—Snivers would so like to help the dear old grisly fellow, with his wrinkled, tired eyes and cheerful mouth, who had denied himself so much to send his son to college. Twenty-five dollars would buy him coal and clothes and a new hat. He really needed a new hat, his present one was really too disreputable; and perhaps he might—Snivers hung his head guiltily at the thought—he might go once to the theater, or maybe—twice—and a delightful but shamefaced smile flitted over Snivers's face. Ah, yes, there were so many things he could do with the money. But what was the use of dreaming? The check wasn't endorsed. If only the check were endorsed, then he could—Snivers suddenly straightened up in his chair. Well, what would he do? What good would that do him—was he—was he at heart a thief? What a mean man is a poor man! thought Snivers, blushing guiltily at the fire. It seemed to hiss back at him, forming many bright, grinning faces; it was no longer a comforting fire.

Snivers rose to go. "Hullo, Gus! is that you?" said a voice behind him. He turned hastily to the door. Before him stood a rather tall fellow, wrapped in a light mackintosh, with a felt hat pulled over his eyes, his trousers tucked into a pair of high arctics.

With a start the newcomer bent forward and peered into Snivers face. "Well, what are you doing here? he asked, quietly, as he stepped under the chandelier and turned up the gas.

"I—I just came in and sat down to get warm," stammered Snivers confusedly, and blinking in the light.

The man in the mackintosh stood looking curiously at Snivers, slowly drawing off his gloves. "That was cool in you," he said at length, with the faintest twinkle in his eye, "but where did you get that?" catching sight of the check trembling between Snivers's fingers.

"Why, I—I saw it on the floor—I was just looking at it—it's not endorsed," he added hurriedly; "it wouldn't have done me any good if I had—er taken it."

"Won't you sit down, Mr. ——."

"Snivers," said Snivers.

"Mr. Snivers? My name is Graff," said the man in the mackintosh, doffing it and snapping the lock on the door.

Snivers sat down, watching his host uneasily as he pulled the heavy curtains across the windows, kicked off his arctics, and drew a chair up to the fire. He was a big fellow, with a rather pale but pleasant face, his hair parted squarely down the middle, and with a self-possessed glance in his eyes.

Snivers laid the check on the desk. His host reached over and took it. Snivers noticed that his hand trembled as he read it. Snivers dropped his eyes to his host's yellow shoes. He felt himself being scrutinized, and he felt that he was blushing. Surely his host would think him a thief if he noticed this sign of gulit. Snivers wished his host would say something, instead of sitting over there and digging his keen eyes cheerfully into his (Sniver's) soul. Only the mirthful cracking of the fire broke the stillness and Snivers could not but feel that it was laughing at him and pointing him out to its master as a thief.

The silence must be broken. So, still avoiding the sharp scrutiny of the eyes he felt fixed on him, and fingering his ragged hat, Snivers began hesitatingly. "I ought to—say to yer, Mr. Graff—that I—I didn't come in here to—to steal. I just came in to sit down and get warm. Your fire looked so warm—so cheerful, I mean, that I could't resist coming in. I happened to see that check," he glanced up half haughtily, half guiltily, and was surprised to see that his host was not looking at him. His face was hidden by his hand and he seemed to be gazing into the fire. The check still trembled in his hand.

After another silence, with an effort, Graff began hesitatingly, "Mr. Snivers, I suppose you're pretty poor. Whether you're honest or not has nothing to do with the case now. Now the Faculty—the Faculty—well, they think I'm a handball and they've used me accordingly. I haven't made a success of my college life—I don't believe my being here has done me or any one else the slightest good—so if you—er—you could accept—that check—well, I'd be awfully grateful. I'd like to be able to say I have helped somebody here, if not with my own brains, with the old gentleman's money, so—so—won't you please accept it?

Snivers thought of his own father and Tom. Why not accept—what was pride compared to making three people happy? Tom should have his fiddle, and Daddy—he would send him the whole $75.

"Mr. Graff," said Snivers, blushing, "I will accept it, thank you sincerely."

Graff endorsed the check and showe Snivers to the door. "I wish I were going to be here a little longer," he said, smilingly, "so that I could see you again. A warm fire is good, but a warm friend and a warm fire—well, I won't paint the good times you've missed through the efforts of the Faculty," shaking Snivers merrily by the hand.

"What a light-hearted fellow," said Snivers as he plowed his way back to his room; "he doesn't seem to care a bit about being expelled."

When Snivers held the face of the check under his little brass lamp that night, he was surprised to see how blurred it was; "I don't believe I understood that fellow," said Snivers thoughtfully shaking his head. H. B. Eddy in Harvard Advocate.

At Pacific Grove.

[Written for the RURAL PRESS by K. P. S. BOYD.]

To see once in a life-time a crestfallen expression on the face of a "boss carpenter" is worth living for.

"What does this mean?" said our lately arrived, next-door neighbor, a Philadelphia widow, indeed, whose slumbers had been rudely broken by dumping of lumber and tearing up of her kitchen door-steps.

"Why, madam," said politely the 'boss carpenter' "we are going to make you a fine porch here and a woodshed up to this hedge."

"You are not going to do any such thing; I have heard nothing about it. I hired this cottage for a month from the 2d of May, and the agent said nothing at all of any shed."

"That's a pity, madam; of course you should have been told. Well, you know it now. It will be a great convenience to you, as you see. My orders are to attend to it at once. The agent has been after me about it for a long time."

"There shall be no pounding on this house while my sister and myself are in it. We hired it for rest and quiet, and not to hear hammers and nails."

"But, madam (persuasively), you see the letting season begins here in June, when rents jump right up, and this furnished cottage with five outside doors will rent easy for fifty dollars a month; and then I've other work to attend to, and must do this now. Sorry to trouble you, of course, but we will hurry it up."

"You will not do anything of the kind. I will not have any pounding; you will both of you leave, and take that lumber away. I never heard of such proceedings in all my life. *Good morning*," and she majestically closed her kitchen door.

Not a word was said by the two men for several minutes; then the "boss" looked at the young man, who began to grin, and kept on grinning till he had to sit down on the upturned step and hold on to his knees with one hand and cover his mouth with the other. The elder man examined the roses and the tall, pale foxgloves beside the house, while he rubbed his chin and then said: "She is right; you go and work for —— when you have fixed up that step."

Oh, the puzzled, downcast and discomfitted expression on that head carpenter's face! It was simply impossible for us to then abstain from stepping out of our cottage door (in the same garden) and going near enough to him to see his face, while we also examined that rose vine. We had been as much surprised to hear the carpentering begun as the widow was, and could not help hearing the conversation and rejoicing that Philadelphia brotherly love won the morning. But we, not being widows indeed, are so used to giving man the dominion, that we should certainly have let those carpenters give us splitting headaches with their "pounding," or run away from home to the beaches, and let them make all the woodsheds they chose and been thankful, inasmuch as we have to keep our 12-inch sticks of wood under the dining-table and sit sideways at our meals. We never should think of eating in our woodshed, but it is quite another matter to keep wood in our dining-room. One would not eat in the kitchen, but one might, on occasion, cook in the dining-room, especially if, as to-day, one had a fresh abalone (Haliotis—"ear of the sea") to chop and boil until perfectly tender, with a little pork and potato, for our delicious soup, tasting very like, but much nicer, than clam stew. Sole and all fish are very nice and cheap here. Of course, a dinner is not a dinner without fish.

The lumber was carted away that same day, leaving the big bench and box of tools; and next time I fancy the agent will consult his tenants before making additions to houses.

There is nothing to mar the music of the hosts of little linnets that sing, from quarter before five in the morning till dark, in the gently murmurous pines over our heads. One linnet is now carrying off the ragged edge of our ancient door-mat, and looks through the open window at us from our piazza rail, where her red-breasted, red-headed mate sits and sings and pecks at the nasturtium seeds. Of course, there are no English sparrows here, or we should not have these charming songsters.

On the beach, we watched a duck floating to and fro on the waves, as the tide was coming in, till she was washed to the sand, when she stepped ashore and waddled about, in great contrast to her grace upon the water.

Finding nothing to suit her bill, she embarked herself again on the rolling sea and floated along by the sharp rocks to the next short stretch of beach, which she in turn visited for living mollusks, torn by the waves from the rocks.

The view of the blue water through these gray, gnarled old cedars is most charming, as all Californians know. Though the coast is not very high, the waves dash with tremendous fury, sending their spray over the pine trees at Pacific Grove that grow on the very edge of the cliffs, wisely left in their beauty by the railroad company. On other days the water is as calm as a pond and reflects the trees and rocks and sail-boats "as in a looking-glass." We gather many little *haliotis* from the size of a grain of barley to that of an inch long, and pick up large ones thrown away by those who take them from the rocks under the seaweed in boats, and cut out the large thick muscle or "foot" for food. It resembles a pat of butter set upon a larger oblong slab six inches long, delicately fringed and scolloped around with gray trimmings—solid, an inch or two thick. The top of the "pat" is fastened into the inside of the shell where the highest coloring is, as that round. hard part of the oyster is fastened to its shell. We have heard it spoken of as being "as tough as sole-leather;" but those we have chopped and slowly boiled have been tender, so we could eat them all and enjoy it. The under part, the paunch, the long gills under the holes where the sand and water, not desired, are spouted out, and the mantle are very interesting, but not generally eaten. The black abalone, *Haliotis Cracherodii*, the "black turban snail," *Omphalins fasescens*, "blue wire snail," *Calliostoma costatum*, the "top snail," and the limpets that have the "owl" inside, and are polished and made into the fashionable Monterey spoon, *Acmæa spectrum*, are found living on the rocks here, and many other little beauties, especially the dark-brown, variegated, rice-shaped shells and tiny red-spotted pheasant-shells abound on the sand where that duck took her promenade.

The air is delicious and invigorating; the sweet wild flowers and the rarest of cultivated ones are all about this heaven of a prohibition town, where life is indeed worth living.

Odds and Ends.

Written for the RURAL PRESS by MRS. J. HILTON.

There is one form of cruelty to animals that I wish to protest against, and that is turning an animal out to die. I have seen horses staggering along, too weak to go and get a drink, yet living days and days, and I have seen them lie down and have no strength to more than raise their heads, yet not die for two or three days. Oh I think it is so cruel. If the owners cannot kill the horse themselves, which I do not blame them for not doing, yet they could get almost any one not used to the animal to do it for a small sum. Friends, if your horses are too old to work, do have them put out of misery. Merely turning them into a pasture is not kindness, for weakness and loss of teeth often debars them from getting nourishment and they slowly starve.

As we live on a main road we are often visited by tramps, and we rarely deny them anything, and sometimes when there is an extra lot of pancakes or Johnycake left from breakfast the remark is made that they would be nice for some poor fellow who needed a breakfast. The other evening our little four-year-old was watching her papa eating his supper, and as he had been working pretty hard was eating heartily. Missy spoke up, "Don't eat that all up, papa, leave some for the tramps." So we have that saying for a caution now when one eats too much.

I want to tell the young folks handy with hammer and saw to make a reading friend, an inclined book or magazine rest. A very convenient size for a center table is a board 12 inches long and 8 wide, then nail a piece 12 inches long and 5 wide to one edge so that the large board is inclined, and on the other edge add a piece 12 inches long and 2 inches wide to prevent the book from slipping off. It can then be covered all over with some cloth that matches in color the rest of the colors in the room and you will have an article that will make a reader think grateful thoughts of you when reading. A large one, arranged so that mother's bible an be permanently open in her room, gives pleasure to many.

Another article made the same way, only a little wider and not inclined quite so much and without the lower piece, put on a table in a corner, and a collection of pencils and pens with a small inkstand by the side and paper and envelopes underneath, will induce the youngsters and often the older ones to write letters, when without the conveniences many a letter is unanswered. When I know that a family keeps the ink on the mantel, the pen anywhere, and the writing paper in the bottom of the bureau drawer, and the envelopes in the trunk, I do not expect an answer to my letter for one year at least. Parents, if you do not care to write letters yourselves, have the things arranged handy for the young folks and let them write, or try to, whenever they want to, as writing, like every other accomplishment, must be often done to make one proficient.

YOUNG FOLKS' COLUMN.

"Maria's Song."

A Story of Italy.

Written for the RURAL PRESS by MARIE EVELYN.

"Four o'clock! and Francesco does not come," cried Maria, looking at the clock for the fiftieth time that afternoon.

"My lesson begins at four, and I shall be late, and never know the song after all."

Maria spoke aloud, because she was excited, and as all the children had gone home, she was alone in the large schoolroom, with no one to criticise her remarks.

She was a little Italian girl of ten years, with a pale face, large, eager, dark eyes, and long, brown hair wound round the top of her head, like a Japanese lady's.

Maria's mother had died before the child could remember. It seemed to her that she had always lived with her father, Madelina, their old housekeeper, and Francesco, their cook, in the old house in the Via degli Alberi (The Street of the Trees), in Milan. Il babbo (papa) was very good and kind, but strict, so was Madelina, and Maria seemed to be always studying or practicing.

"Five minutes past four." She spoke English now, but very slowly, pronouncing each word separately with difficulty. "And school was over at half past three. I shall have no singing lesson," and the tears came into her eyes.

Most little girls would exclaim, "Why did she not go to her lesson?"

Well, in Italy it would not have been the custom. Little girls are never allowed out alone in the city, nor big ones either, for the matter of that.

Every day Francesco took Maria to school and came for her. "Why," she asked herself, "should he be late to-day, when so much depends on having a good lesson?"

Maria learned English from Miss Clarke, an American lady who was studying singing in Milan. The child was beginning to speak a little, and her "babbo" had promised that if, on Christmas Eve, she could recite "Mary had a little lamb" in English, and could sing an Italian song, he would give her anything reasonable that she asked for.

The song was "Santa Lucia," and she had learned the accompaniment without much difficulty, but as for the singing, her piano teacher had given it up in despair. "I can never teach Maria to sing," the poor teacher had exclaimed.

But Maria would not give up the attempt. She had seen a doll, a beautiful large doll, with a trunk of clothes for every occasion, with shoes and hats to match each dress, besides a real sealskin cloak for cold weather.

"I *must* earn that doll," Maria had confided to her English teacher, and Miss Clarke had replied, "I will teach you the song"

"To-day is the last lesson, and I cannot sing Santa Lucia yet. Miss Clarke will think I am not coming, and go out," cried poor Maria in despair, as the schoolroom clock struck a quarter past four. "I will go and see if Francesco is coming," she added, and, snatching up her books and music, Maria ran into the courtyard.

It was beginning to grow dusk, and the doorkeeper perhaps thought all the children had gone home, for he was not sitting as usual at the entrance, so that Maria reached the street without being stopped. It was a quaint, narrow street, with a canal running at one side of it. Beyond the canal were old palaces with gardens, where the snow lay quite thick.

No Francesco was in sight. There was a man coming along the road, lighting the street lamps, and just as he lighted the one opposite the school, the clock of San Carlos church tolled half past four.

"My lesson is half over. Oh, how angry il babbo and Madelina will be! But I *must* go alone," cried poor Maria; "perhaps I shall meet Francesco."

If she had only stopped to think, she would never have dared to walk all the distance by herself. She had never been out alone before in her life, but then the circumstances were so desperate, to-morrow being Christmas Eve, that Maria forgot everything but her desire to reach her teacher.

"I will run fast," thought the child.

The roads were slippery, but she made good speed till she reached a rather lonely spot, with the canal on one side and the public gardens on the other. Maria hesitated. The great trees looked so dark and somber, and the white snow only made the shadows blacker.

"I wish I had crossed the canal by the last bridge," she thought; "but it would take too long to go back now."

At this instant a voice, a few yards away, began to sing her song—Santa Lucia.

Maria forgot everything as she listened to the sweet notes ringing out on the frosty air. "Ah! if I could only sing like that, 'babbo' would give me *two* dolls," she thought with involuntary envy.

Suddenly the song stopped, broke off in a sob, and Maria ran forward to see what was the matter.

Crouching against the granite railing of the canal was a little girl about her own age. A thin, brown child, in a washed-out cotton dress. Her face was partly hidden in the frayed black lace shawl she wore instead of a hat, and one of her worn wooden shoes had rolled off and was half buried in the snow.

"You poor thing!" cried Maria with Italian impetuosity. "Don't cry, *cara*. I would not cry if I could sing so beautifully."

The little singer uncovered her face, and stared with great, black eyes at the well-dressed healthy child kneeling in the snow at her side.

"Why do you cry? Are you cold?" asked Maria again.

The little girl sobbed convulsively for a moment, and her lips twitched as she answered:

"Why should I not cry? It is not because I am cold and hungry; I am used to that. My father has been in the hospital for three weeks, and to-day—to-day"—and here she sobbed again.

"Is he no better?" asked Maria, chafing the child's cold hand.

"He will never be better; he—O babbo! babbo!" she sobbed.

"Is he *dead?*" asked Maria in an awe-struck tone.

The child nodded her head, and Maria for a few moments went on chafing her hand in sympathetic silence. At length she asked:

"Why do you not go home?"

"I have no home," said the child sadly. "Babbo was ill for so long that we sold everything. My stepmother is not like babbo. She said I was a useless burden, and must make a little by singing while babbo was in the hospital. She has not money to find bread for her own children. Now that babbo will never come back, she will not give me a home."

Maria was silent. It never occurred to her that she could desert her new-found friend, but she was sorely puzzled to know what to do with her. At length she said:

"Tell me your name."

"Gina," replied the child, placing her other hand over Maria's, as though to keep her from leaving her.

"I will take you too," said Maria, smiling, picking up Gina's shoe for her.

Miss Clarke was taking her five o'clock tea in her cosy little parlor, and wondering what could have become of her favorite pupil, when the maid announced Maria, and added confidentially, "Sono in duo" (there are two of them).

"Two!" said Miss Clarke, surprised, as Maria entered, leading a shivering, poorly dressed little girl.

"Miss Clarke," cried Maria, rushing up to her teacher, "this is Gina; she is the loveliest singer you ever beard."

Maria had touched Miss Clark in a tender spot. She was willing to welcome the most disreputable looking person who could sing well.

"And who is Gina?" she asked smiling.

"Hear her sing first," said Maria. "Gina, sing Santa Lucia."

Poor Gina did not feel in a very singing humor, and, seeing that the child looked embarrassed and unhappy, Miss Clarke observed:

"Play for her, Maria."

Maria jumped on to the piano-stool and sounded a few chords, saying eagerly, "Begin, Gina."

Gina began in a rather trembling and husky voice. It was a new experience to her to have an accompaniment, and she liked it, and soon forgot everything else in the music.

When she had finished, Maria asked eagerly, "Well?"

Miss Clarke had tears, actually tears in her eyes. "She has a lovely voice, Maria, lovely," she replied.

Like many other Italians, Gina sang correctly by nature. The language has a great deal to do with this, by opening the mouth and sending the sounds well forward. In addition to this, nature had given Gina a really beautiful voice and a correct ear.

Miss Clarke made the children eat some cake, and heard all poor Gina's story. Then Maria took her lesson. The child had no false modesty about singing badly before Gina.

"I have no voice," she said laughing; so Gina sang with her and helped her so much that Maria actually seemed to catch something of Gina's way of singing.

Just at the end of the lesson, old Francesco arrived, pale and excited. He had had a great deal of shopping to do, and the crowds in the stores had made him late.

"I will take Maria home," said Miss Clarke.

As for Gina, Miss Clarke and Maria took her address, after the former had given her a few francs, to soften her stepmother, and on the way home they talked about nothing but the little singer, and how they could have her educated to become a great singer.

Luckily Madelina was in a good temper, and promised Miss Clarke to forgive Maria's dreadful disobedience, on condition that the child promised never, never, to go out alone again.

"On Christmas Eve Maria recited "Mary had a little lamb" faultlessly, and then, going to the piano, she began Santa Lucia.

She knew the chords by heart, and, shutting her eyes, she tried to imagine herself out again in the road, listening to Gina's singing, trying to recall every tone, every inflection, that the little street singer had made.

Usually she spoiled her singing through nervousness and trying too hard to do well. To-day she forgot herself, and was only aroused by hearing her father exclaim.

"Brava, Maria! You will make a singer yet."

Nothing pleased Maria so much as her father's praise, and it was very rarely given. She jumped up and threw her arms around his neck.

"You are pleased, babbo?"

'Yes, I am pleased. Madelina has told me about yesterday, but you are to be forgiven this once. You must tell me if it is the doll you want."

Maria closed her eyes to shut out the vision of the doll, which she did want very much, as she answered:

"No, I want something that may cost even more than the doll. *Can* you afford it, babbo dear? I want you to buy Gina nice clothes, and get her into one of those schools where they educate orphan children."

"And your doll, Maria?" said her father.

"Oh, Gina shall be my doll," she answered. "Will you do it, babbo?"

Maria had her wish. Mr. Galli spent money and interested his friends in getting Gina into a good school. She is well cared for now, and is having a musical education. They say that she will probably become a great singer.

As for Maria, no doll could ever have given her half the delight obtained by the happy pride she takes in Gina, whom she always calls "my singing doll."

ROYAL


BAKING
POWDER
Absolutely Pure.

AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

EXPERIMENTAL AGRICULTURAL STATION.—Sutter Creek *Record*: The station at Jackson was located in this part of the foothills through the efforts of Congressman A. Caminetti. Its location could not be better. The long chain of foothills along the Sierras has about its centre in our neighborhood, and the soil to be found in its wide area is represented in the ground of the station—the red and granite formation. The place itself lies in about as rough a country as could be picked out. There was no cultivation on the ground previous to the establishment three years ago. Clearing had to be done at great expense, much of which was paid for out of the very liberal contributions from the inhabitants of the county. The fencing and the building, as well as the team and spring wagon, were also paid for by the citizens. The collections were taken because the law says that only the carrying on of experiments shall be paid for by the funds at disposal, whereas the county which wants the improvements located in its midst has to provide for the establishing of the place. The area, 34 acres, was donated partly by Senator Boggs (22 acres), partly from the adjoining neighbors, McKay and Oneto. Three hills are enclosed by the fence, giving exposure in every direction, the ground being no better and no worse than any other place around this part of the country. Plantations are made of fruit trees and vines, and plots are laid out for forage plants. Whatever has been put out on the red soil is duplicated on the granite formation. There are about 140 different kinds of grapes under cultivation; half of their number on red, the rest on granite soil, making a total of about 4000 vines, of which all those put out in the first season will be in bearing this year. About 1000 different fruit trees take up the rest of the cultivated land, every variety of all kinds grown in California orchards being represented. The olives line an avenue from one side of the station to the other; the figs (56 varieties) will give shade to a road encircling the reservoir hill. The hill on which the residence is built is reserved for a natural park, in which all those trees and shrubs which formed the original growth will be retained. A turbine and pump located at the Amador canal which crosses the grounds, supply the place with water. A system of about 3500 feet of pipe and the necessary reservoirs and tanks take the water wherever it might be wanted. The difference of the lowest and highest point of the ground is 200 feet, the elevation above the sea, 2000 feet. Though the trees and vines could be irrigated, they have never received any water from that source since they were put on. The object is to try and grow the plants without irrigation, to show that keeping the ground open will do better for them than irrigating.

Butte.

SMALL VS. LARGE ORCHARDS.—Oroville *Register*: A leading fruit grower says: "Urge your people in the line of small orchards. Large ones are a detriment to the country and sooner or later the owners will go to the wall. It is true the large fruit orchard develops the land, but it is bad for the owner himself. He must employ a large number of men. He cannot superintend these men and keep them constantly employed at a profit to himself. There is more waste, greater loss and less profit in a large than a in small orchard, acre for acre. Some men will not earn what you pay them, and this is especially true when a large number are employed together. They are not all working in one place, like miners or laborers in many other occupations. They must exercise some skill and judgment to prevent a loss in handling your fruit. With a small orchard these losses can be avoided. Ten acres are plenty; twenty ought to be the limit in fruit-growing."

KEEPING ORANGES.—*Register*: Many let their oranges hang upon the trees till late in the spring or early summer, but Mrs. S. Titus of this town showed us some that had been picked the first of February and laid in a cool, dry place. The rind was thin, the flavor fine and the orange exceedingly juicy. The fruit was certainly superior to that left hanging upon the trees.

Contra Costa.

FRUIT CROPS AROUND CLAYTON.—Cor. Martinez *Gazette*: The prospects for fruit in this valley are not the best. Peaches and plums will be scarce and apricots not much over half a crop. Grapes will be a fair average, except where frosts have injured. The hail storm in March, when the trees were in blossom, was an injury. Almonds that were set were beaten off to some extent.

Fresno.

HOW TO HANDLE THE RAISIN CROP.—William Applegarth in *Expositor*: Let us launch out by combining in one solid organization, and dictate our own terms, for in union there is strength. I propose that we form ourselves into as many companies as may be necessary; the larger the plant the cheaper the work can be done. Then let each company elect a director, said directors to form a board which shall inspect all the packs, grade and fix prices, and sell all of the output each season. If this plan should be adopted universally, we can get from five to five and one-half cents this season, whereas, if done on the go-as-you-please plan, we will have to take starvation prices. We must cooperate or dig up our vines, there is no middle course. We can borrow money from the banks to pay, say, 2½ cents for fruit when received at the packing house, and enough to put up the pack in good shape. Suppose we don't sell all of our crop, is it not better to get an average of five cents for 85 per cent of it than to take 2½ cents for the whole? As to selling, the board handling the whole raisin crop of the State would be independent of middlemen and the other parasites who fatten on our labor. Every man, woman and child in the raisin-producing countries is interested in this question.

ORANGES ON THE FOOTHILLS.—*Expositor*: A large acreage of orange trees has been set out this year in Fresno county, along the foothills and also lower down in the valley. The question of successfully growing oranges in this county is no longer a matter of speculation. It has been successfully tried, and many fine trees laden with the golden fruit are yielding large profit to the fortunate owners. The thermal belt of the foothills will no doubt produce as choice an orange as can be grown anywhere in California.

Mendocino.

CROPS AT SUNOL.—Ukiah City *Press*: Some of the heavy grain was blown down and tangled up by the recent wind and rain storm, but it is generally concluded that the benefits outweigh the damage. Some hay was cut and will be damaged, but the amount is not large.

Monterey.

NO DAMAGE BY WARM WEATHER.—Salinas City *Democrat*: Inquiry among the farmers in town Thursday elicits the information that no material damage has been done to growing grain or fruit by the warm weather of the past three days.

CROP PROSPECTS.—Salinas City *Index*: Crop prospects are reported never to have been better from Salinas to and through San Miguel canyon along the Santa Rita road. Barley is the principal cereal, and a large acreage has been put in. H. C. Tuttle has a splendid barley and oat crop. The wheat on the Graves place, near Santa Rita, is magnificent.

Napa.

THE MUST CONDENSER TO BE ENLARGED.—Healdsburg *Enterprise*: We visited the must condenser at Geyserville the other day, and met Baron Von Schroeder, one of the principal owners of the establishment. The last shipment of must was made this week, being 50 tons, which was shipped to London. The Baron informed us that he intends to increase the capacity so that double the amount of grapes can be used, and he thinks that in time a heavy trade for must can be built up in America.

San Diego.

LARGE DEMAND FOR CITRUS TREES.—*San Diegan*: The season for the sale of deciduous fruit trees has about gone by, but the demand for citrus trees continues, and is, if anything, increasing. It has been well demonstrated that citrus trees can be safely and profitably transplanted at any time the trees are dormant for any reason, and when the earth is warm. Trees transplanted late last year have this year made the best growth. The planting of oranges and lemons will, therefore, continue until along toward the end of June. Geo. N. Nolan said that before the season closed the market would be cleared of all lemon trees and nearly all orange trees. "I have just been compelled," he said, "to order a new supply of our stock trees from the nurseries. The fact is, the demand has been far beyond what was expected, in view of the short rainy season. The original supply of trees was large."

THE SILK INDUSTRY.—*San Diegan*: At the Southern California Silk Culture Association regular monthly meeting, the principal business was devising ways and means for extending the silk industry all over Southern California, and also in calling the world's attention to the fact that this portion of the State is most favorably adapted to silk culture on account of the soil and climate. In proof of this, the reports of different members showed remarkable results in regard to the number of eggs hatched, the health of the worms, the size of the cocoons and the quality of the silk. A good average of eggs hatched is 80 per cent. Reports of different members claimed 100 per cent; loss of worms from disease, none; inferior and useless cocoons, none. It must be remembered that the ladies who testified to such unusual luck in these regards have been careful and painstaking in their methods. They have complied with conditions and not trusted to chance to escape disaster from violated rules.

DISTRICT FAIR.—Julian *Sentinel*: The Directors of the Twenty-second Agricultural Fair Association met at San Diego last week and fixed the date of holding the next fair from September 21st to 23d inclusive, and the place Escondido. It was decided to have no races this year, as they have heretofore been a losing card. The early date will doubtless prove satisfactory to all parties, but it completely bars out the apple show of this section. However, we have glory enough and will be pleased to see other localities that are earlier try their hand at an apple show. It is also early for our late potatoes, corn and winter vegetables. Notwithstanding all this, it will not be safe to hang out any tempting prizes, or we will gather a few acorns, Indian pine apples and nuggets, and go you one round for luck. Here's success to the fair. This locality will be on hand with something, if it is not larger than an Indian.

ORANGES AT CHOLLAS VALLEY.—Cor. National City *Record*: Some of the old citrus farms in Spring Valley are making a record. The old McRae farm, now belonging to W. B. Prentice and folks, and on which Mr. Prentice has introduced the flume water by flumes and pipes connecting with the great flume, has produced for sale this last season 1400 boxes of oranges and 600 ditto of lemons. The oranges were sold on the trees at $1 a box, but I don't know how the lemons were sold, as they are now being cured by the Prentice people.

Santa Barbara.

PETERSON'S FARM.—Santa Maria *Times*: Peterson's cheese has such a good reputation in our local market that his entire output is consumed right here at home, and there is call for more of the same quality. Mr. Peterson is milking 40 cows now, and is making about 80 pounds of cream cheese per day. Grazing is a little short on adobe land this year, and he is economizing in this line by herding his cows on the river. There was but little water running in the river the past winter, and a great deal of the river bottom is covered with a fine growth of alfilaria, clover and other grasses. His dairy fixtures are of the latest improved, and are kept clean and in perfect order. He has an unlimited supply of pure spring water, and makes cheese only through the heaviest milking season, when the milk is plentiful and very rich. He devotes his entire dairy to cheese-making until the green feed supply begins to give out, when he turns his attention to butter-making for the rest of the season. Mr. Peterson has a ranch of over 400 acres, all highly improved. He has a family orchard in bearing and an 80-acre orchard one and two years old. He has 200 acres of fine fruit land, all of which he expects eventually to plant to trees.

CARPINTERIA CROP NOTES—Cor. *Independent*: The rainfall of several days ago amounted to about three-quarters of an inch, and will result in much good, although causing some loss and much inconvenience at this time. A few farmers whose beans were planted just previous to the storm will have considerable replanting to do. Very little hay was large enough to lodge much. Some was cut, and consequently was damaged somewhat. Late hay and fall crops will be greatly benefited by the additional moisture. Fruit and nuts promise well (with the exception of certain kinds of pears and plums), and are coming forward promptly. It is likely that all the driers in the valley will be busy this season, as low prices for dried fruit will be against factory's buying green fruits to put up. The hay crop will be light for the area of acreage, the early sown being all that will make a good crop. Some wheat and barley will be threshed.

Santa Clara.

FRUIT AROUND MOUNTAIN VIEW.—Cor. *Mercury*: The fruit crop around Mountain View this year will be large with the exception of prunes, and they will produce about two-thirds of the usual yield. Cherries, apricots and peaches will be heavy, the late frost not injuring them in this section at all.

Sonoma.

FRUIT CROP PROSPECTS.—Santa Rosa *Democrat*: Charles Perry of the Sebastopol cannery says that the fruit outlook in the Gold Ridge district is more promising than the reports made public so far would seem to indicate. There will be a large crop of peaches, he says; cherries bid fair; Bartlett pears promise an average yield; apricots nothing to speak of; blackberries good; prunes less than last year; apples a heavy crop. The growers have done effective work in spraying their pear and apple trees.

Stanislaus.

GRAIN AND FRUIT NOTES.—Oakdale Cor. Modesto *Herald*: The late rains, while they have damaged more or less that portion of the hay crop which had been cut and remained in the field, will prove of incalculable benefit to late grain. Of the latter there is a large area in this locality, the yield of which, should the remainder of the season prove favorable, will be almost doubled by the late rainfall. In anticipation of the heavy crop from his almond and fig orchard, F. A. Sawyer is erecting a two-story drying-house in the rear of his residence. Mr. Sawyer's almond crop is exceptionally good.

Tulare.

A ONE-YEAR-OLD ORCHARD.—Visalia *Delta*: One year ago the J. D. Thorne ranch of 240 acres was almost a wide waste of land. Since that time a wonderful change has been wrought; dense weeds and underbrush have been cleared away for fruit trees. The ranch is conveniently situated, lying along a road on the south and one on the west. When the whole tract is planted to trees, it will present a charming picture to one who drives along either road. During the past season, 90 acres of this tract have been set out to fruit trees, divided into the following varieties: 2000 climbing plum, 2000 Robe de Sergent prunes, 700 Tragedy prunes, 300 prunis Simonii, 600 peach on plum roots, 50 orange trees and five lemons around the house. Besides the above, 120,000 Myrobolan plum seedlings, 100,000 peaches, 45,000 pears and 5000 apples have been set out for nursery stock. This nursery stock presents an even and healthy growth, and represents $30,000. The nursery stock is situated on the far northern side of the ranch, where the soil is naturally damp, being next the river. This land does not require irrigation, only cultivation at intervals. The upturned soil is moist, and remains so for weeks. The young trees are growing well. The 90 acres already planted to trees are doing remarkably well, and while the trees are not high, having been summer pruned and cut back, they present a vigorous growth, with plenty of stock and leaf, and well filled with buds. Geo. F. Beals, the superintendent of the ranch, said that up to the present time he has not lost a tree from improper setting out. He has been troubled a good deal by rabbits, but he has since protected the young trees with shakes, and the trees are growing well, having leafed out splendidly, although they were badly damaged. Sixty-one acres of the tract lie along the road on the west, and a good deal of alkali and salt grass were in it. The salt grass and alkali were thoroughly cultivated before the trees were set out, and the soil has been well tilled since. The trees are growing as well on the salt grass and alkali piece as on the best land on the ranch. This all goes to prove that careful and frequent cultivation will work out good results.

ORCHARDS AND VINEYARDS.—Tulare *Register*: The acreage now set to fruit and vines is very much greater than one might imagine unless he familiarizes himself with the facts. All kinds of fruit trees that are in bearing are well laden with their growing burden of fruit. Upon many trees so much fruit has set that the owners deem it necessary to knock off fully 50 per cent of the fruitage, in order to give the balance a chance to properly mature. This, however, is a common practice in this wonderfully productive locality, and is regularly attended to by the successful fruit raiser. The vines, of which there is a greatly increased acreage, have made rapid growth, and although somewhat injured by the late frost, there will this season be a large pack. In all the vineyards and orchards we visited, the care and painstaking method of cultivation was particularly remarked, there being no noticeable instances of neglect. The introduction of larger and larger areas of fruit and vines is bringing into prominence a more systematic and thorough manner of taking care of the crops. Nothing short of the best methods will please our fruit raisers, as nothing but success will succeed. With one of the most perfect systems of irrigation almost completed, with a soil that cannot be excelled and an enterprising people here located, we of Tulare are on the sure road to commercial greatness.

FRUIT SALES.—Hanford *Sentinel*: W. S. Porter, we hear, has sold his apricot crop on the trees for $75 per acre. B. V. Sharp was offered $65 per acre for the crop on his three-year-old trees and would not take it. B. A. Bateman sold his orchard by the lump for $450. The Railroad orchard at Armona sold for $3700 last Tuesday. Harding has had several offers for his but has not sold. A. M. Stone has been solicited for a sale several times, but we have not heard whether he has sold yet or not. Seventy-five dollars per acre for the fruit on the trees, without any handling to the owner of the trees, looks like a very fair price this time of the year. It is ten per cent on $750 per acre land.

Ventura.

CROP NOTES.—Sespe, May 16—TO THE EDITOR: Two weeks ago many of us felt pretty blue—late barley gave every indication of being almost a total failure; earlier sown was fast ripening and nearly ready to cut; corn and beans were a very uncertain article; gardens and potato fields were fast drying. But our two inches of rain have done wonders; and subsequent weather has been moist and most propitious. Late barley looks fresher and more unfit to cut than it did two weeks ago, and will be good, although light. Early barley is being cut, some being baled; it is good, some of it heavy. Beans and corn now being planted; whether there is sufficient moisture to mature them is a problem. Corn that is up looks well. On the whole we shall have a fairly prosperous year.—S. P. SNOW.

HONEY CROP.—Ventura *Democrat*: L. S Snuffin, a bee raiser near Newhall, says he will have to go without honey this year. The rains were a little behind hand to make honey.

Yolo.

FARM NOTES.—Winters *Express*: Scott & Lowe have gathered in their flocks of sheep for shearing and are marking their lambs. They have had 12 men shearing for three weeks and the increase of their lambs is about 2000 this season. There is plenty of grass now fit to cut, but the farmers are waiting for the weather to settle before commencing to hay. F. N. Cutt, of Sacramento, bought Scott & Lowe's wool, paying 18 cents per pound for it. The grain crops never looked more promising than at present. W. J. Cannedy has four eight-horse gangs and three single plows running. He has erected a large water tank near his residence; both horse and wind power are connected. Carpenter Shaw, of Winters, did the work.

Yuba.

WEATHER AND CROPS.—Wheatland *Four Corners*: The weather has been unusually warm the last few days, the mercury playing around the 80 notch. A mild north wind accompanied the warm wave, much to the satisfaction of the farmers. From late reports, the last heavy rain did no damage of any note to hay or grain. In some few fields a trace of rust is found and heavy grain is slightly out of perpendicular. On the bottom lands the heat has rushed all crops forward. In the hop yards the growth of the bine can almost be seen with the naked eye. The growers are busy training. Although the yards are about ten days behind, good growing weather from now will make considerable difference.

ARIZONA.

CATTLE NOTES.—F. B Logan in Tucson *Citizen*: One of the most promising towns along the S. P. railroad in Arizona is Willcox, situated in the Sulphur Spring valley. It is estimated that upward of 15,000 head of cattle will be shipped from here to Montana, Wyoming and Kansas during the next few months. Already shipments are being made, and buyers have arrived to secure large lots. Among them, J. M. Holt of Montana will alone relieve the range of 5000. J. B. Insley and A. R. Reader have purchased 2000 of two-year-olds of Mr. Hooker at $11.50, which is somewhat above the regular price paid, his stock being of superior quality.

WASHINGTON.

CROPS IN EASTERN WASHINGTON.—Ellensburg *Capital*: Never in the history of this valley has the outlook for a good crop been so fine as it is to-day. The unusual rainfall of March, April and May has got the ground in perfect condition for working, while the fall-sown grain has been nourished and stimulated to a wonderful degree and now presents a magnificent appearance, many fields of it being from eight inches to a foot high. The acreage is gratifyingly large and consequently the yield will be fine. A good many are predicting an average yield of from 35 to 45 bushels per acre, and judging by present appearances the predictions are not unreasonable.

The Red Cedar Shingle Business.

It is now acknowledged in the East that red cedar shingles from this coast have obtained such a foothold in some markets that no other kind can be sold to any great extent. Carpenters like them because they are light to carry aloft, because they are wide and because they can lay them rapidly. The house owner likes them because they will stand the test of time. Numbers of new shingle mills are being erected on the northwest coast, especially in the State of Washington—so many, in fact, that the question arises, "Will the business be overdone?" The *West Coast Lumberman*, in speaking of the subject, says:

The above question is often asked but seldom answered twice alike, but usually with many ifs and provisos. The question presents problems that are new and perhaps not susceptible of a positive solution, but from the general "layout" we think a reasonably safe answer can be made in the negative. It is true that shingle mills are going in rapidly. At no time in the history of this coast has the increase been as marked as it has since the close of last season's business. Mills are still going in, and it is safe to say that at the close of this year the cutting capacity of our shingle mills will have increased from 75 to 100 per cent over the past year's capacity. Not that the number of mills have increased to that extent, but a large number of the old mills have added new machinery. The statement from actual figures is that one large machinery house in Seattle has sold machinery in the past few months which has a daily cutting capacity of 2,500,000 shingles, or more than 6000 cars a year. This is more than was shipped last year from this section. So much from the affirmative side of the question. Now what have we to offset this? Let us see: In 1889, Manistee, Michigan, manufactured in round numbers 525,000,000 shingles; in 1891 the output had dropped to 200,000,000, or but 25,000,000 over one-third of the former cut. Again, at Muskegon, Mich., was formerly located what was known as the Irish mill, with a daily cutting capacity of 750,000 shingles. That mill was burned last year and will not be rebuilt. We note these two cases on account of their magnitude. Men who are posted say that throughout the districts which were formerly devoted to making white pine shingles the number of mills has greatly decreased. A case at hand is that of the Stinson Mill Co. of Seattle, which has abandoned their large shingle plant in the East, but now manufacture red cedar shingles at Ballard. Again, it is evident that the demand is growing at an unexpected rate, and the fact that our millmen are behind with their orders at this early date in the season is proof of the growth. Wholesale lumbermen in the East are trying—often without success—to contract for large quantities of our shingles. No better argument could be made for our side than that. It should not be expected from shingle makers that the demand will continue in advance of the capacity and a lull will follow, but nevertheless, by a fair construction of the rule of supply and demand, we believe that the former will not exceed the latter.

PRACTICAL USES OF GEOLOGY.—Though the practical value of geology has been, and still is, well demonstrated, there is a certain class of well-meaning persons who, from want of due consideration or lack of information, fail to see any direct benefits from the study of stones. Appended, are a few hints regarding the worth and results of geology. As a statement, geology is the sum of all the sciences, the foundation, the support, the very anchor that holds the rest, for it treats of our own earth, of its birth, rise, progress and the present state. Properly studied, it embodies the complete story of life, the great history of creation, the narrative of our very existence, the record of our own planet, our present home. To be a competent geologist, one must study everything useful and economical to explain causes and effects, reasons and results. As he journeys he involuntarily studies thoroughly the country he passes through—the botany, entomology, chemistry, zoology, mineralogy, and compares them with the silent wonders he saw sculptured in the rock that lived, flourished and died thousands of years ago. Astronomy is consulted as to the formation of this earth and its companions and visitors. From the little diatom, resplendent under microscope, to the huge reptiles 75 feet long, in stony silence petrified, the boundless, natural realm of mysteries opens wide its gates. All have a wonderful tale to tell—a story often beyond the grasp of man's puny intellect. But proofs are constantly carried around with you of the uses of mineralogy and geology. The metal buttons on your clothes, the knife in your pocket, your keys, not to mention the countless array of hardware everywhere, owe their cheapness to work of the persevering follower of science. This assertion is true. It cannot be denied. There are belts and lodes of mineral in the earth that have certain limits, sure and certain manner of occurrence and regular deposition. Here the mineralogist and geologist steps in and defines them, toiling away until the rocks tell their own story of hidden treasure. By deductions, the geologist locates mineral belts, natural gas, oil, marble and minerals. It is not to be forgotten that his theories have to be tried in the crucible of experience.

LIFE SAVING BY ELECTRICITY.—A most interesting apparatus was exhibited at the last meeting of the Frankfort Electrical Society. This was a poison cupboard invented by Mr. E. G. Kubler, of Akron, Ohio, and provided with an electric safety contrivance rendering impossible on the part of the chemist any error in the sale of poisons. The cupboard, which is well executed from an artistic point of view, shows a number of compartments closed by shutters and each containing a bottle. The current is supplied by two Leclanche elements, the conductors being so arranged that they run past each compartment, terminating finally in the armature of a relay. This armature in a state of rest closes the line, going from the positive pole to a plug cord. The negative pole is connected with a spring having a hole at its end, so that, when the plug is inserted in the hole, the current is closed. The current further passes through a number of electromagnets, one being contained in each compartment, and provided with a hook, which holds up the shutter closing the compartment. On the current being closed, the shutter is released and drops. The poison bottles in the compartments stand on hubs and are provided at the bottom with matrices. Beneath the hub is a second wire, which is held down by the weight of the flask, and which on the weight being taken off interrupts the current and causes a bell to ring. It will be clear from this description that, both when a shutter is opened and when a bottle is taken out, the current is interrupted and no other shutter can be opened until the preceding one has been closed and the bottle restored to its place. By this contrivance an error is excluded with absolute certainty.—Electricity.

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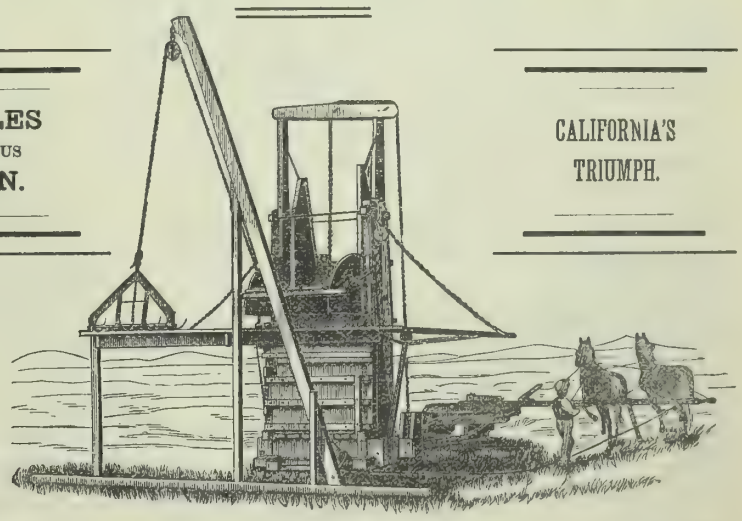
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THE VINEYARD.

Grape Interests at the World's Fair.

There was a convention of those in the grape interest on Wednesday and Thursday of last week. I. DeTurk of Sonoma county, presided. The chief subject for consideration was the exhibit of California grape products at the World's Fair.

After a general discussion, in which many participated, a committee was appointed to propose a plan for securing a creditable display in the lines proposed, as follows: Alameda, A. G. Chauche; Contra Costa, John Swett; Los Angeles, S. C. Bichowsky; Sacramento, H. M. Larue; Santa Clara, William Wehner; San Francisco, Charles Bundschu; Napa, S. P. Connor; Sonoma, D. D. Davidson.

At a subsequent session this committee reported as follows: First—That a general, harmonious and artistic exhibit of the grape and grapevine and its products, consisting of wine, brandy, raisins, etc., should be made in the California State building at the Columbian World's Fair. That a concentrated, classified exhibit should be prepared for the national building, for the purpose of competition and awards.

Second—County groups and individual producers should have therein as much distinctive recognition as practicable.

Third—Said exhibit should include all apparatus and paraphernalia pertaining to the production, preservation, racking and storing of wines, cellar utensils, cooperies and distilleries.

Fourth—The organization and collection of the exhibit should be managed by the State Board of Viticultural Commissioners, its chief officer and Supt. McNeil of the State exhibit. However, as the duties and labors connected with a faithful and judicious performance of this task are very exacting and complicated, we recommend the appointment of a committee which, in conjunction with the Board of State Viticultural Commissioners, the chief viticultural officer and the superintendent of the State viticultural exhibit, shall constitute the viticultural central committee in all matters pertaining to wine, grapes and viticultural products.

Fifth—The said committee shall be organized on the following basis: Wines (sweet and dry) 7 members, brandies 3, raisin grapes 2, table grapes 2, grapes and grapevines 3, cooperage 2, machinery, utensils and distilleries 2, literature and statistics 2; total 24.

Sixth—This committee should be appointed by the chair, with due consideration of a fair division of the viticultural districts, but principally with a view of concentrating its members within easy reach of San Francisco, so an executive committee may be enabled to establish a permanent communication with Supt. McNeil and the officers of the viticultural commission.

Seventh—When the amount of available space and appropriation of funds will be definitely settled the committee should work out its plans in detail, submit the same to the California State Commissioners, or to the chief of the Viticulture Department in Chicago, for approbation, and thereafter devise ways and means to successfully carry them through. Respectfully submitted, S. P. Connor, A. G. Chauche, H. M. Larue, D. D. Davidson, E. C. Bichowsky, Charles Bundschu.

The report was taken up and each clause acted on seriatim, the result being its adoption with a few minor amendments.

THE EXHIBIT IN THE STATE BUILDING.

The secretary read a copy of a letter addressed to the California World's Fair Commissioners, stating that the proposed appropriation of $6000 to the viticultural department was greatly inadequate to its needs and asking that it be increased to $12,000. The letter was mailed on the 3d of the present month and no reply had been received.

Mr. Haraszthy moved that a committee of three be appointed to ask for a reapportionment of funds.

Much discussion ensued and the chairman announced that the committee would be appointed later.

The following resolutions were offered and adopted:

Resolved, That the application of Hon. H. M. Larue of Sacramento for the position of chief of viticulture at the Columbian Exposition, under J. M. Samuels, is heartily indorsed, and that we, the viticulturists of the State in convention assembled, respectfully urge Director General George R. Davis to appoint Mr. Larue at the earliest possible date.

Resolved, That the appropriation of $6000 for viticultural purposes set aside by the State World's Fair Commissioners is entirely too small to make a creditable display of viticultural products.

Resolved, That in view of the importance of viticulture in California, of the numbers of people engaged and the amount of capital invested in the industry, and of the important part that viticultural exhibitors will be called upon to take in preparing a creditable display in the California building, the State World's Fair Commissioners are respectfully but urgently requested to increase the amount set aside to at least $12,000.

It was then moved that a committee of three be appointed to again bring the matter properly before the State World's Fair Commissioners. The chair appointed Messrs. Larue, McIntyre and Stanly.

SHEEP AND WOOL.

Wool in the Census of 1890.

It is now only one month less than two years since work was begun on the eleventh census, of which one of the objects was the collection and publication of facts in connection with sheep husbandry in the year 1890. If it was the intention of the census authorities that their report should considerably antedate what the historian may have to say, there must have been some miscarriage of effort in that direction, for one-fifth of the decade is about closing over a practically exhausted treasury with flock statistics mouldering in office pigeon holes, while ex-employes are waiting for recall at such time as funds are forthcoming for meeting the expenses of compilation and distribution.

Such in general terms is the situation so far as sheep husbandry is to figure in the national census in 1890, unless exception be made in case of the short "preliminary report on the wool manufacture of the United States" sent out during the month just now closing. This little bulletin may have some interest for the wool grower as showing for the year 1890:

Number of establishments	2,503
Hands employed	221,087
Capital invested	$206,983,161
Wages paid	76,768,871
Cost of materials used	205,495,642
Miscellaneous expenses	19,547,200
Value of goods at factory	348,231,109

A considerable increase over the showing by the previous census, ranging from 23 per cent to 86 per cent, with the single exception of the number of establishments. This diminution is accounted for by the absorption of smaller mills by corporations and the general disappearance of custom carding-mills formerly so common.

But for wool producers, the chief interest in this report centers upon the item of raw "materials consumed." These were made up of 215,001,813 pounds of wool scoured ready for the cards and 88,318,073 pounds of shoddy, hairs, etc., with a supplement of 75,638,865 pounds of cotton. The most prominent fact in connection with the enumeration of these materials is the rapid increase in the quantity of hairs employed as substitutes for wools of the several grades. For instance, the item of camels-hair increased from 1,583,119 pounds in 1880 to 7,689,804 pounds in 1890; mohair from 159,678 pounds to 2,136,244 pounds, and other animal hairs from 6,335,169 pounds to 16,865,764 pounds. Ninety-three mills, employing 2266 hands, were engaged in manufacturing shoddy in 1890—an increase of 20 mills since 1880.—Breeders' Gazette.

A WOOL GROWERS' MEETING.—In response to numerous petitions, Governor Prince of New Mexico has issued a proclamation calling an Interstate Wool Convention to meet at Albuquerque July 5th to 7th. The object is to discuss sheep and wool interests in the States and Territories west of the Mississippi river. Delegates are invited to be sent as follows: From each State and Territory to be appointed by the Governor, ten delegates; from each county to be appointed by the Commissioners or Supervisors, five; from each city of over 25,000 inhabitants, to be appointed by the Mayor or municipal authorities, five; from each city or town with a population not exceeding 25,000, to be appointed as above.

IN California for nine years, beginning with 1867, the industry of wool-raising forged ahead rapidly. In 1876 the clip reached over 56,000,000 pounds, but two years after it fell off nearly 16,000,000 pounds. From 1878 to 1884 it ranged from 40,500,000 pounds to nearly 47,000,000. In 1887 the clip was the smallest on record. Since that year it has fluctuated from about 32,000,000 to over 34,000,000.

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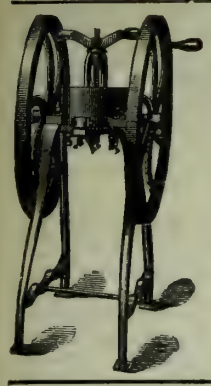
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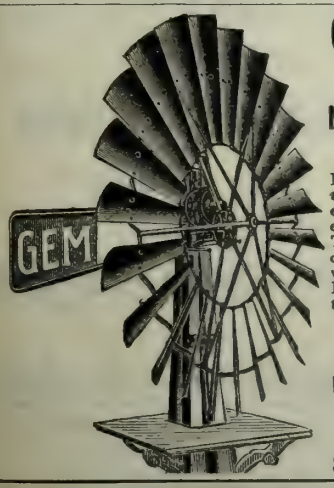
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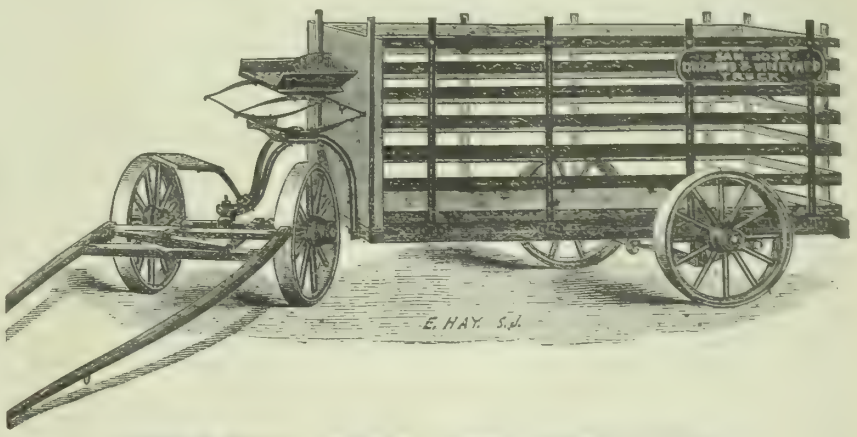
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The Nicaragua Imbroglio.

TO THE EDITOR:—The contention of the farmers anent the Nicaragua canal matter has thus far had reference only to the burdens which might be imposed upon commerce by the devices common to railway corporations. There is, however, an objection which goes to the legality of the charter and which is interwoven with the history of the Federal Government, as it was the incorporation of a bank by Congress, which first divided the people of the United States into parties.

That the power to grant charters of incorporation was not only not delegated to Congress, but was denied in such form as to leave no room for equivocation, is evidenced by the journal of the convention, which framed the constitution and the notes of debates by Mr. Madison.

On the 18th of August, 1787, Mr. Madison submitted, in order to be referred to the committee of detail with other powers, the following as proper to be added to those of the general legislature: "To grant charters of corporation in cases where the public good may require them, and the authority of a single State may be incompetent," and on the same day Mr. Pinckney submitted a list for that purpose, one of which was a power "To grant charters of incorporation." The propositions were so referred.

August 22d, Mr. Rutledge, from the committee to whom were referred the propositions of Mr. Madison and Mr. Pinckney, reported favorable to some of the propositions, but not to the power to grant charters of corporation.

September 14th Dr. Franklin moved to add after the words "post roads," Article 1, Sect. 8, a power "to provide for cutting canals where deemed necessary." Mr. Wilson seconded the motion. Mr. Madison suggested an enlargement of the motion into a power "to grant charters of incorporation where the interest of the United States might require, and the legi-lative provisions of individual States may be incompetent." Mr. Randolph seconded the proposition. Mr. King: The States will be prejudiced and divided into parties by it. In Philadelphia and New York it will be referred to the establishment of a bank, which has been a subject of contention in those cities. In other places it will be referred to mercantile monopolies. Col. Mason was for limiting the power to the single case of canals. He was afraid of monopolies of every sort. The motion being so modified as to admit a direct question, specifying and limited to the case of canals—Pennsylvania, Virginia, Georgia, aye, 3; New Hampshire, Massachusetts, Connecticut, New Jersey, Delaware, Maryland, North Carolina, South Carolina, no, 8. Madison Papers, p. 543, 544.

Here, then, the convention, by a vote of eight States to three, not only refused to delegate to Congress the power to grant charters of incorporation generally, but denied such power even when limited to a single specified case, and that the cutting of a canal.

From the day that President Jackson vetoed the U. S. Bank bill until the signing of the act of incorporation of the Nicaragua Maritime Canal Company by President Cleveland, it was not considered possible that any President owing his election to the confidence of the Democratic party could be so forgetful of its origin, so ignorant of the history of the Constitution or so blinded by ambition for reelection as to commit such a blunder.

What is more remarkable than Mr. Cleveland's blunder is the want of protest of an act which in principle effaced all distinction between the two parties and reduced them to contending factions struggling for the emoluments of office.

For the first time since the acquisition of California it fell to his lot as a Democratic President to do an inestimable service to his party and his country by securing to the people of the United States a quick and economic passage between the Atlantic and Pacific oceans through the Central American States. He was, however, found as destitute of statesmanship as he was lacking in trustworthiness.

It was a notable illustration of a small man in a great place; of a Democratic President who made a National bank president Secretary of the Treasury; who permitted the coin of the United States to be removed from the treasury and deposited in the banks for corporate profit; who argued with the fervor of a Wall Street broker for the single gold standard; who failed to understand that the restoration of constitutional gold and silver money, supplemented with representative coin certificates as currency was the burning issue of the period; who thrust forward in the closing hours of his administration an issue which, however meritorious in itself, found those for whom it was intended unprepared, and which not only defeated his party and himself but gave to the country the Billion-Dollar Congress, saddled upon the people a pension system heretofore unknown to the history of nations, and but for the patriotism of a few Republican Senators would have been instrumental in lighting the fires of an inter-race, if not another civil war.

That the cutting of the Nicaragua Canal is a matter of vital importance to the inhabitants of the Pacific Slope, of undoubted advantage to the commerce of all nations, and almost indispensable to the western coast of the United States, is well known. Indeed, the necessity for an Isthmic passage was so important that it received the earnest consideration of President Grant, the cutting of the canal was recommended by President Hayes, and during the administration of President Arthur a treaty with Nicaragua was negotiated by which the United States was to construct and own the canal and have a strip of territory three miles wide on each side of it. This treaty was sent to the Senate for its advice and consent, whereupon the British Government represented that it was in contravention of the Clayton-Bulwer treaty and further consideration was postponed until after the 4th of March, 1885.

Immediately after his inauguration, President Cleveland withdrew it, consigned it to the limbo of dead treaties and took no further interest in the Nicaragua Canal matter until the eve of his election, when he was induced to sign the bill incorporating the Canal company. Of what significance is the "Monroe Doctrine" if it be permissible to a foreign government to invade a neighboring republic by the trick of conferring the title of King upon an Indian chief and giving him a Consul for Prime Minister, assuming protectorship and refusing to abandon the invaded territory except on such terms as were assented to by the United States in the Clayton-Bulwer treaty—a negotiation in which Great Britain was represented by an accomplished diplomat and the United States by the timid and dwarfish politicians of a moribund party?

Is it possible that the United States are reduced by this improvident treaty to the alternative of forever beholding the citizens of the Pacific States with an ocean at their doors, and an isthmic right of way offered gratis, condemned to depend for an indefinite period, upon railway transportation alone, for the commerce of a greater part of their products, and the cities of the coast quite defenseless while the naval vessels destined for their protection are circling almost half the world or participate with a corporation in accomplishing the work by loaning the credit of the Government thereto?

Congress has power to borrow money on the credit of the United States, but it has not power to loan that credit or to guarantee the payment of a bond made by any individual or corporation. The commission of one unconstitutional act leads to that of another.

The guarantee, or purchase proposed, would be an evasion of the Clayton-Bulwer treaty, which would be objected to by Great Britain. Were the bonds placed upon a foreign market, the United States would object, and that very promptly, as it would leave them subject to acquisition by a foreign government, as witness the Suez Canal bonds which were acquired by Great Britain. In no event will the United States permit any foreign power to obtain control of the Nicaragua Canal either directly or by indirection, as it would subject their commerce to regulation by a foreign nation and leave them dependent on it for leave to pass their troops and ships of war, and would make Nicaragua and Costa Rica subject to domination by such nation or to the overthrow of their Governments. The truth is, if the bonds were placed on a foreign market, Great Britain would at the opportune moment give notice to abrogate the Clayton-Bulwer treaty, and would soon thereafter be found in control of the canal. This would provoke a war in which we might be successful, or necessitate more diplomacy in which we might again be outwitted. Any attempted negotiation, however, of the bonds should be followed by instant revocation of the charter by the United States and of the concession by Nicaragua and Costa Rica.

Nothing is more certain than that the farmers and workingmen have determined that there shall be a complete severance of action between the Federal Government and corporations, and that the powers delegated to Congress by the Constitution shall be administered hereafter without participation by such organizations; and hence there will be no legislation by the United States touching the guarantee or purchase of the bonds of the company.

Are we then to be indefinitely restricted to the route by Cape Horn? No! Let us give notice to terminate the treaty. Let the United States pay to the company, upon surrender to Nicaragua and Costa Rica of its concession, such an amount as may be agreed on, and such as will fully compensate that company. This, President Miller has just declared, the company is ready and willing to accept. We should hasten to purchase exemption from the folly and blunders committed in this signally important matter, even if we have to pay somewhat roundly for it, and then vitalize the Nicaragua treaty by returning it to the Senate for confirmation. M. N. M.

Is It Dangerous to Spray Fruit Trees with Poison?

The following report of experiment, made to determine the amount of copper and arsenic adhering to fruit that had been sprayed with Bordeaux mixture and other compounds, is taken from Bulletin 17 of the Hatch Experiment Station of the Massachusetts Agricultural College at Amherst:

GRAPES.

During the early autumn the Board of Health of New York City condemned several carloads of grapes as dangerous to the public health and ordered them destroyed, because they were slightly disfigured with the Bordeaux mixture which had been used by the growers to prevent mildew and rot. This caused a "scare" among the dealers and consumers, and a serious fall in prices, which affected the market more or less for the rest of the season. To determine positively the amount of copper adhering to the grapes grown in the college vineyard, two lots of fruit—of ten pounds each—were selected, one from vines sprayed with the Bordeaux mixture throughout the season, and which were very badly disfigured, and the other from vines that were treated with the Bordeaux mixture up to the middle of June, then with two applications of the ammoniacal carbonate of copper, and which were not in the least disfigured.

An analysis of these two samples was made at the State Experiment Station. In the first, sample No. 1, there was found only 2-1000 of one per cent of oxide of copper—an amount so small that one would need to eat from one-half to one ton of these grapes, stems, skins and all, to obtain the least injurious effect, and that notwithstanding the fact that the bunches were selected from those having the largest amount of the copper mixture adhering to them.

In sample No. 2 not a trace of copper could be found. It would seem from the above that even under the most careless use of the copper solutions, no injurious effects need be feared, and that when properly applied there will not be a trace of copper left upon the fruit at harvesting.

APPLES.

Early in December the *Pall Mall Gazette* of London, England, published an article headed "American Apples; Alarming Allegations—Are They Doctored with Arsenic?" Then the statement is made "that American orchardists use arsenic in such large quantities to protect their fruit from insects as to completely saturate it, and that the bloom or white powder found on the surface of American apples is arsenic, brought to the surface by evaporation, and if the fruit is eaten, this should be wiped off to avoid injurious effects; that the delicate, unnatural (?) bloom of the American apples is due to arsenic—a drug that is largely used by people, especially the fair sex in America, to make the complexion fair," and other statements equally absurd and without a shadow of foundation. These statements were undoubtedly made in the interest of speculators for the purpose of injuring the sale of American apples in the English market.

To determine the amount of copper and arsenic adhering to the surface of apples (for it could not have been absorbed into the substance of the fruit) which had been sprayed three times with the Bordeaux mixture and Paris green, 20 apples, measuring one peck, were taken to the State Experiment Station for analysis. The amount of copper oxide found on these apples was .022 of one grain. This equals about .0005 of one ounce to the barrel, or requiring 2000 barrels to yield one ounce of copper oxide. The specimens selected for this analysis were those with the roughest surface, to which would adhere more of the copper solution of Paris green than to the average apples.

Not a trace of arsenic could be detected in this analysis, as Paris green (average samples of Paris green contain about 33 parts of oxide of copper and 61 parts of arsenious oxide) was not used after July 1st, but it was probably all washed off during the three months following, before the apples were gathered, which was October 1st.

When we consider the fact that probably not one fruit grower in one hundred throughout the country used Paris green at all, and that not one barrel in thousands came from sprayed trees, the absurdity of the "scare" becomes still more apparent.

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Do you want a farm where you can raise every variety of cereal to perfection?

Do you want a farm where you can raise cotton, sugar-cane, tobacco, flax or ramie?

Do you want a farm where you can cut three to six crops of hay every season?

Do you want a farm where you can raise potatoes, beets and vegetables the year round?

Do you want a farm where your harvest may commence in January and continue each month until the following December.

Do you want a farm where you can raise two and even three crops on the same land in one season?

FRUIT GROWERS:

Do you want a place where the peach, apricot, plum, pear, apple and every other deciduous fruit flourishes?

Do you want a place where you can raise oranges, lemons, figs, olives, pomegranates and other sub-tropical fruits?

Do you want a place where you can raise almonds, chestnuts, pecans, walnuts and all similar products?

Do you want a place where you can raise finer raisins than Spain, can show better prunes than France produces?

Do you want a place where strawberries and other small fruits are at home?

Do you want a place where the peach tree and the raisin grape bear at eighteen months from planting?

Do you want a place where every fruit produced in America grows luxuriantly and produces abundantly?

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Do you want a home in a land where the sun shines more than 300 days out of the 365?

Do you want a home where twenty acres well tilled will yield a competence and eighty will return wealth.

Do you want a home where discomfort of every kind is minimized and everything conspires to make existence a pleasure?

All this, and more, too, you may find in the great Kern River Valley of California. In this valley and in the mountains that tower above it, you may find every variety of climate, from perpetual summer to eternal winter, every variety of scenery from level plain to rugged mountains.

In the choicest part of all this rich territory the Kern County Land Company owns over four hundred thousand acres of choice fruit land, which it offers to the classes above mentioned in tracts of any size, from town lots to thousands of acres. Prices and terms more favorable than may be obtained anywhere else in the world.

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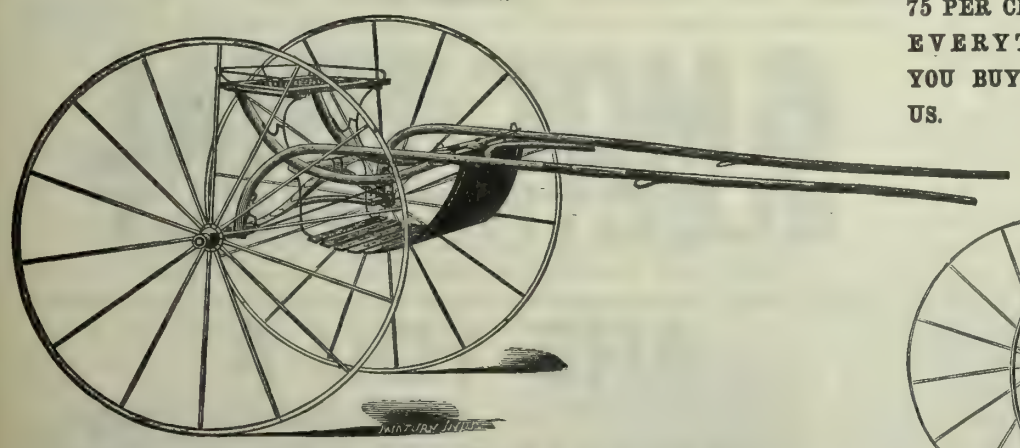
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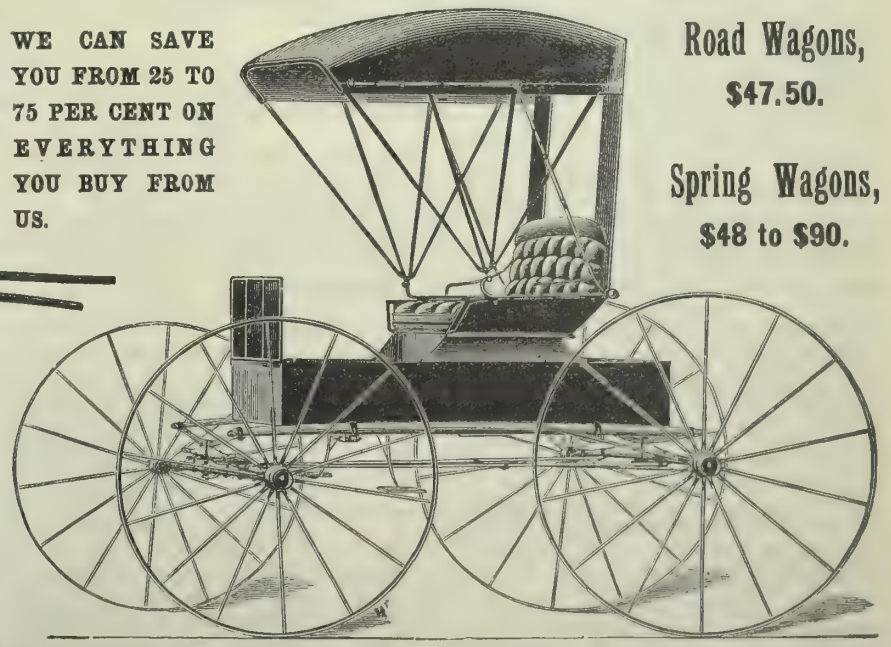
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To be Happy buy a DANDY STEEL MILL AND A DANDY STEEL TOWER.



We Make the Challenge, Dairy and O.K. Wooden Mills, and a Full Line of Pump Stands, Cylinders, Shellers, &c.

With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

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(Mention this paper.)

Domestic Economy.

Tested Recipes.

Prepared for the RURAL PRESS by Ada E. Taylor.

Jelly Pudding.—Four eggs beaten separately, two cupfuls of sugar, one of butter, one of sweet cream, one of acid fruit jelly, two tablespoonfuls of vanilla. Beat the yolks thoroughly; cream the butter; mix the butter, sugar and yolks together, then add jelly, and lastly the well-frothed whites and the seasoning. Bake with an under crust. This quantity will make two very large puddings, or three medium-sized ones, and, where rich desserts are liked, will be found delicious. Such desserts should be perfectly cold before eaten.

Jam Pie.—One teacup of creamed butter, one of sugar, one of raspberry, strawberry, or grape jam, three eggs beaten separately, cinnamon, nutmeg and cloves to taste. Bake in perforated tin plates lined with rich pastry. This quantity will make two large pies.

Potato Pie.—Three eggs beaten together, a cupful and a half of sugar, half a cup of butter, and two large potatoes. Mash the potatoes and put the butter in while hot; add eggs and sugar. Beat all together thoroughly; season with orange or vanilla. After mixing well, bake in tins with under crust only. This makes two pies.

Cranberry Puffs.—One pint of cranberries, one pint of flour, two teaspoonfuls of baking powder, one teaspoon of salt, two eggs; add enough sweet milk to make a batter a little thicker than for cake. Grease six or seven teacups thoroughly with butter. Fill half full; set in a steamer closely covered, and steam an hour. They will come out perfect puff balls. They are spongy and absorb a great deal of sauce.

Pudding Sauce.—One cup of sugar, one egg, butter twice the size of an egg; stir to a cream. Heat one-third of a cup of milk and pour into the sauce, stirring it rapidly until it foams. Flavor with lemon or vanilla.

Devilled Ham.—Put a tablespoonful of mustard into a dish, mix with a teaspoonful of lemon juice; add half a teaspoonful of curry powder and a pinch of cayenne pepper; mix and spread over slices of cold, boiled ham. Broil and lay on a dish with sliced lemon.

Cream Biscuit.—Sift a quart of flour; add half a teaspoonful of salt; dissolve a teaspoonful of soda in a little boiling water, and stir in half a pint of thick, sour cream; mix the flour with the cream, roll out the dough, cut into biscuits and bake in a quick oven.

Grape Tarts —Line small patty-pans with rich puff paste, and bake 15 minutes in a quick oven. When done, take out and fill with the following: Stew some grapes until tender; when cool, remove the seeds and add one cup of sugar to two of grapes; put on the stove and boil till thick. Cover each tart with meringue, and set back in the oven to brown.

White Cake.—Beat three-quarters of a pound of butter to a cream; gradually add a pound of powdered sugar, beat well, sift ten ounces of flour, beat the whites of 15 eggs to a stiff froth, and stir alternately with the sugar, into the flour; beat the whole very hard, turn into a greased pan, and bake in a moderate oven When cold, ice.

Salmon Salad.—Take one can of salmon, pour the juice off, and remove the bones. Then mash fine with a wire potato masher, or fork. Add salt, pepper, mustard and vinegar to taste. Chop fine two hard-boiled eggs, and mix thoroughly. Put on lettuce leaves and pour mayonaise dressing over it.

Cheese Straws.—Roll rich pie crust very thin; grate cheese thickly over it; fold several times and roll again; cut in fine strips, and bake to a rich brown.

PROF MUYBRIDGE, of the University of Pennsylvania, is strongly of the opinion that men will some day learn to fly. "Edison has told me," he says, "that he firmly believes a perfect flying machine some day will be invented, and that he believes the wing of a fly is the model upon which that machine will be constructed. Lubbock and Helmholtz, and Langley, Ray Lankester and Sir Wm. Thompson—a group of names that are probably the most renowned in the scientific circles of to-day—share Mr. Edison's opinion, and unite with him in urging me to make a study of the locomotion of insects upon the same system I adopted in my 'Animal Locomotion.'"

THE Souvenir Badge for the members of the National Editor's Association has been manufactured by Col. A. Andrews from gold, silver and tin, products of the mines of California. The medal proper, which is of tin from the Temescal mines, is just the size of a silver half-dollar piece, but somewhat thicker. It is suspended from a silver bar pin by two short chains of silver beads. The silver bar, which is of satin finish, bears the letters "N. E. A." On the obverse of the medal the emblem of California appears in the shape of a small bear made of solid gold, and riveted to the medal with concealed rivets. Above the bear is the word "California," and beneath it the figures "1892." The reverse of the medal bears the legend in raised letters, "Gold, silver & tin products of California."

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"We, the members of the Board of Health of the city and county of San Francisco, cordially approve and recommend the Royal Baking Powder. It is absolutely pure and healthful, composed of the best ingredients, of the highest strength and character.

"In our judgment, it is impossible to make a purer or stronger baking powder than the Royal.

"JOS. R. DAVIDSON, M. D., CHAS. MCQUESTEN, M. D., HENRY M. FISKE, M. D., T. J. LETOURNEUX, M. D."

Members of the San Francisco Board of Health.

"For purity and care in preparation, Royal Baking Powder equals any in the market, and our test shows that it has greater leavening power than any other of which we have any knowledge.

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Prof. Chemistry, University of California and State Analyst.

"From actual analysis made by me, I pronounce the Royal Baking Powder to be the strongest and purest baking powder before the public. W. T. WENZELL."

Prof. Chemistry, College of Pharmacy, University of California, State Board of Horticulture, etc.

"I find the Royal Baking Powder pure, reliable, and one pound to contain 200 cubic inches more available carbonic acid gas than the best of the others.

HENRY G. HANKS."

Chemist, Assayer and Geologist, State of California.

"It is clearly demonstrated and proven that the Royal Baking Powder is pure and wholesome and that it stands, as far as strength and purity are concerned, at the head of the baking powders of the United States. GRANVILE MCGOWAN, M. D"

Health Officer of the City of Los Angeles, Cal.

"There is, therefore, no question but the Royal is the strongest, purest and most wholesome baking powder in the market.

"GEO. A. BETHUNE."

State Chemist and Assayer, Washington.

"I find the Royal Baking Powder superior to all the others in every respect. It is entirely free from all adulteration and unwholesome impurity, and in baking it gives off a greater volume of leavening gas than any other powder.

"WALTER S. HAINES, M. D."

Prof. of Chemistry, Rush Medical College, Chicago, Ill., Chemist to the Chicago Board of Health.

"The strength of Royal is shown to be 23 per cent greater than any other.

"As a result of my investigations, I find the Royal Baking Powder far superior to the others. It is pure and contains none but wholesome ingredients.

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Public Analyst, Ontario.

"Finding in analysis that it is made of the highest grade of cream of tartar and bicarbonate of soda, and is entirely free from any adulteration, we heartily recommend the Royal Baking Powder for its great strength, purity and wholesomeness."

Signed by Members of BOARD OF HEALTH, Seattle, Wash.

"In our judgment, the Royal is the best and strongest baking powder before the public. We confidently recommend it because of its purity and care of preparation."

Signed by Members of BOARD OF HEALTH, Tacoma, Wash.

"The Royal Baking Powder is a cream of tartar powder of a high degree of merit, and does not contain either alum or phosphates, or any injurious substances.

E. G. LOVE, Ph. D."

Late U. S. Gov't Chemist.

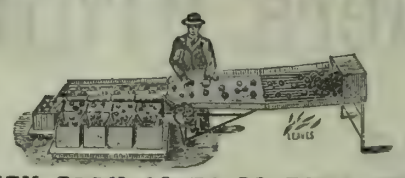
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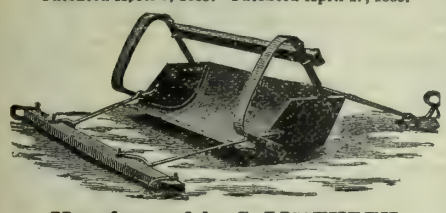
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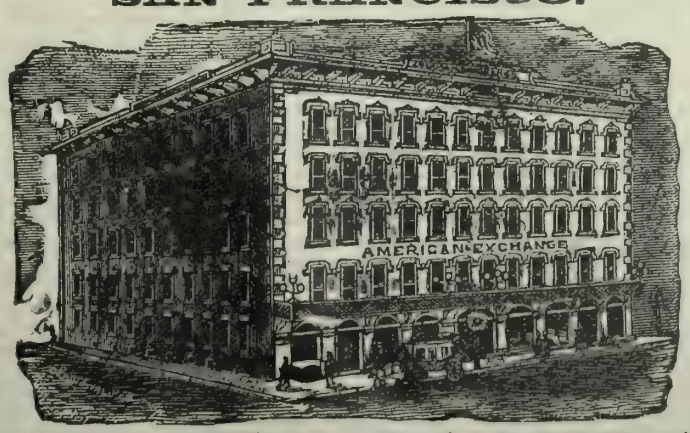
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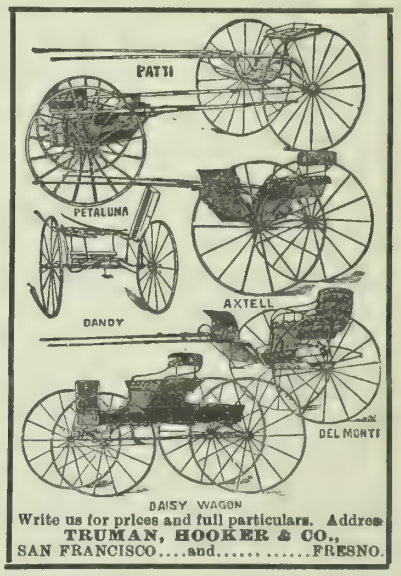
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THE STOCK YARD.

Selecting a Bull.

Before many weeks the question of selecting a bull will be occupying the minds of many farmers and stockmen, and I am prompted to speak of a few things that are not often considered in this connection. As a general thing, the search for the bull ends when one of good form in fair condition is found, providing, of course, that he is in reach of the seeker's pocket book. Few, indeed, look at more than the mere outward conformation. That is all right as far as it goes. To improve the form is, or ought to be, a prime object of improvement. But the bull should have something more than merely a good form to recommend him. He should have feeding quality, the ability to profitably convert the greater portion of the food he eats into flesh, and he should have what is most important of all in the bull—prepotency, the ability to transmit his own good qualities to his offspring. Form, feeding quality and prepotency must be combined in the most profitable bull, and one of the greatest causes of dissatisfaction and failure in breeding beef cattle is the lack of judgment displayed in being content with bulls that hardly possess more than one of these three most essential qualifications. Good form is generally demanded by every bull buyer. That is the *sine qua non*. Fortunately, although perfect form is not often met with, animals of good form are not hard to find in these days. Unfortunately, such forms are too frequently covered with little more than loose skin, and while such bulls may transmit their forms to their calves, they cannot transmit what is of more real economic importance to the western farmer, viz., feeding quality, for the reason that they do not possess it themselves. Hence the work of selecting a bull, if thoroughly satisfactory results are to be obtained, is not done even when an animal of unusual individual excellence is found. It is not always easy to judge correctly to just what extent a bull possesses feeding quality. To start with, he should most certainly be in good flesh. No excuses, such as "he has had no grain," "I've just aimed to keep him growing," and other like expressions, should be accepted. They may be true and valid. The bull may be all right and a good feeder, but it is doubtful. That is not the way good feeders are raised, and it is always best to be on the safe side, and let such a bull and such a breed alone. The only way to breed feeding quality is to feed, and the man who is forever making excuses about the condition of his stock may usually be set down as a poor feeder. The fact that the bull is in good flesh, taken with such outward indications as the head, size of bone, touch of skin, etc., is quite helpful in judging him, and in fact I consider it a safe rule to discard all thin bulls and use only those in good flesh. Now I know that some will object to such doctrine and talk about "breeding conditions," and the unreliability of fat bulls, the evils of pampering, etc. Such talk is getting most decidedly monotonous. It is a great pity about ten thousand times as many bulls are not pampered. The cattle breeding interest would be much better off if they were, and there would be considerable less growling among cattlemen. The bull kept in thin flesh may be a good feeder and get good feeding steers, but he will be an exception if he does, and exceptions are good things to beware of. They are not to be trusted. In addition to the points above mentioned, about the only other way to judge of the feeding quality is to examine his immediate ancestors. If the sire and dam, and grandsire and granddam, were good feeders, the animal in question is reasonably sure to possess feeding quality, but it is always well to look with suspicion on a bull whose immediate ancestors show themselves to be hard feeders and unthrifty doers.

In selecting a steer, if we can get one of good form and a good feeder, the work is done. But in a bull there is something even more important, if such a thing be possible, than either of these. We want him to impart that excellence and feeding quality to his calves. There is only one way to tell certainly whether he will do this or not, and that is to look at the calves. They will tell the story. Of course, if one confines himself to this way of judging of a bull's prepotency, he can buy only aged bulls. This is the plan followed by the greater number of our best breeders. They cannot afford to take many risks with young and untried bulls, and such are always used sparingly until their value as breeders is ascertained. It is a great wonder that more farmers and cattlemen do not adopt this plan. There seems to be a prejudice among such against bulls over three years of age, and, as a consequence, many first-class steer-getters are sent to market in their prime, simply because of an utterly foolish notion. The greater number of farmers must depend upon young bulls.

The degree to which a young bull possesses the power to transmit his own characteristics can only be guessed at, to say the most. There is no invariable rule for determining it. A study of his pedigree, or rather of the animals that compose his pedigree, will enable a good judge to make a pretty fair guess as to the young bull's prepotency. We hear a great deal of talk about pedigree. It began a century ago, and will probably never end. There is probably nothing new to be said about it. All animals have pedigrees. Some are called "good" pedigrees and some not so good. Just what constitutes a good pedigree varies greatly, according to the breeder who defines it.

For the man who wants a bull to sire good calves in every sense of the word, a good pedigree must be composed of the names of animals that for not less than five generations back were each and all individuals of pronounced excellence not only as regards form, but good feeders and useful, prolific breeders. With all the talk about pedigree there is far too little attention paid to it, and of all those who neglect it the farmers and stockmen who raise steers can the least afford to do so. Pedigree is the only guarantee the buyer has that his bull is better than a well-fed grade for breeding purposes, but in nine cases out of ten it is filed away in a pedigree hole and no practical use is made of it either before or after buying. The pedigree itself is worth nothing. The aid it gives in judging whether the animal is likely to transmit his own characteristics is invaluable.

First, then, get individual merit, for "like breeds like." Second, get feeding quality, for upon the flesh-producing capacity of the steer depends the feeder's profit. That, in connection with the other two, get a good pedigree, for only animals possessing such have the power of transmitting their own good qualities to their offspring.—Henry C. Wallace in Live Stock Report.

Cattle Sales.

We have been looking forward with some degree of interest as to what would be the outcome of several important sales of cattle that have recently been held at Chicago. Now that we have full reports, we are more than ever convinced that there is always a paying market for the best of everything.

This is no mere theoretical conviction, as the "proof of the pudding is in the eating." So have we proof of good cattle selling for good prices in every public sale of such that is held in every part of the country, be the breed what it may. Utility seems to rule the demand.

In the closing out sale of Messrs. C. M. Sanger & Sons, whose herd contained several show animals and prize winners, besides "cattle of all ages, from aged cows down to young things that could not be expected to command high prices," the average price for 53 head was $111.65. In this sale, the highest priced cow was the three-year-old Victoria of Glenwood 8th, red, white stockings all fours (not a taking color) that sold for $735. The second highest price was for $720 for the light roan yearling elsewhere referred to.

On the day following, April 20th, the consignment of 43 head, belonging to Col. W. A. Harris of Linwood, were sold for an average of $252, the highest of the series of sales.

The *Breeders' Gazette* says that at this sale was the largest gathering of Shorthorn breeders seen about an auction sale ring for many years. The cattle were nicely brought out. All females of breeding age were either safe in calf or had but recently calved, and the uniformly useful type of the cattle was the theme of much favorable comment.

On the following day were sold selections from the Bates-bred herds of Bronson C. Rumsey of Buffalo, N. Y., and Wm. Wright, Detroit, Mich., when 36 head sold for an average of $168.35. In this sale was the highest-priced cow of the season, so far, viz., the roan 4th Duchess of Hilldale. On the 22d of April the sale of C. H. Andrews' Bates-bred herd took place, when an average of $153.60 was realized on 39 animals. The *Gazette* says: "This sale was not so largely attended as the rest, its position at the end of a four days' series operating to limit the company largely to those who meant business."

At the four sales there were sold a total of 171 animals, for an average price of $168.50.

The average on 46 bulls sold was $186, and that on 125 females, $162.17.

The *Gazette* in its editorial remarks on the series has the following, which will be found worthy of more than a superficial perusal by those interested in breeding Shorthorns, or any other good cattle:

"There is certainly much encouragement for the Shorthorn cattle-breeding interest to be derived from a perusal of our detailed reports of the sale series held at Dexter Park, this city, last week. The one outstanding fact that must be observed with genuine pleasure by all intelligent breeders is the recognition accorded real merit wherever it was found to exist, regardless of bloodlines or color.

"Selling well up to that splendid Bates Duchess cow, 4th Duchess of Hilldale, will be noted a "plain" American-bred Crocus. She carries the blood of grand show cattle, however, and if properly handled will prove a stumbling block to all yearlings at this year's competitions. Be it noted further that both of these highest-priced females are roans—one of them a very *light* roan. The highest-priced female of the Sanger herd—the Sittyton Victoria that swept the show yards last fall—was bought by Henry F. Brown of Minnesota, one of our best-known advocates of the use of Bates-bred sires. At the Rumsey-Wright sale, the proprietor of the Linwood herd and various buyers of Scotch cattle at his sale were conspicuous bidders upon several Bates-bred heifers. It thus appears that the entering wedge which shall finally crack the shell of hide-bound partisanship has been given another well-directed blow, and the *Gazette* trusts that the lapse of time will serve to still further beat down the barriers of prejudice. Whoever attempts to perpetuate factional strife is a traitor to the true interests of the Shorthorn breed."

A Wonderful Machine.

Twenty-two years ago, in the city of Rochester, N. Y., James W. Paige began the work of constructing what at that time seemed an impossible machine. Assiduous labor, persistency of purpose, and an indomitable will finally crowned his efforts with success, and Dec. 24, 1890, in the city of Hartford, the inventor saw his work completed—a work which all who have been granted the privilege of seeing have pronounced the greatest mechanical invention of the age.

True, the machine does not talk, says the Chicago *Tribune*, but it reasons; reasons with its operator. It is a type-setting machine, and is called "The Paige Compositor," and it does the entire work of composition, setting ordinary movable type with far greater speed, accuracy and artistic effect than has ever before been accomplished by any method. The machine automatically distributes, and at the same time sets the type indicated by the operator, automatically spaces and justifies the matter without mental effort on the part of the operator, places it in a galley ready for book or newspaper, as desired, records the number of lines set, and "leads" the matter as and when required. All of this is accomplished by means of positive mechanism.

This machine is not to be confounded with any other machine, nor should it be called a mere type-setting machine. To see it in operation, to note with wonder its marvelous performance, one who understands, and even one who does not understand, the method of type-setting by the human printer, would call the machine a compositor in the truest sense of the word, as it performs simultaneously all the work of a human compositor. In an apprenticeship of less than 40 days, an operator has set 86,121 "ems" of solid, standard nonpareil in eight hours, an average of 8515 "ems" an hour. These figures are wonderful when one takes into consideration the fact that the average printer of to-day sets about 700 or 800 "ems" an hour with his time of distribution also considered. The machine, as has already been said, distributes its type while it is also setting. The work is all done simultaneously.

The machine is run by one-twelfth horse power and is now in private practical operation at Fifteenth street and Western avenue. It is probable that the directory of the World's Fair will offer one supreme prize for the best mechanical invention of the age; also one for that of electricity. For the former "The Paige Compositor" will be a competitor. That it will be the successful one is instantly and unstintedly accorded by all who have been to see it.

"I can print," says Mr. Paige, "a 200-page book, at a cost of $5, in twenty minutes. The operator has only to watch the keyboard and copy, and the machine will do the rest. An operator can average three or four characters at each touch of the keys, and this machine is the only one in the world for which there is no excuse for an error in proof."—Chicago Journal of Commerce.

GOOD HEALTH.

Night Air and Malaria.

"Ever since I can remember, I've heard changes rung on the necessity for sitting in doors at night, especially in malarial districts. To walk about much in the evening was deadly. To sit on the porch or door step was to take one's life in one's hands, while riding or driving were only permitted as matters of necessity, and the team generally went home against time, in order to get us in out of the night air.

Now, the physician comes in here and attends a patient suffering from a malarial disease, and after divers and sundry other directions, tells us, that, whatever we do, we must not shut fresh air out of the sick-room, even at night, but must have the windows so arranged that the ventilation will be as nearly perfect as possible.

Now, this is a malarial locality, at all events it is considered so, and the patient contracted whatever disease there may be, just here. If you will tell me what difference there is between breathing night air indoors, and night air out of doors, it will relieve my mind of great anxiety. We would no more think of spending the night, or any portion of it, in the hammock on the porch than we would of seeking suicide in any other direction, and yet here is this medical authority insisting that we bring indoors the very elements that we are supposed to stay in the house in order to avoid.

Now, dont understand that I am quarreling with anybody's notion on the importance of fresh air, for I am not, but I am trying to make up my mind why so much is said against spending a little time out of doors in the evening, and so much in favor of bringing the same atmosphere into the house. For my part, I think that a great deal of the danger from night air comes from the fact that people go out without sufficient wrappigs. I think that I could spend half of my evenings on the piazza, and not receive the slightest injury, if I protected myself in a proper way, but I should wear a cloak as thick as the one I use in mid-winter, and should keep a hood or light shawl over my head all of the time. I once spent a season in one of the worst malarial districts I ever knew. It was confidently predicted by every one who knew me, that I would have malaria-fever, because I insisted on sitting out on the porch of evenings, but I always put on a jacket, and then wrapped myself in a mackintosh with a hood pulled over so as to cover all but my face. I didn't catch cold, nor did I have an ache or a pain either that season or the next. Almost every one around there had ague and chills and fever and aches of all sorts, but I assure you that the sick ones were those who went out without wrappings, and always declared: "Oh, it won't hurt me to go out a little while; I never take cold;" but they took the consequences of their imprudence, and some of them paid for their folly with their lives. This and similar experiences have fully satisfied me that it is less what you do than the way you do it, which preserves the health; therefore, I am going to obey the doctor's orders and open the windows, but they will not be the windows of the sick-room. I shall let in the air to the other rooms first, and ventilate entirely in what you might call a secondary fashion. I shall also take the precaution to put an extra blanket over the sufferer, or, what is often better, a very thick linen sheet, which is a more complete protection under such circumstances than the heaviest blanket."—New York Ledger.

A PURER CHLOROFORM than has yet been available, by virtue of its purity, is claimed to be produced by the Swiss scientist, Pictet, by a process of artificial refrigeration that precipitates a quantity of deleterious impurities. It is moreover claimed that the physiological effects of the impurities removed by Pictet's process when isolated have been such as to show their deleterious quality beyond doubt. If this be all as stated, the use of chloroform in surgery, the benefits of which are simply incalculable, may become free from some dangers hitherto attending its administration. The use of intense cold for purifying and separating chemical substances is still in its infancy, though for the extraction of menthol and similar substances from essential oils it has been for some years employed.

THE number of persons who approve of cremation seems to be steadily increasing. From the report of the Cremation Society of Englahd for 1891, we learn that in 1885, the first year a crematorium was used, only three bodies were sent there; in 1886 the number was 10; in 1887, 13; in 1888, 28; in 1889, 46; in 1890, 54; and during last year, 99.

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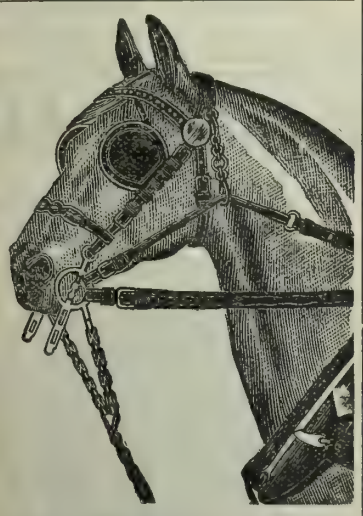
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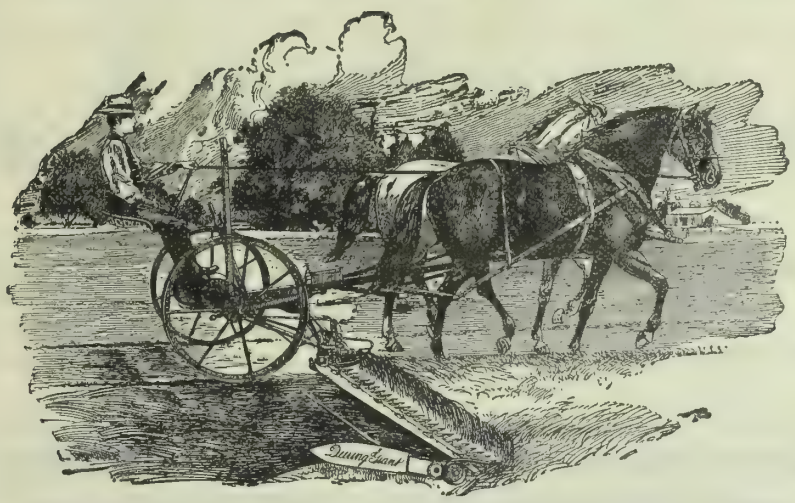
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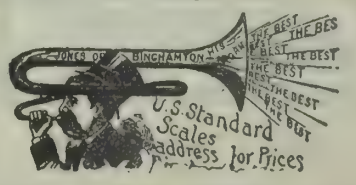
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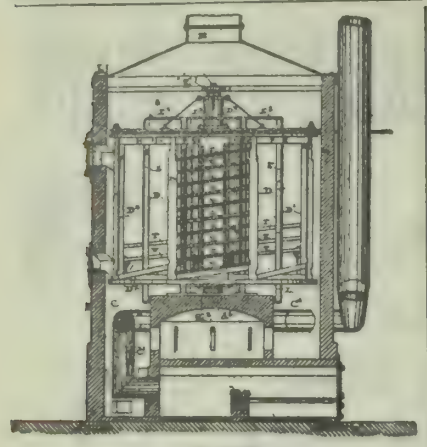
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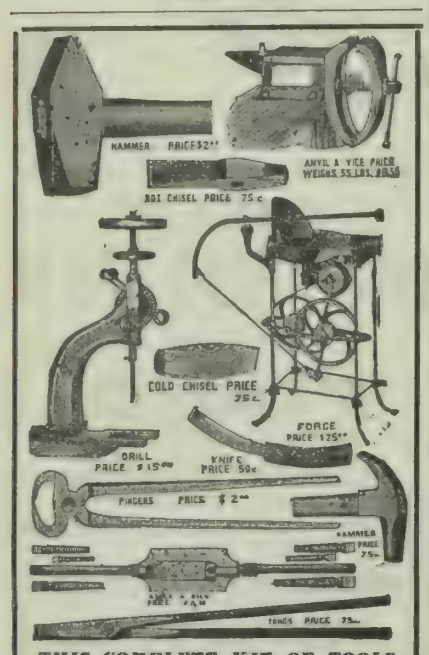
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Incorporated April, 1874.



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Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

OFFICERS.

A. D. LOGAN	President
I. C. STEELE	Vice-President
ALBERT MONTPELLIER	Cashier and Manager
FRANK McMULLEN	Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1, 1892 A. MONTPELLIER, Manager.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.

HAVEN & HAVEN,
ATTORNEYS AND COUNSELORS AT LAW,
No. 530 California Street,
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, May 25, 1892.

Fickle weather has contributed no little in demoralizing general trade, and until crops are assured it now looks as if no great improvement can be expected. In farm products, trading is light. Wool and fruits are moving fairly free. In the local market money is easy, but complaints are at hand from interior points, of a growing scarcity of available funds. It is claimed that crop requirements will be quite large.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.	Sept.
Thursday	6s08½d	6s08½d	6s09¾d	6s1¼d	6s1½d
Friday	6s09½d	6s10 d	6s11 d	7s00 d	7s00½d
Saturday	6s10¼d	6s10¼d	6s11¾d	7s00½d	7s00¾d
Monday	6s10½d	6s09½d	6s10¾d	6s11 d	6s11½d
Tuesday	6s 8¾d	6s09 d	6s10 d	6s11 d	6s11¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	36s0d	36s d	36s d	Inactive.	Fine.
Friday	36s6d	36s d	36s d	Slow.	Warmer.
Saturday	36s6d	36s d	36s3d	Higher.	Showery.
Monday	36s6d	36s d	36s d	Quiet.	Fine.
Tuesday	36s d	35s9d	36s d	Easier.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, May 25.—Wheat—Not much demand. California spot lots, 7s 4d; off coast, 36s; just shipped, 36s 9d; nearly due, 35s 9d; cargoes off coast, steadily held; on passage, market seems firmer; Mark Lane Wheat, steady; French country markets, very firm.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug
Thursday	15[illegible]	150¼	151⅞	150⅝
Friday	153⅜	154⅛	155⅝	1 47
Saturday	152¼	152¼	153⅜	152⅝
Monday	150½	150⅝	151⅛	150⅜
Tuesday	151⅝	15 [illegible]	153⅛	152

The following are to-days' telegram:

NEW YORK, May 25.—Wheat—91⅞ for May, 91⅞ for June, 92c for July, 91⅞ for August, 91c tor Septembr and 93⅜c for December.

CHICAGO, May 25.—Wheat—83⅞c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	148½	147½	....	....	....	....
Friday	147½	147	....	....	140½	140½
Saturday	....	....	....	....	....	....
Monday	147	144⅝	....	....	142⅜	140½
Tuesday	143⅜	141½	142	142	139⅜	139½

The following are to-day's recorded sales on Call:

Wheat—Morning Informal Session—Buyer season, 400 tons, $1.42½; 300, $1.43; 100, $1.43½. Seller 1892—200 tons, $1.39½ ₩ ctl. Afternoon Session—Seller 1892, 200 tons, $1.39⅜; 100, $1.39½ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	December. H.	L.
Thursday	*96½	95½	....	....	100½	100
Friday	*96½	95½	....	....	101	100½
Saturday	....	....	....	....	....	....
Monday	*95½	95½	....	....	100½	100½
Tuesday	*94½	93⅝	....	....	100	99½

*New Crop.

The following are to-days' recorded sales on Call.

Barley—Morning Informal Session—Seller 1892, new, 100 tons, 94½c; 100, 94¾c ₩ ctl. Regular Session—Buyer season, 400 tons, 94c; 100, 94¼c; 200, 94½c; 700, 95c. Seller 1892, new, 100 tons, 95¾c; 200, 95½c. October, 200 tons, 97½c; 900, 97½c; 300, 87½c ₩ ctl. Afternoon Session—Seller 1892, new, 100 tons, 95½c ₩ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 23.—There was an earnest attendance of buyers and a larger volume of sales would have resulted at the seaboard if supplies had permitted. Receipts of western are detained by the floods, and wet, cold weather in Virginia, Pennsylvania, Ohio and New York has delayed shearing. The most prominent feature of the quotations in this between clip period is the readier sale of wool at the old figures than for some time past. The tone for old or new is not above 55 cents cleaned. This, with the rates obtained for Texas here, and California in Boston, does not as yet indicate much buoyancy in the new clip. Australian has a steady sale. It would be well if home growers were to copy the careful marketable preparation of this product. Freedom from spiritings and tags makes a great difference in buyer's views. Woolen goods are in good shape, there being a few cancellations in orders for men's fabrics. Sales at New York, 548,000 domestic and 330,000 foreign. Boston sold 1,772,000 domestic, of which 206,000 were new spring California at 17@19c. and 150,000 ditto to arrive to a manufacturer at private terms; also 538,000 foreign, 331,000 of which were Australian. Philadelphia reports good inquiry, but a very limited supply on hand.

Eastern Dried Fruit Markets.

NEW YORK, May 23.—Peaches and prunes are hardly in wholesale offerings; prices are as strong as before. Raisins—Dealings are not in a large way, but are quoted better with more confidence. A few lines of layers at $1.35@$1.50, and if boxed loose, $1.10@$1.30. For outside rates the quality must be faultless. Selected bags, 4¼c; fairly decent, 3½c. Holders obtain some assurance from the fact that Californias have kept steadier than Valencias all through last summer, though the latter were 1@1½c cheaper. Apricots are stiffer. A line of 800 packages brought 10c; boxes, 10@12c for prime to extra; bags, 8¼@10.

NEW YORK, May 24.—Black California prunes are reported scarce here. The Grayish stock of 50s, sell at 9¼c in bags and 9¾c in boxes from second hands; good 60s, 9c; 70s, 8½c; 80s, 7¾c, in boxes.

Eastern Deciduous Fruit Markets.

NEW YORK, May 23.—Cherries brought $5@5.50 a box. A sample of fresh Arizona-grown apricots, small but handsome, were shown by Sgobel & Day.

Eastern Hop Markets.

NEW YORK, May 23.—Most of the week there was merely enough brewers' demand to verify prices. At the close a better feeling was apparent, as deliveries on contracts are expected to be less interruptive. Best State '91's, 28@29c; Pacific, 28; other grades, 23@27. Options are dull; July, 26c bid. The English market is strong.

English Hop Markets.

Mark Lane *Express*, May 9:—Considerable activity is visible in the English plantations, poleing being in progress everywhere, and even stringing in a few instances. The shorts have come away quite strong and healthy, and if we escape late frosts there will be a fair prospect for bine. Planters seem to be entering upon another season in a very hopeful spirit, inasmuch as, even should there be a large crop grown, prices are pretty sure to rule good on account of the close way in which stocks of all kinds have been used up, leaving no surplus to carry over for another year.

Miscellaneous.

NEW YORK, May 23.—Lima Beans—The supply is less pressing; choice are firmer at $1.75 per bushel for spot. Mustard seed holds its improved condition.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 23, '92, were as follows:

Flour, qr. sks	100,210	Bran, sks	5,197
Wheat, ctls	21,475	Buckwheat "	....
Barley, "	7,451	Middlings "	2,105
Rye, "	....	Chicory, bbls	110
Oats, "	28	Hops, "	....
Corn, "	770	Wool, "	1,846
*Butter, "	1,563	Hay, ton	1,568
do bxs	66	Straw, "	104
do bbls	....	Wine, gals	236,650
do kegs	23	Brandy, "	2,020
do tubs	4	Raisins, bxs	200
do ½ bxs	280	Honey, cs	....
†Cheese, ctls	1,027	Peanuts, sks	....
do bxs	117	Walnuts "	89
Eggs, doz	46,910	Almonds "	....
do " Eastern	71,610	Mustard "	51
Beans, sks	31,433	Flax "	....
Potatoes, sks	19,343	Popcorn "	....
Onions, "	36,121	Broom corn, bbls	....

*Overl'd, 260 ctls. †Overland, 136 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 23, '91.	July 1, '91 to May 21, '92.
Flour, ½ sks	361,999	444,457
Wheat, ctls	1,371,926	1,280,415
Barley, "	269,912	55,502
Oats, "	347,532	419,183
Wool, bales	6,409	7,383
Hops, "	455	431
Rye, sks	210	3,498
Potatoes sks	100,687	137,742

Arrival of New Wheat.

The first carload of new wheat, crop of 1892, arrived at Port Costa on May 23d. The wheat was raised on the farm of J. M. and O. B. Kimberlin, Kimberlina, Kern county. This makes the third year in which the Kimberlins have outstripped their competitors in the race to get new wheat into market first. In the present instance their consignment was of inferior quality, the berry being very small and very badly pinched. The carload was sold on 'Change by auction and purchased by the Del Monte Milling Company at the fancy price of $1.52½ per cental. In each year there is more or less competition to secure the first lot of new wheat, and the prices paid have no bearing whatever on the local market. Last year the first lot was also purchased by the above-mentioned company.

The following shows the first arrivals of new wheat and prices paid for the same:

Year.	Month.	Price.
1859	July 14	$1 90@2 00
1860	July 3	1 50@1 55
1861	July 24	1 50@1 62
1862	July 11	1 62@1 65
1863	June 25	1 50@1 60
1864	July 9	2 80@2 95
1865	June 12	2 20@2 25
1866	June 25	1 50@1 60
1867	June 17	1 65@1 70
1868	June 18	1 90@2 00
1869	June 15	1 40@1 45
1870	June 9	1 70@1 80
1871	June 23	2 30@2 37
1872	June 10	1 80@1 85
1873	June 7 (Vallejo)	1 75@1 80
1874	June 11	1 65@1 67
1875	June 2 (Vallejo)	1 65@1 67
1876	June 9 (Oakland)	1 75@....
1877	June 2 (Vallejo)	2 40@....
1878	June 13	1 70@....
1879	June 20	1 65@....
1880	June 24	*1 00@....
1881	June 7	1 25@1 40
1882	July 6	1 67@....
1883	June 19	1 65@1 70
1884	June 20 (Port Costa)	1 42@....
1885	June 2	1 42@....
1886	June 5	1 30@....
1887	June 10 (Port Costa)	1 75@....
1888	June 15 (Wheatport)	1 31½ ....
1889	May 24	1 37½ ....
1890	May 20	1 30 ....
1891	May 25 (Port Costa)	†2 02½ ....
1892	May 23 (Port Costa)	1 52½ ....

*Very inferior quality.

†Sold by auction at a fancy price, actually worth, by sample, about $1 65. It was Sonora, rather pinched and somewhat mixed with barley. It came from the Kimberlena farm, Kern Co. In 1890 the first consignment also came from Kern Co.

Cereals.

The second general memorandum on the wheat crop of 1891-92, issued by the Government of India, says: In the Punjab at the end of January the area under wheat was reported to be 6,918,400 acres, or a falling off of 1 8 per cent from the area reported at the end of 1890-91, and 2 9 per cent from that shown in the first forecast for 1891-92. In the north-western provinces and Oudh the area as reported at the end of December last was 4 per cent more than last year's area. In Bombay the area in British districts, including Sind, is about 12 per cent below last year's area and the average, while the Native States figures show a decrease of 10 to 21 per cent respectively. In the Central provinces the area under crop is below the normal area, while in Berar the crop area is estimated at 884,104 acres. In Bengal the area sown with wheat has fallen short of the normal by about 25 per cent, and of last year's area by about 15 per cent. Condition: In the Punjab the crops have in many places suffered from drought, and at the date of report it was feared that if rain continued to hold off the crop would be a very poor one. In the north-western provinces and Oudh there has practically been no frost, and damage from rust is but slight. The crop is said to be probably the best that has been seen for some years. In Bombay the condition of the crop is fair to average, except in the South Deccan and Karnatic, where almost the whole of the unirrigated crop has been lost or greatly injured by drought. In the north of the central provinces condition is good, in the Narbudda Valley districts about average, in the southern districts and Chattisgarh, however, it falls short of the average by a third. In Berar the condition is not, on the whole, satisfactory, while in Bengal half an average crop is the most that can be expected."

London cables, May 25, report as follows: Wheat and flour on passage to United Kingdom, 2,784,000 qrs; Continent, 1,275,000. Imports of wheat into the United Kingdom during the past week, 233,000 qrs; flour, 213,000 bbls.

In the local wheat market futures have been hammered on Call to lower ranges. The general appearance of the market indicates that a strong bear contingent is at work to force prices down, for so far our advices from abroad and also from the East do not warrant low prices; the only thing favorable for lower ranges is the low price of silver which admits of importations into England of Indian wheat at a considerably less range in values than imports of wheat from gold-using countries can be made at.

In the sample market wheat is reported lower. This decline is largely due to heavy offerings of old, by disgusted holders. With more sellers in the market, buyers were not slow in bidding down; being able to purchase here at lower prices, they offered cargoes for prompt shipment on the Liverpool market at slightly lower figures, which has a temporary bad effect on wheat cargoes. The engaged tonnage in port for old and new crop loading continues to increase. The disengaged tonnage in port is kept up to over the 100,000 tons register mark.

Crop advices from the country are uniformly favorable. The hot weather in the past week did not do any damage, owing to its short continuance and cool weather since. It is quite generally claimed that the present cool weather will cause the grain to be plumper and heavier. Farmers, as a rule, report very spotted crops, more so than ever before known which makes it difficult to form a fair estimate of the probable outturn.

The barley market shaded off, but toward the close it exhibits a firmer tone. Cooler weather, it is claimed, will put back harvest work, and as the supply of old in the State is light, dealers are slightly more anxious to buy for immediate wants. Cool weather is against brewing barley, although holders are firm in their views under the belief that the available supply of that grade in this State is light; barely enough to meet the requirements before new will be available for use. Feed barley for delivery in next month is more or less in buyers' favor.

Oats hold to strong prices under light receipts, lessening stocks and a good demand. It is quite generally claimed that the outturn in this year will be less than it was in 1891. This will be particularly the case up north where rains interfere with outdoor work.

Corn shows more strength with a general advance along the line. The available supply in this State is said to have largely entered into strong hands.

Rye is very dull.

Feedstuff.

Considering the excellent natural feed, the demand for ground feed continues active. With moderate receipts and a fair demand, both bran and middlings have been advanced. Feed meal commands a higher range of values.

New hay put in an appearance the past week. The quality was poor and, with forced sales, low prices had to be accepted. Haying in the southern part of the State is general, but in the central and coast counties it has only fairly commenced, owing to more or less cloudy and foggy weather in many districts. There is, or at least as far as the writer knows, no desire among large feeders to contract for large quantities for future delivery, unless offered inducements. Farmers, as a rule, prefer to take chances in getting better prices than to sell at buyers' present views.

Live Stock.

The market for bullocks appears to be slightly firmer. A warm wave in the past week caused butchers to "go slow" in buying, fearing that another warm wave might set in at any time. The Reno (Nevada) *Gazette* reports heavy shipments from that place to Oregon; in one day 21 cars were loaded with bullocks for Portland alone. Mutton sheep steady, as are block hogs.

Dairy Produce.

Hot weather for four days in the past week not only softened butter, but also softened the market, for under strong selling, prices shaded off fully one cent a pound. The manufacture of butter in this State and in Nevada is exceptionally large, with the grade more uniform and better. Feed has been most excellent, while there has been a large increase in the number of cows milked. During the hot spell of weather there was little packing, but with cooler weather it is again being largely carried on, both in the city and country.

Cheese drags at lower prices. It now looks as if the bottom for the better grades has been reached. It is said that some quiet buying is going on. The buyers will hold for better prices, and to keep the cheese sound and sweet will shellac them.

Eggs are strong for strictly choice fresh laid. The hot spell of weather is succeeded with cooler weather, which causes Eastern eggs to come to hand in better condition. Eastern eggs have this season sold alongside of Californian.

Vegetables.

The quotations for old potatoes are withdrawn—only new crop potatoes will from now on be quoted.

The receipts of potatoes are only fair for the season of the year. Shipments to distribution points at the East are free. The backward season east of the Rocky Mountains will give us a market later in the season than we would otherwise enjoy.

Onions are slow for both old and new.

In garden stuff, the market is well supplied with beans and peas. Tomatoes, summer squash and other spring vegetables continue to decline, as receipts of all kinds are increasing.

Fruit.

On Friday the first apricots of the season came to hand. J. R. Collins and E. Fisher, Vacaville, were the shippers. The first figs of the season were received on Saturday; they were sent in by J. H. Taggart, Yuma, Arizona. M. L. Madden, Tulare county, sent the first peaches of the season to market.

Strawberries advanced the past week. Longworths sold as high as $15 a chest, but to-day the outside figure was $12. Free receipts of other fruits, with declining prices, are against them. Currants are coming in freely, with a strong probability that prices will have sunk to a sufficiently low level by the middle of next month to admit of canners entering the market. Cherries made another bad break, To-day $1 was the top for choice black. Receipts are very large, and, with its continuance, canners will be able to soon enter the market as buyers. Cherry plums are coming in sparingly, yet prices are shading. Gooseberries are coming in fairly freely. The quality is good. Raspberries are scarce. There is a growing conviction that when the weather grows warmer, fruits will mature rapidly, which will cause some difficulty to handle the riper kinds at fair prices. Apricots are small and generally poor.

Limes and lemons are firm, with the former selling at a decided advance. Oranges sold at one time at an advance on outside quotations, but toward the close they shaded off under free receipts.

The dried fruit market is well cleaned up; only odd ends and trashy stuff are to be had. Peaches and apricots are in good request at a slight advance.

The market is being cleaned up of raisins; all poor and inferior stuff is being worked off; choice to extra choice are scarce. Stemless grapes are wanted at 3 to 3½ cents ₩ lb.

Wool.

The market at the East does notshow any material change. Our market is quoted at a slight advance for the more desirable clips. The advance here is accepted as an evidence that the grades of the better conditioned clip is more acceptable than they were in last year. Sales have been made at Red Bluff of 1300 bales at a flat price of 19 cents ₩ lb. This indicates a range of from 17 to 20 cts. ₩ lb. This purchase was for shipment to the East.

In hops trading is light owing to the light available supply of old. We are not advised of any contracts drawn for new crop delivery. Both buyers and sellers are paying particular attention to crop prospects on this coast and also abroad.

Green almonds are hard to sell even at low prices.

Miscellaneous.

From reliable advices up to May 25, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	219,657	319,220	*†145,761	50,177
San Diego	18,869	16,477	2,708	.....
San Pedro	11,389	10,297	.....	13,165
Oregon	25,941	34,383	17,262	
Puget Sound	17,800	39,408	.....	
Totals	294,656	419,785	165,731	81,655

*Engaged for wheat, 1892, 19,503; 1891, 33,165 †For new crop loading, 16,849

The statistics of produce exports from this port from July 1st to May 18th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,481,556	12,728,251
Flour, bbls	954,932	1,082,720
Barley, ctls	1,008,763	340,050

Poultry is gradually settling to lower prices under free receipts and more liberal supplies of fruit and vegetables.

Beans are lower, with Limas breaking the most. Our advices indicate that the crop of Limas will be short, owing to a lessened planting. More attention was given by farmers this year to planting white beans, particularly the smaller varieties.

Honey is in light supply. Advices from the southern part of the State indicate a light crop.

Foreign Grain Review.

LONDON, May 16.—The Mark Lane *Express*.—It is the opinion of experts that there will be a short yield of wheat. The farmers are clearing away their reserves, and owing to heavy supplies unprecedented sales were made at low figures. Foreign wheat was also largely offered. White dropped is 6d. Oats and maize are dearer and barley is cheaper. To-day foreign wheat advanced 6d on American sales.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

WEDNESDAY, May 25, 1892

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	2 00 @ 2 20	Extra, City Mills	4 65 @ 4 75
Butter	2 50 @ 3 05	Do Country Mills	4 50 @ 4 75
Pea	2 20 @ 2 70	Superfine	2 75 @ 3 10
Red	2 00 @ 2 20	**NUTS—JOBBING.**	
Pink	1 90 @ 2 05	Walnuts, Cal. lb	4 @ —
Small White	2 20 @ 2 55	Do Choice	6 @ —
Large White	2 20 @ 2 45	Do paper shell	7 @ —
Limas	1 70 @ 2 05	Almonds, sft shl.	10 @ —
Fld Peas, blkeye	3 00 @ 3 30	Paper shell	12 @ —
Do green	1 50 @ 2 75	Hard Shell	6 @ 7½
Do Nies	1 30 @ 1 40	Brazil	6½@ 8
Split	4 50 @ 5 50	Pecans small	11 @ 13
BUTTER.		Do large	14½@ 16
Cal. Poor to fair, lb	15 @ —	Peanuts	1½@ 3
Do good to choice	17 @ —	Filberts	10½@ 12½
Do Giltedged	— @ 19	Hickory	7 @ 8
Do Creamery rolls	— @ 19	Chestnuts	11½@ 16
Do do Giltedge	— @ 20	**ONIONS.**	
Eastern	— @ —	Silver Skin, Choice per ctl	1 75 @ 2 00
CHEESE.		Fair to Good	1 00 @ 1 50
Cal. choice mild	— @ 8	Cut	50 @ —
Do fair to good	7 @ —	New Reds	46 @ 70
Do gilt edged	— @ 9	**POTATOES.**	
Young America	— @ 10	Early Rose, ctl	60 @ 85
EGGS.		Do do in boxes	80 @ 1 25
Cal. ranch, doz	18 @ —	Burbank Seedling	— @ —
Do do selected	— @ 21	Do do Oregon	1 00 @ 1 25
Do store	17 @ —	River Reds	40 @ 60
Eastern	17 @ 19	Garnet Chilies	80 @ 90
FEED		**POULTRY.**	
Bran, ton	17 50 @18 50	Hens, doz	6 00 @ 8 00
Feedmeal	26 50 @29 00	Roosters, old	6 50 @ 8 00
Gr'd Barley	22 50 @24 00	Do young	8 00 @12 00
Middlings	20 00 @21 50	Broilers, small	2 00 @ 3 50
Oil Cake Meal	— @25 00	Do large	4 00 @ 6 00
Manhattan Food ₩ cwt	7 50	Fryers	6 00 @ 8 00
HAY.		Ducks	5 00 @ 7 00
Wheat, per ton	11 00 @ —	Geese, pair	1 25 @ 1 50
Do choice	— @ 14 00	Goslings	1 25 @ 1 75
Wheat and Oat	10 00 @12 00	Turkeys, Gobl'r	17 @ 19
Wild Oats	10 00 @ —	Turkeys, Hens	14 @ 16
Cultivated do	10 00 @ —	Manhattan Egg Food ₩ cwt	11 50 @ —
Barley	10 00 @12 00	**PROVISIONS.**	
Alfalfa	8 00 @10 00	Cal. Bacon, be'vy, lb	9½@ —
Clover	— @ —	Medium	10½@ —
Straw bale	45 @ 60	Light	12 @ —
GRAIN, ETC.		Lard	9 @ 11
Barley, feed, ctl	95 @ —	Cal. Sm'k'd Beef	11½@ —
Do Choice	1 00 @ —	Hams, Cal salt'd	10 @ —
Do Brewing	1 02½@ —	do Eastern	12½@ —
Do do Choice	1 07½@ —	**SEEDS.**	
Do do Giltedge	1 10 @ —	Alfalfa	12 @ 12½
Do Chevalier	1 05 @ 1 40	Clover, Red	14 @ 15
Do do Giltedge	1 45 @ 1 50	White	20 @ —
Buckwheat	— @ —	Flaxseed	1¾ @ 2
Corn, White	1 37½@ —	Hemp	3¾@ 4
Yellow, large	1 35 @ —	Mustard, yellow	3½@ 4
Do small	1 36½@ —	do Brown	3 @ 3½
Oats, milling	1 46½@ —	**WOOL.**	
Feed, Choice	1 43½@ —	**SPRING, 1892**	
Do good	1 35 @ —	Humb't & Men'cino	16 @ 20
Do fair	1 30 @ —	Sac'to valley	16 @ —
Surprise	1 50 @ —	S Joaquin valley	11 @ 16
Black Cal	1 15 @ —	Cala'v & F't'h'll	15 @ 19
Do Oregon	1 30 @ —	Oregon Eastern	12½@ 19
Gray	1 27½@ —	do valley	— @ —
Rye	1 37½@ —	So'n Coast, def	10 @ 12
Wheat, milling, Gilt edged	1 50 @ —	Nevada (State)	15 @ 18
Do Choice	1 47½@ —	**HONEY.**	
Do fair to good	1 45 @ —	WhiteComb, 2-lb	8 @ 11
Shipping, cho'oe	1 45 @ —	do do 1-lb frame	10 @ 13
Do good	1 42½@ —	White extract'd	6½@ 7
Do fair	1 40 @ —	Amber do	5½@ 6
Common	1 36½@ —	Beeswax, lb	25 @ —
Sonora	1 36½@ 1 45		
HOPS.			
1891 Choice to Ex.	25 @ —		
Fair to Good	22 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 25, 1892.

Limes, Mex	8 00 @10 00	Figs, Arizona, lb	70 @ —
Do Cal	— @ —	Apricots, Principle, box	75 @ —
Lemons, box	50 @ 3 50	Cherries, box	
Do Sicily	5 00 @ —	Black	75 @ 1 00
Oranges, Seedlings		Red	40 @ 75
Redlands	2 50 @ 3 00	White	40 @ 75
Riverside	1 50 @ 2 50	Beets, sk	— @ 1 00
Los Angeles	1 50 @ 2 00	Carrots, sk	50 @ —
Do Navels—		Okra, dry, lb	15 @ —
Redlands	4 00 @ 5 00	Parsnips, ctl	— @ 1 25
Los Angeles	2 50 @ 3 00	Peppers, dry, lb	10 @ —
Riverside	3 00 @ 4 00	Do green	— @ —
Duarte	3 @ 4 00	Turnips, ctl	50 @ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Cabbage, 100 lbs	40 @ —
		Garlic, lb	8 @ 12½
Strawberries, per chest—		Squash, Sum, bx	70 @ 1 00
Longworth	7 00 @12 00	Tomatoes, box. 1	1 25 @ 2 25
Sharpness	5 00 @ 8 00	Asparagus, box	75 @ —
Gooseberries, ₩ pound	2 @ 3½	Do choice to ex. 1	50 @ —
Large do	4 @ 6	Peas, green, sk	40 @ —
Raspberries, bkt	20 @ 35	Do sweet	75 @ 1 25
Currants pr dr	65 @ 85	Rhubarb, box	65 @ 1 25
Peaches, box	2 00 @ 2 50	String Beans	3 @ 3½
Cherry Plum, dr	1 15 @ —	Do do wax	2 @ 4
		Cucumbers, doz	50 @ 1 00
		Mushrooms	10 @ 30
		Egg Plant, lb	17½@ 20

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	5½@ —	Wethers	7 @—
Grass fed, extra	5½@ —	Ewes	6½@—
First quality	5 @ —	Do Spring	8 @—
Second quality	4½@ —	**HOGS.**	
Third quality	4 @ —	Light, ₩ lb, cents	5½@ —
Bulls and thin Cows	2 @ —	Heavy	4½@ —
VEAL.		Feeders	3½@ 4
Range, heavy	5 @ —	Stock Hogs	5½@ —
Do light	6 @ —		
Dairy	6 @ —		

Grain and Wool Bags.

Calcutta, spot	7½@ 7¾
Do, June-July	7½@ 7¾
Wool Bags	36@ 38

THE CHAMPION COMBINED REAPER & MOWER, NO. 4.

IF YOU HAVE FIFTY ACRES YOU SHOULD HAVE ONE.

It has everywhere met with the most brilliant success achieved by an agricultural machine. It is simple, strong, light draft, easily understood and handled, ready and capable at all times, complete and perfect in every detail.

This machine is first built as a Mower, and so arranged, before it leaves the factory, that either a self-raking attachment or dropping attachment can be added at any time. These attachments are fastened to the machine by a few bolts and can be easily and quickly attached or taken off by the farmer. The machine is made in one size—wide cut, five feet. It is the most powerful cutter ever constructed, enabling it to do good and clean work without choking or breaking in especially difficult crops, such as heavy, lodged grain, flax, sowed corn, etc.

The Champion No. 4 Combined Reaper and Mower

Is in every respect a combined machine, capable of cutting grass or grain as well as any Single Reaper or Single Mower. To change it from one to the other does not require that a number of intermediate gear wheels, etc., etc., should be changed so as to increase or reduce speed.

The Main Driving Wheels

Are of cast iron; and the Main Frame, made of steel bars firmly riveted together, is supported on two driving wheels, which turn upon a stationary axle.

The Main Frame

Made of the best rolled steel and firmly riveted together, is exceedingly strong and durable. The boxes or journal bearings, made of malleable iron flanged to fit the bars of the main frame, are bolted to this frame, insuring perfectly true bearings, and they will always maintain their relative positions.

The Main Shafts and Drag Bar

Are made of cold rolled iron, possessing great strength and stiffness, and, at the same time, the highly polished surfaces furnish perfect wearing journals

The Knife Pitman

Is very long, and works almost on a straight line. It is connected with the fly-wheel by means of a universal socket and ball joint, while the opposite end, or pitman hook, is is of conical shape, fitting into the eye of the knife, and firmly held in its position by the pitman bolt and ratchet nut.

The Rakes and Reels

Are absolutely under the control of the driver, and can be arranged to work automatically or at will; when set to work automatically the driver can, by the use of a convenient device, carry the gavels around a corner out of the way of the team in cutting the succeeding round, or for any distance where the grain is light or uneven.

The Levers

Are conveniently arranged so that the cutter-bar can be instantly thrown down to the ground to pick up badly lodged or tangled grain. When the cutter-bar is tilted, the rakes almost touch the ground, and, as it were, lift the tangled grain upon the table. Without the reaping attachment this machine is almost identical with the Champion Light Mower, and does the work equally well. For the farmer who raises small crops of grass and grain and does not feel able to buy separate machines, this is decidedly the most economical implement that he can purchase, as the Champion No 4 is the only machine that is a perfect Reaper any Mower in one.

FOR FURTHER INFORMATION ADDRESS

SAN FRANCISCO. **BAKER & HAMILTON,** SACRAMENTO.

PATRONS OF HUSBANDRY.

Grange Mention.

AMERICAN RIVER GRANGE.—Past Master Daniel Flint reports recently the pleasure of meeting this Grange, with Past Masters Steele and Webster, Executive Committeemen Walton and McConnell and Doctor Caples, saying that they "were out in good voice, and they made the hall ring with good Grange ideas. It is a rare thing to get so many State officers together at one time. A class of ten was instructed in the fourth degree by your humble servant. The officers did exceedingly well, the choir giving us soul-inspiring music. The Matrons furnished a real feast, and every one contributed some pleasure of the day, by either voice, smiles, good looks or appreciation."

EDEN GRANGE.—On account of a public sale, this Grange will not meet again until Saturday, June 4th. The question box has furnished considerable interest lately, and at the next meeting a MS. paper will be issued for further entertainment and instruction of members.

MERCED PICNIC.—May 21st Merced and California Granges joined with two Sunday-schools in a picnic, which, considering the high temperature of the atmosphere, was a pleasurable success. The Merced and Athlone Bands furnished music, the farmers' wives and daughters made lots of ice cream, and with plenty of games, races, etc., a lively time prevailed.

COOPERATIVE LEGISLATIVE COMMITTEE. J. V. Webster, Chairman of the Committee appointed at the last session of the State Grange to cooperate with representatives of other organizations in presenting the legislative needs of our farming and industrial classes to the candidates at the next general election, and asking their pledge or refusal to vote in favor of the same, notified the balance of the Grange Committee, and also representative members of other organizations, to meet at the State Grange Secretary's office on Monday, May 23d. There were present Past Masters Webster, Steele and Coulter and also Past Assistant Steward Norton. Legislation on the subject of the election of United States Senators by popular vote, in favor of authorizing the organization of mutual assurance associations and for the reassessment and collection of unpaid taxes, was adopted, and will in due time be printed and presented to all legislative candidates. It is to be regretted that no other representatives were present.

PAST MASTER PERRY of Merced Grange and wife were in San Francisco on Monday.

Our Editorial Visitors.

Geo. W. Childs, printer, editor and publisher "to the manner born," is one of our distinguished editorial guests in San Francisco.

Wm. H. Hearst, proprietor of the *Examiner*, gave the N. E. A. a generous compliment in placing the steamer Ukiah at their disposal and furnishing a fine lunch and other favors.

Our editorial friends from beyond the Rockies are as wide awake, appreciative, and happy a lot of excursionists as ever visited our coast. The editors of California, with everybody else, it seems, have extended them a hearty grip of friendship. Pres. G. M. Francis, of the California Association, A. B. Lemmon and Arthur R. Briggs, Chairman and Secretary of the Ex. Com., Scipio Craig, of the Southern Cal. Association, and Wm. H. Mills, Vice-President of the Board of Trade, are leading representatives of the many who have excelled in their able efforts to make our Eastern visitors heartily welcome and comfortable within the borders of the State.

Patrons and farmers generally have shown their liberal disposition by promptly doing their part in entertaining, in our towns and cities, our editorial visitors.

MRS. JENNIE C. CARR, of the Woman's Press Association of California, accompanied the editorial visitors from Los Angeles northward.

THE Free Reading Room of the Farmers' Alliance, at Santa Barbara, is a success, through the enterprise of Mrs. Eleanor E. Tousey and others.

TWO Swedish astronomers, Lemstrom and Trumholt, are reported to have produced artificial auroras by means of a network of electric currents between two mountains.

Agricultural Fairs.

State Fairs.

State.	Place and Sec'y.	Date.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

No.	Place and Sec'y.	Date.
1	Oakland	Aug. 8–13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Mackay	
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Th s. Fraser	
9	Rohnerville	
10	Yreka	
11	Quincy, Fred Blinman	Oct. 3–7
12	Ukiah, R. E. Donohoe	
13	Marysville, G. R. Eckart	Aug. 30–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield, J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	Grass Valley, I. J. Rolfe	
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	
33	Hollister	Oct. 3–7
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug.
37	Lompoc, W. I. Nichols	Sept. 27–30
	Glenn Co. Willows, W. V. Freeman	Aug. 9–13

AT the mouth of Nehalem river, on the coast of Oregon, is washed ashore at high tide, a substance having the appearance of a mineral and the qualities of fine beeswax. It is also found on shore in black soil where trees are growing, at considerable elevations above the water. It is sold in Astoria at the regular price of beeswax. It belongs to the hydrocarbon series, allied to amber, a fossil remain of the resinous trees of the tertiary age.

HORSESHOES of rubber set in a metal frame are said to be useful on asphalt or other smooth pavement.

RABBIT-PROOF

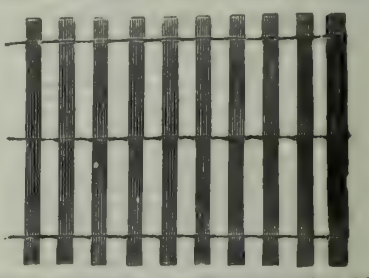
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Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

JUDSON MFG. CO.,

14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.

Cheaper than any First-Class Mill in the market

Every One Guaranteed.

No bearings, no springs, no wheels to get out of order. The simplest mill in the world.

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TRUMAN, HOOKER & CO., San Francisco or Fresno

Save $40.00 on New $140.00

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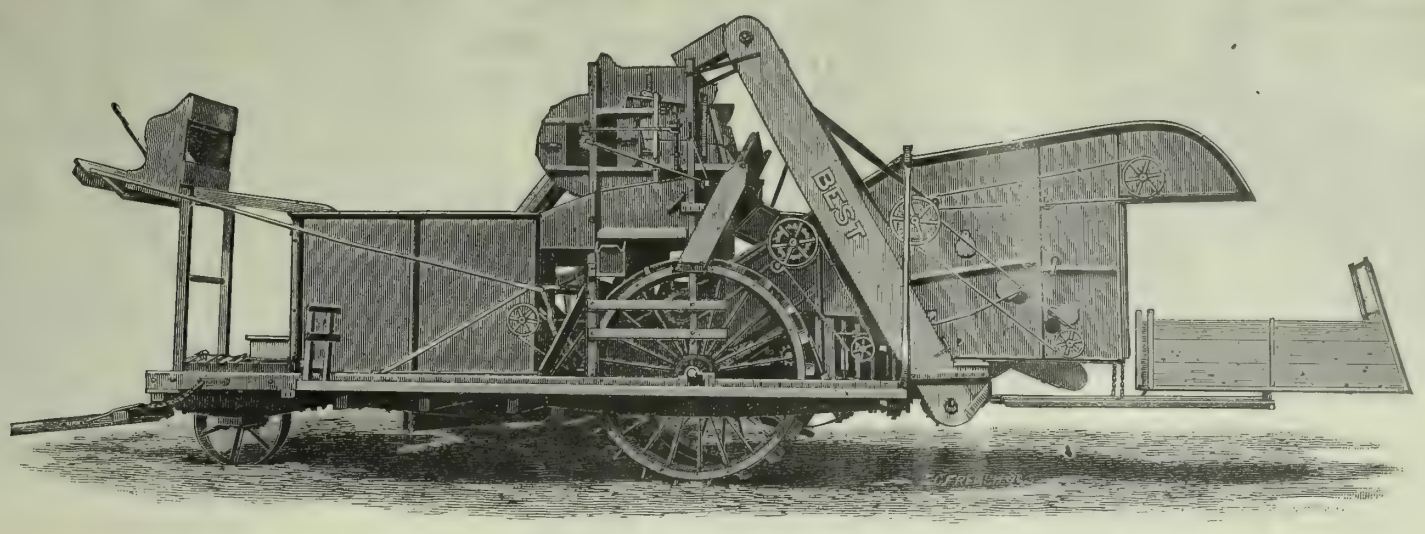
We will deliver, free of freight, to any point west of the Rocky Mountains, perfectly new $140 grade, cushion tire, Referee Safeties, highest grade, for $100. Lists Free.

A. W. GUMP & CO., Dayton, Ohio.

F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

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Educational.

WADE & WADE,
Analytical Chemists and Assayers.

ESTABLISHED 1887 — 109½ COMMERCIAL ST., LOS Angeles, Cal. We have fitted up the best laboratory in Southern California and are prepared to make Assays and Analyses of all Metals, Minerals, Ores, Waters, Fertilizers, Etc. ASSAYING TAUGHT.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
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Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.
ESTABLISHED 1864 Send for circular.



HOPKINS ACADEMY,

OAKLAND, CALIFORNIA. A FIRST-CLASS, SELECT School. Early application necessary. During year 1891-92, TWENTY-FOUR APPLICANTS were refused for want of room. Next term begins August 2, 1892. W. W. ANDERSON, Principal.

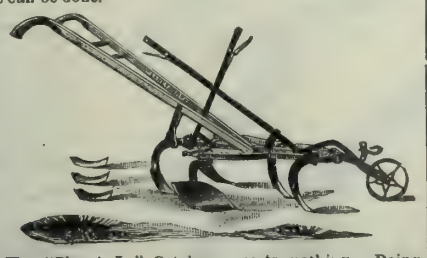
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FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.
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ACTUAL BUSINESS PRACTICE.
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PACIFIC Business College, 320 POST ST. SAN FRANCISCO.
Oldest and Best.
LIFE SCHOLARSHIPS, $75.
No Vacations Day and Evening Sessions
Ladies admitted into all Departments.
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Money IN Farming

Not if the farmer throws it away.
Not if he spends an hour on a row of onions, which the "Planet Jr." Wheel Hoe would do better in six minutes.
Not if he takes half an hour to "set" his old cultivator, when he could change a "Planet Jr." without stopping his horse
Not if he wastes his seed in sowing thick, and then his time in thinning, when he might save both with the new Hill-Dropping Drill. Money lies in raising double the stuff at half the cost. It can be done.



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3 and 5 Front Street, San Francisco, Cal.



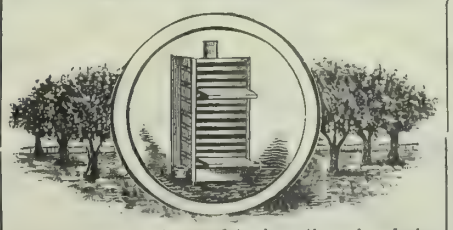
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The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels.
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FRUIT EVAPORATOR
THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free.
THE BLYMYER IRON WORKS CO., Cincinnati, O.
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BROWNE'S
—PATENT—
SQUIRREL EXTERMINATOR.

This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to
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CALIFORN'A STANDARD FRUIT DRIER



Is one of the most complete inventions for drying **Raisins** and **Prunes** by steam in 24 hours—other fruits less time. No sulphur or potash used. Retains all syrup, juice and flavor in original purity. Capacity, dries from 75 lbs green fruit to 20 tons. Send for circulars. CALIFORNIA FRUIT EVAPORATING & M'F'G CO., 347½ S. Spring St., Los Angeles, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.
"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.
The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St, San Francisco.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap, will be sent direct from warerooms, if desired. Address H. F. D., Box 2517, San Francisco, Cal.

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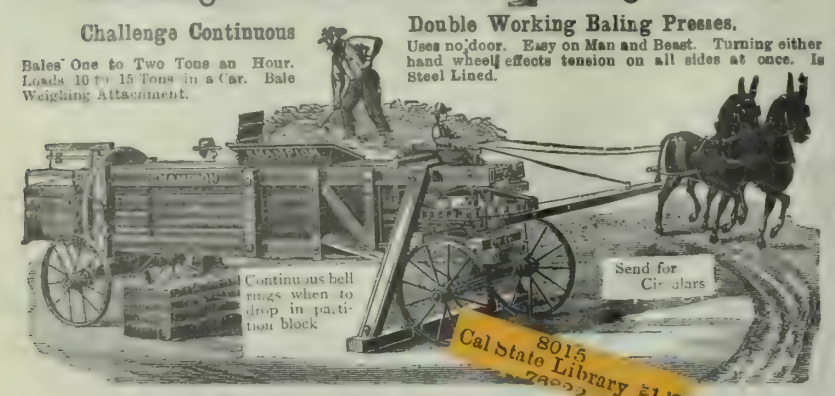


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A FARM OF 188 ACRES IN ASHLAND, OREGON, 40 acres in Alfalfa and well watered. A modern house on place. Address
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Challenge Portable Lever Baling Press.



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Steel Wheels With 5-inch Tires on Truck. Size for Bales. Steel Lined. Weight 3600 lbs.

Most Powerful, Rapid and Durable Press in America.

WITH DOUBLE-ACTING REBOUND PLUNGER POWER and QUICK RELIEF CONTINUOUS BALE CHAMBER,

—WITH—

Bell Attachment which rings when to drop in Partition Block for Hay, Straw, Moss, Etc.

Challenge Double-Acting Continuous Baling Press BALE WEIGHING ATTACHMENT.

By the use of same, each bale can be weighed accurately as it passes out of the press, which is very desirable when wanting the correct weight of each bale. Being attached to the press, is always ready and no trouble to move it about, as is the case when using a platform scale, yet it is just as correct. (warranted.)

SEE IT! TRY IT! AND YOU WILL BE SURE TO BUY IT!

Everything Ready for Work—Even a Fork Wherewith to Feed It.

CONTINUOUS, Making Bales Without Intermission.

NO STOPPING TO TIE. NO DOORS USED, TO BE HANDLED 1,200 TO 2,000 TIMES A DAY.

The Best is the Cheapest. **Complete With the Best Bale Weighing Attachment.**

Agents for the Challenge Detached Power Press, Challenge Full Circle Press, Challenge Belt Power Press, Petaluma and Monarch Presses.

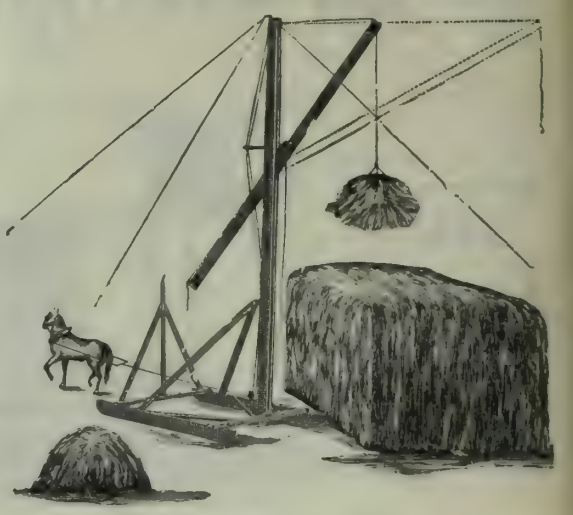
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TRUMAN, HOOKER & CO'S PATENT STEEL WIRE BALE TIES.

BETTER THAN WIRE AND CHEAPER THAN ROPE.

ASK FOR THE ORIGINAL BUCKEYE MOWER AND TAKE NO OTHER. IT IS THE BEST MOWER IN THE WORLD. EVERY ONE GUARANTEED.

THE OLIVER DERRICK.



Description.

The base occupies a ground space of 8x14 feet, mast 27 feet high, boom 22 feet long Boom is suspended by flexible steel wire rope. Its operation is positive and will not get out of order. The boom is extended (as shown by dotted lines in cut) by simply checking a chord; when load is dropped, boom automatically returns to its normal position.

We claim for this machine:

First—It is the only Derrick having an extension boom, whereby load can be deposited at any point on a very large rick.

Second—It is the only Derrick that can be easily and quickly folded for transportation Horse used for hoisting hay can elevate mast and man can lower the same.

Third—It is the only THOROUGHLY PRACTICAL Derrick on the market. It is well made of good material, and we will send it anywhere, guaranteeing satisfaction.

WRITE FOR PRICE.

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Celebrated Randolph Steel Header, Best in the World. Buggies and Vehicles in great variety. Agricultural Implements of Every Description.

SEND FOR CATALOGUE.

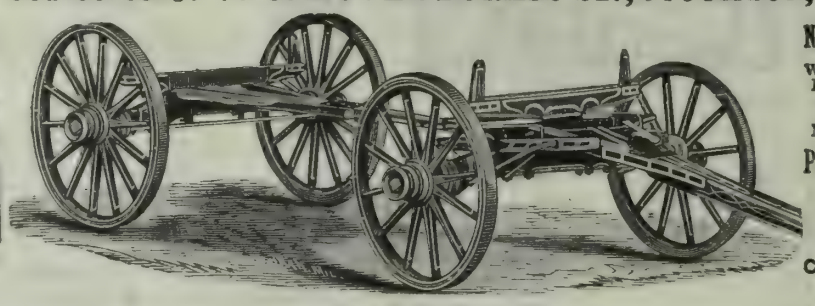
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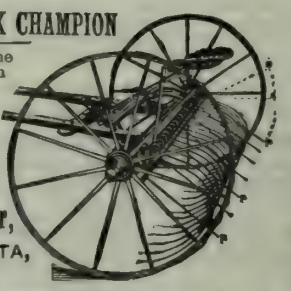




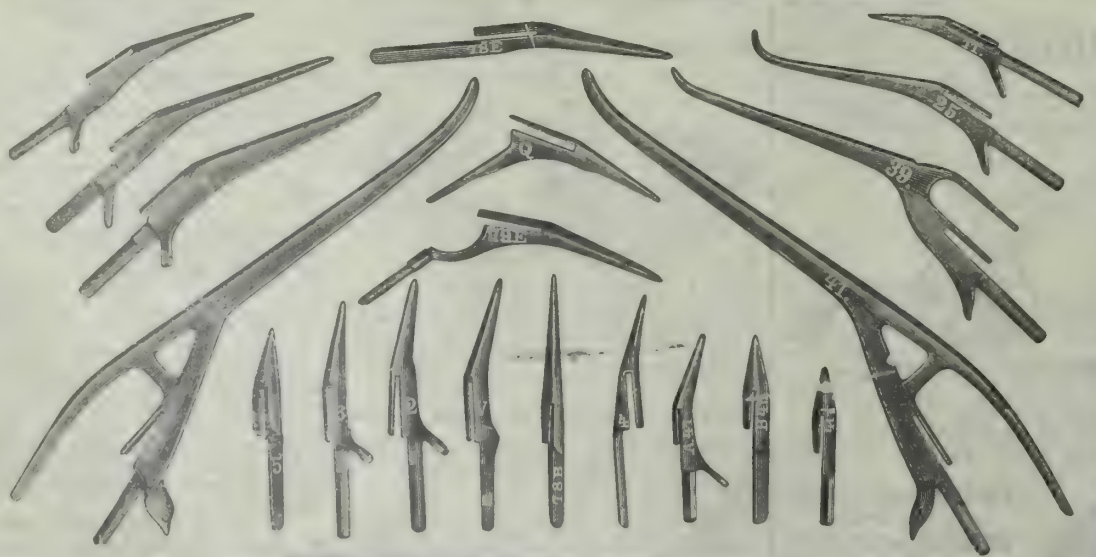
NEW YORK CHAMPION

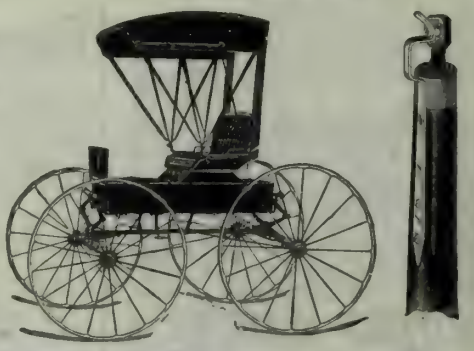
Warranted the Best Rake on Earth.

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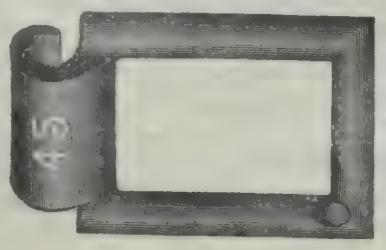


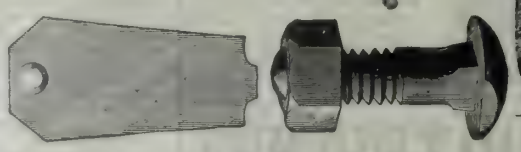
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TRIUMPH MOWERS —AND— REAPERS.

—— SEND FOR CIRCULARS. ——

GENERAL RANCH, VINEYARD AND ORCHARD SUPPLIES.

ILLUSTRATED CATALOGUE MAILED ON APPLICATION.

PACIFIC RURAL PRESS

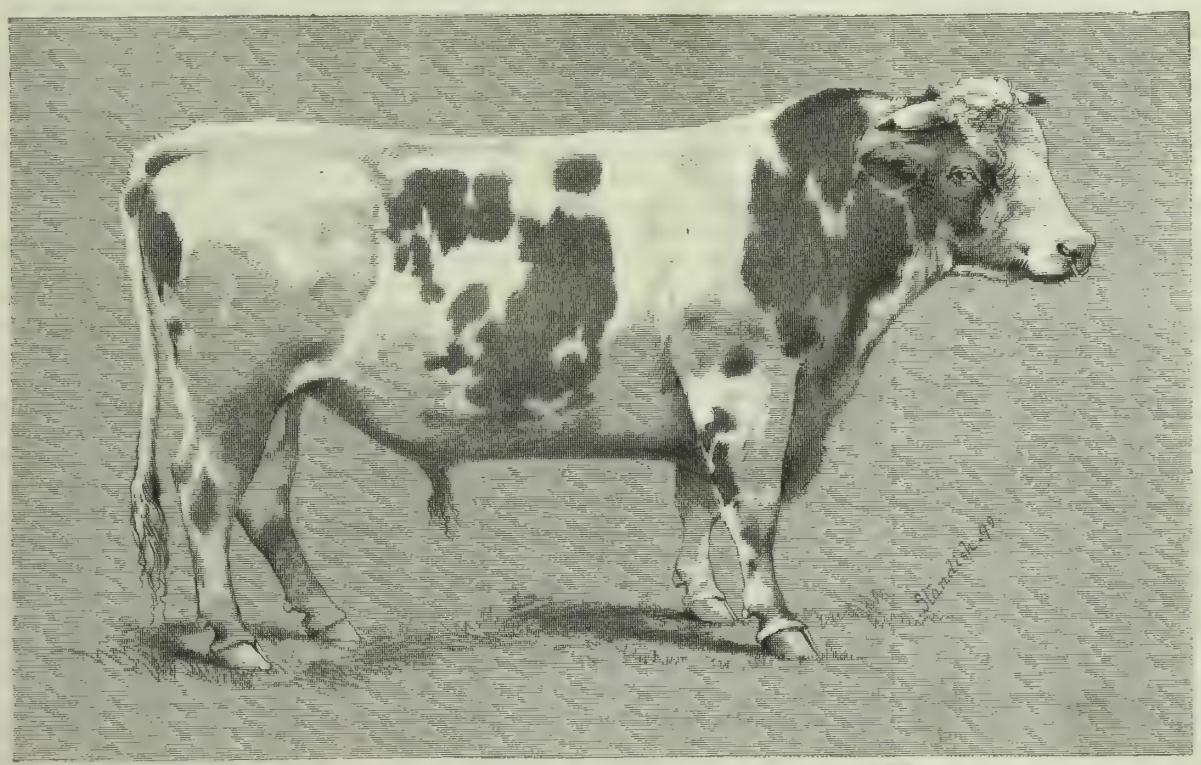
Vol. XLIII. No. 23. SAN FRANCISCO, SATURDAY, JUNE 4, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

A Possibility in Pampas Plumes.

California has suffered for some recent years because of inactivity in one of her most esthetic products. The capacity for this product at the East seemed limited, though the appetite at the outset was alarming, and at one time it looked as though the mesas in some southern counties might become vast feather beds. Just about the time, however, that the common people comprehended the incomes the acute were securing from pampas plumes, the bottom partially dropped out of the business and those who were slow to get the grass roots into their fields were very fast to get them out again. The fact was that while the plumes were new at the East, they were a genuine sensation. As soon as all the mantel vases were filled with them and the plumes had gathered dust and flies for one summer, the housewives unceremoniously ducked the dust and fly laden things into the kitchen stove and would have no more of them. Thus our great hope ended in smoke, so far as the Great Eastern States were concerned. Still, we had the world for a market and most of the recent product has been marketed in Europe where, it is said, they are used in home decorations, in street parades, etc. Germany was for a good while the largest buyer. England, Russia and Italy now purchase large quantities.

But the latest thing is the possibility of a grand demand, before which producers are now standing in keen expectancy. An enterprising Los Angeles lady, full of patriotism and business-sense, has devised an emblem which, under certain conditions, may become of sweeping popularity in the coming Presidential campaign. It and its uses are described as follows: At one end of a neatly turned stick about four and a half feet long are three small branching sockets of tin. When the stem of a plume is firmly set in each socket there are three long wavy plumes of three colors spreading in fan shape from the top of the stick. It makes the most novel and beautiful device of the kind ever conceived. While pampas plumes have been talked about in the East as a campaign emblem, their use in this device is purely a Californian conception, for which the party in this State is indebted to the patriotic woman mentioned. As the pampas plume is a California product, so soon to be honored nationally, it is fit that the California delegation should burst on the Eastern view bearing Columbian plumes in the prettiest device that has been suggested.

This emblem is supposed to be singularly appropriate to the nomination of the "plumed knight," and if he should make the race, the California pampas plume might again ride the crest of popularity, as well as ornament the topknot of the party worker. In that case, this year's crop of plumes would sell at high figures unless some sharp Yankee should bring out bogus plumes at low figures. But suppose the "plumed knight" should not be in it; then sad to relate, the pampas plume would perhaps miss its last chance of history.



HOLSTEIN-FRIESIAN BULL TROY SEDRO 13,849 H. F. H. B.—OWNED BY F. H BURKE, MENLO PARK.

SOUTHERN CALIFORNIA FARMERS' INSTITUTE. — The meetings at Pomona on Friday and Saturday of last week were very well attended and much interest manifested. There was an abundance of material in the form of essays and discussions, and a very free *extempore* recital of experience and observation. Many of the more practical portions of the proceedings will appear in our columns—some of them will be found in this issue. Hitherto the meetings have been held under the auspices of the State University cooperating with a County Institute organization in Los Angeles county. At last week's meetings, several adjoining counties were largely represented, and, as no local organization had been undertaken in these counties, it was decided to broaden the scope of the effort, as is implied in a change of name to Southern California Farmers' Institute. This will admit of holding meetings outside of Los Angeles county, and the opportunity was quickly made use of by appointing the August meeting at Chino, at the invitation of Richard Gird. This will give attendants a chance of a most impressive lesson in sugar beet culture, for the great beet fields and sugar factory at Chino will be in excellent condition for inspection. The meetings in August will have full programs prepared, and will doubtless attract wide attention in Southern California.

FRUIT PROSPECTS.—At the meeting of the State Horticultural Society, reports from members showed generally a fair crop of peaches in the interior, and light along the coast. The pear crop in parts of the northern belt and in the San Joaquin valley was reported heavy, but light in other sections. Apricots were reported as good, but the crops of cherries, plums and prunes light. High prices of fruit for the coming season were predicted, as crops in many parts of the country were injured by the recent storms.

DROUGHT IN RUSSIA.—The Russian Imperial Economic Society reports that the protracted drought has caused serious damage to grass, and there is damage to crops in every province. Farmers are complaining of a lack of pasturage. The society recommends the storage of grain and fodder.

A California-Bred Holstein-Friesian.

We give upon this page a portrait of one of the most notable Holstein-Friesians bred in California from distinguished imported ancestry. His breeder is Frank H. Burke of La Siesta Ranch, Menlo Park, whose exhibits of fine stock at California State and district fairs for some years back have won distinguished honors. Troy Sedro is a leading prize winner, and it is claimed that he has never been beaten from calfhood up to the fairs of 1891. In three years he scored 11 first prizes, thus adding to the records of his sire and dam, who were both notable beaters.

Troy Sedro is No. 13,894 H. F. H. B., which might mean Herd F. H. Burke, if it had not earlier been accepted as the initials of the Holstein-Friesian Herd Book. Troy Sedro is the son of Sedro (3168 H. H. B.) and was calved September 22, 1888. Sedro was by Imported Herder (2331 H. H. B.) whose dam was Antje Laan, with a Holland record of 56 pounds as a two year old and 64½ pounds as a three year old. Troy Sedro's dam was Edna of Troy (603 H. F. H. B.) by Violet King, out of Violet, a champion of her day both in the prize ring and at the pail.

Troy Sedro is over the average size, and, as the portrait shows, of excellent proportions. He is well backed, very handsome about the head and everywhere symmetrical.

THE LAW IS ALL RIGHT.—It may frighten our Railway Commission to know that the courts would sustain them if they should attempt to do anything. Perhaps such support would be as unwelcome as the finding of work by a tramp who is hunting for it. And yet that is the danger they must incur if they should wake up, for it has been done in Oregon. Action was brought in Marion county by the Board of Railway Commissioners against the railroad to compel the Southern Pacific to accept the schedule of freight rates adopted by the Board. The court has just decided the case in favor of the Board.

HAY IN YOUNG ORCHARD.—The growth of hay in young orchard has been usually condemned as bad practice because of the exceptionally exhaustive character of such a crop both of moisture and fertility. It is not alone the moisture lost by the hay which is deplored, but that which is lost by evaporation from an uncultivated surface. Another danger of hay or grain in young orchard is emphasized by a telegram from the Rotterdam colony in Merced county, where a field fire destroyed twenty acres of pear trees belonging to W. E. Muller, and twenty tons of hay, with a loss of $2,500.

THE agricultural appropriation bill was completed by the House Committee on Agriculture today, and it appropriates $507,500 more than last year; $1,000,000 is appropriated to carry out the provisions of the meat inspection law.

THE Provident Surgical Society of London distributed last year 6223 artificial arms, legs, teeth and noses. One of the noses was brought back to be exchanged.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 4, 1892.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Fruit Graders—D. D. Wass & Co.
Spray Pumps—Wm. Wainwright.
Cultivator—Malcolm Macleod, Los Angeles.
Fencing—California Fence M'f'g Co.
The California State Fair.
Holstein Bull—T. Lilienerantz, Aptos, Cal.

☞ *See Advertising Columns.*

The Week.

The hot wave has reduced notably the mountain snows, and consequently raised the rivers. Through the San Joaquin valleys the streams are running full, and the San Joaquin is flooding the lowlands in the lower valley, but this is expected, and the only effect so far is the moistening of lands for late feed and summer crops. The Sacramento has been very high, and the State Capital was saved from flooding by a break in the levee on the other side of the river, where some damage was done by overflow.

These floods are wholly due to sun water and so far have been of slight injury. The reports from the prairie States of storm floods, and tornadoes continue. There has been great loss of loss of life and property in Kansas and adjoining States.

Decoration Day was generally observed on Monday. Business was laid aside, and exercises proper to the day were held in all parts of the State.

THERE is said to be an oak in the Imperial Gardens at St. Petersburg which has grown from an acorn taken from a tree growing near the tomb of Washington at Mount Vernon. It was planted 50 years ago by George Sumner of Boston, the brother of Charles Sumner.

At the South.

We had opportunity during a flying visit to Southern California to attend the Farmers' Institute at Pomona to observe many indications of the industrial activity which is pervading many southern sections. Naturally we saw most of Pomona Valley. The development of the region in safe and varied lines of agricultural production is notable. With this growth also come many manifestations of progress. The Pomona Board of Trade is an exceedingly active and effective body and places the stamp of its work upon many important measures. Their place of meeting would do credit to a metropolis—in fact, the State Board of Trade in this city is not so well housed. Public works at Pomona are also very creditable and private enterprises show much life and thrift. A public park covering the sides and summit of a round-topped hill rising like a butte very near the main streets, and having well-made circling roads by which the summit of the hill is reached, is an acquisition which many towns might envy. The impressional visitor seeking a home could hardly resist the view of the broad valley spread beneath him in all its loveliness of varied culture, and the charming environment of hills and lofty mountains which encompass it. Residents of other towns visiting Pomona can hardly escape without forming resolutions of emulating its public and private enterprise, and thus the influence of the work done there will become State wide. If our people could only visit each other's towns more frequently there would be less local conceit and a more general impulse toward improvement.

Everywhere in Southern California we heard of new individual and corporate movements aiming at the development of water and the improvement of waste lands. It is not remarkable in view of the constant reminders of the valuable results of such efforts which are to be seen on every hand. There seems to be adequate capital for hosts of promising enterprises—not in staking of dry washes into town sites as the fashion once was, but in legitimate enterprises upon the basis of profitable production. Such undertakings are emanating constantly from the old centers of enterprise, with the names and fame of which all readers are familiar, and the aggregate growth of the south result-therefrom will be something most notable and gratifying.

In Los Angeles, the great city of the south, there is at present discernible a clear spirit of advancement. Growing business and rising rents are encouraging free investment in new business blocks. The business tide is leaping far beyond its old bounds, and it is clear that boom dimensions will not accommodate the business, although the boom dimension of suburb was probably largely overdrawn. Where the old Los Angeleno lolled along in the sun, throngs are now whisked forward and backward by a network of cable and electric railways, as though time was the essence of every man's contract. Even all the time which old Los Angeles succeeded in killing during all its history could hardly suffice for a day's life of the new town.

One hears very much in Southern California of the development of some parts of Arizona. The success already attained with early fruits in the territory is attracting much capital. Irrigation investments are proceeding rapidly, and Southern California contractors, laborers and supply dealers are all enlisted in this work. It is exceedingly inspiring and energizing to sojourn even for a brief moment amid the indications of industrial activity at the south.

Danger in Grain Gambling.

The influence of grain-gambling in unsettling values, and in generally making a shuttle-cock of man's labor and necessities, is frequently remarked. This is perhaps the longest count in the indictment against it, but another evil is the destruction of personal credit and responsibility in those who conduct the trade. Gamblers too frequently operate with stolen capital, and grain gamblers who bring themselves into situations which destroy their business responsibility are hardly less culpable. However the moral may run in the case, the fact is, that very often, as at Chicago on Tuesday of this week, much grain was lost by those who had no part in the gamble, and often by producers at a distance who did not even know that a "deal" was on. There had been a corner, and a sharp rise in May corn. The bears triumphed and the bulls collapsed. A dispatch says:

> The loss to the trade was larger, it was estimated, than that suffered by the huge collapse of S. V. White in September corn. It was said that one commission house suffered a loss of $55,000 on 100,000 bushels of corn bought for a customer at 45 cents and sold to Coster & Martin to-day at $1. There were innumerable other instances of the same sort. One firm is said to have suffered a loss of $12,000 on 25,000 bushels sold the some way. The receiving houses which received car lots from country customers early in the morning and sold to the clique at 98 cents suffered more than any other class.

How is it possible to do any safe trade while the merchants are knocked about in this way? This gambling in staple products should be made impossible.

Statistical Position of Wheat.

The statistical position of wheat does not warrant the low range of prices for the cereal ruling in our market. While it is admitted that the crop outturn on the Pacific Coast will, without some unforeseen unfavorable climatic changes, be larger this year than any year since 1882, still it is but a drop in the bucket of the world's requirement. Viewing it from this standpoint, then, the depression is largely local, and a recovery in values can be looked forward to with a feeling of considerable confidence.

The United States Department of Agriculture estimates the world's wheat crop in 1891 at 2,352,537,497 bushels (Bulgaria and Caucusus were reported for the first time), allotted as follows: North America, 669,313,672; South America, 47,256,500: Europe, 1,161,581,716; Asia, 399,707,007, Africa, 40,803,996; Australasia, 33,874,606. Leaving out Bulgaria and Caucusus, the yield was 2,238,245,081 bushels, against a total crop of 2,203,889,552 bushels in 1890, an increase of 34,355,529 bushels. This increase is quite small, when it is considered that for the three years ending with 1890, the world's wheat reserve was reduced by 341,000,000 bushels, making it fully 1,000,000 bushels less than nothing. The total wiping out of the world's wheat reserve would have caused famine prices had it taken place some 15 years ago, but now it is largely neutralized by steam and electricity bringing within easy range supplies from countries having maturing crops.

The world's wheat crop for 1892 is estimated, at this writing, as follows, in bushels: North America, 560,000,000; South America, 50,000,000; Europe, 1,250,000,000; Asia, 350,000,000; Africa, 42,000,000; Australasia, 35,000,000; total, 2,287,000,000 bushels, against 2,352,537,496 bushels in 1891. In making our estimates for this year we took the more favorable crop reports, so that if in this month the weather should be unfavorable at home or abroad, the total will be subjected to a considerable reduction.

High prices in the last half of 1891 drew out liberal supplies in each civilized country, and, consequently, the old-crop wheat in farmers' hands is estimated to be next to nothing, while the stocks in public warehouses do not average more than they did at the corresponding time in 1891. Accepting this as correct, then, with a smaller crop in 1892 than was harvested in 1891, the statistical position of the cereal is in favor of farmers, and it will be only a question of time when values will appreciate.

The bears and the ship ring in our market ignore the favorable statistical position of wheat and place in the foreground the prospective large crop on this coast. While we confidently expect in California a surplus available for export of not less than 1,050,000 tons and an increase in Washington and Oregon of fully ten per cent over the 1891 crop, yet there is nothing to indicate that ships will command a higher average for outward charters in the season of 1892–93 than they did in the season now drawing to a close. The certainty of a shortage in the wheat crop of the Central States and a possibility that the grade will be correspondingly poorer, there is a very strong probability that overland shipments from east of the Cascade range of mountains will assume that degree of importance which they held in the season of 1890–91. In the latter season, it is but fair to say, there was a remarkable scarcity of rolling stock, which is not so severely felt now as it was then, to move the surplus to tidewater. This scarcity naturally worked against free shipments of wheat to coast ports in Oregon and Washington, and caused more grain to be sent eastward in cars that otherwise would have been sent back empty. While it is not at all probable there will be any marked scarcity of cars to move the crop to tidewater, yet the markets in the Central States may and probably will offer better prices. With better prices obtainable, large quantities will be shipped eastward which would relieve the Pacific coast markets by taking out just so much less which otherwise would have been exported by sea. Even without this relief we do not see, at this writing, any reason for expecting any shortage in the supply of tonnage on this coast with which to market the surplus. We have in port, engaged and disengaged, a larger supply than at the corresponding time in 1891, while the tonnage on its way, which is less than was on its way in June, 1891, is being steadily added to. Aside from the above, the carry over of old in this State, Oregon and Washington will probably not be as large as it was in 1891, when it was less than at the corresponding time for years past.

SUEZ CANAL PROSPEROUS.—The annual report of the directors of the Suez Canal Company shows that during the past year traffic through the canal increased 1,807,268 tons. A net dividend of 16f, 50 centimes is declared. The directors announce their intention to make a further reduction of 50 centimes in tolls, beginning January 1, 1893.

WEDNESDAY morning the wool storage and packing establishment of George Abbot, on the southwest corner of Bluxome and Fifth streets, in this city, was totally destroyed, involving a loss in all of about $70,000.

The State Press.

Santa Maria *Graphic:* "The whole tendency of the State of California is to solid growth, and to the development of its natural resources."

Eureka *Times:* "The exclusion of objectionable foreign immigration has become a public necessity. No well-informed man will dispute this proposition. 'America for Americans' is a sentiment that evokes a hearty and approving response from ninety-nine out of every hundred people that one meets."

Scott Valley *Times*: "Those who think that the denudation of the mountain slopes of their forest growth has no influence on climate, should read in the Los Angeles *Times* the statement that on the shores of the Mediterranean there are vast tracts of formerly fertile lands where the progress of forest destruction has so utterly exhausted the soil that animal life has become almost extinct. Birds and animals have disappeared, fish have abandoned the brooks that dry up in every warm summer, chronic famine has exterminated almost the entire family of vertebrate creatures, with one exception."

Castroville *Enterprise:* "A man in San Joaquin county has seen the road to wealth that we have sought to point out. He recently told a Stockton *Mail* reporter that as soon as the supply of coyotes began to run short that he intended to start a coyote breeding farm to supply the State's demand. He thought he could get at least twelve pups a year, which would be worth for their scalps $60. On an acre of ground he ought to be able to raise $6000 worth of animals. Who will now gainsay but that is a glorious State we live in, with wonderful room for development in various industries? Raise the bounty on squirrel tails a couple of cents, and the lonely plains may become tenanted by speculators willing to raise squirreis for the bounty offered."

Mr. Doyle Again.

Review of Mr. Kinney's Letter on the Canal Question.

MENLO PARK, May 28, 1892.

TO THE EDITOR:—At a recent meeting of the Executive Committee of the Nicaragua Canal Convention, I was asked to reduce to writing the conditions essential, in my opinion, to a measure providing Government aid to the building of the canal. After reflection, I passed it to the subcommittee in charge, in the following form:

"The cardinal features of congressional legislation in aid of the construction of the canal should be as follows: 1st. It should provide sufficient funds to insure the completion of the work in the shortest time possible. 2d. It should fully secure the Government against pecuniary loss. 3d. It should insure the expenditure of the money under the strict supervision of the most competent army engineers, so that every dollar expended shall represent a dollar's worth of useful work or material employed. 4th. Control of the Board of Directors and the corporate management should be vested in the United States, as a precaution against possible abuses in administration or management."

I desire to lay these conditions before the readers of the RURAL PRESS for their intelligent criticism. I am quite as earnest as Mr. Cannon, Mr. Pool or any of the Farmer's Alliance, in desiring to prevent any fraud or swindle under the disguise of a public improvement, but I am also in earnest in wanting the canal built, and *built by American capital*, and I am quite sure that adequate precautions can be taken against abuses if we will but try. If the above four conditions fail to express all that an Act of Congress on the subject should insure, I hope that some of the gentlemen who have taken part or felt an interest in their discussion will give us in writing a clear statement of what further is needed. If, however, they are deemed adequate, I do not see why all Californians, and, for the matter of that, all the producers of the country, should not unite in asking such legislation, leaving Senators and Representatives in Congress to devise—subject to the scrutiny of the press and the public—the details of the law to be passed.

I assume the sincerity of the gentlemen who criticise the pending bill, but a little reflection will show them that to postpone all action until every one is satisfied, is, practically, to put it off forever. Objections to the principle of the bill I am ready to discuss, but I cannot attach much weight to Mr. Abbott Kinny's objection that even, assuming that the bill now before Congress does give sufficient security," etc., "we still have the danger of further Congressional modification, which would destroy it," etc. If Mr. Kinny is really afraid to have Congress pass a good law, lest it should at some future time change it to a bad one, he might better study out some ingenious constitutional amendment, which will restrict the legislative power of that body, to the passage of *good* laws. When, however, he proposes to postpone all needed legislation until such security can be had, I trust he will allow me, without offense, to consider him a little overcautious. He reminds me, I cannot tell why, of Mr. Huntington's objection based on the frequent occurrence of earthquakes in that country *for the seven hundred years preceding its discovery by white men!*

I fear Mr. Kinny is subject to some prejudice on the question, and, unintentionally miscalls things, for he speaks of the pending bill (if I rightly understand him) as "the scheme of a private company to construct and manage" the canal. He will doubtless be glad to learn, in correction of this mistake, that the pending Act is just the contrary; it is a scheme to practically take the affair out of the irresponsible hands of a private company, where it now is—subject to all the abuses of uncontrolled expenditure by them—and put into the hands of army engineers selected by the President of the United States. Mr. Kinny is probably aware that the only disbursing officers of our Government who give no security for the funds entrusted to them are the Engineer Corps of the Army, and that they are the only ones among whom a defalcation never occurs. I would rather trust them with the expenditure of money, that I have to help pay the interest on, than any corporation I ever knew.

Mr. Kinny inquires as to the option to take 70 per cent of the stock. It is to take it at *par*, and it is to last as long as any of the bonds are outstanding. Hence, *mutato nomine*, the proposition amounts to just this: You, Mr. Kinny, with some associates, are (let us suppose) engaged in a great enterprise which calls for a good deal of capital, but has the assured promise of large returns. We will suppose it a toll bridge, over which, when constructed, half the world will have to pass, and pay tolls. You have laid your foundations, got your working plant together, and are pushing the work with a view to its completion within the twenty years your charter allows for the purpose. A wealthy uncle of yours, who, in fact, encouraged you to undertake the job, now comes forward and says to you: "Nephew, I take a deal of interest in this enterprise of yours; so much so that seven years ago I was on the point of undertaking it for my own account, and had even made a preliminary contract to do so. I gave it up then because my old partner, G. B., pointed out to me that we had made an agreement many years ago (which I had partly forgotten about) to the effect that neither of us was to do it for his own sole account; and so, when reminded of this, I backed out. But there is nothing to hinder me from helping you liberally, and I'll do so. The fact is, having so much land on both sides of this bridge, I can't well afford to have it built or owned by any but assured friends of my own. Besides, blood is thicker than water, and my family will have to use the bridge so much and pay so much of the tolls over it that I think it my interest to have a voice in regulating them. So, Nephew, I'll help you build the bridge. Your credit is not good enough to enable you to do it to the best advantage. If you borrow the money yourself you will have to pay twelve, fifteen, perhaps eighteen per cent per annum for it, and you will get on slowly, even at that. I admit that, even so, there is a good deal of money in the enterprise, but I can show you a cheaper way to get the money you need, and on proper terms; will help you to get it."

"That is certainly a kind offer; but what are the terms, Uncle?"

"Well, my son, my plan and terms are these: Make your notes, to my order, for the money you need, say a million of dollars, and pass them over to me. I will write my endorsement on them, and with my credit to back you, you can borrow all you want at 3 per cent per annum. As security that the money shall not be misapplied, I will, however, keep the notes in my safe and only dole them out to you, in sixty day progress—payments as the work goes on—and I will appoint my own engineers to keep strict watch of every dollar expended, only paying, on their certificates, for work and material actually furnished. I will also require you to deposit with me seventy per cent of the whole stock of your company as security, giving me liberty to purchase it at any time within twenty-five years at par, and the right, meantime, to vote on it, so as to make sure of always having a board of directors satisfactory to myself. I shall require you, also, to lock up all the unissued stock of your company, and that it never shall be sold without my consent. On these conditions, my dear nephew, I am willing to aid you by the loan of my credit, as above stated."

Now I can understand that Mr. Kinny and his company might accept his uncle's aid on these conditions, harsh and mistrustful as they appear, for he knows that the old gentleman's credit will insure the completion of the work, and save him all the trouble of negotiating elsewhere for money; but he would certainly find it very unjust if he were charged with a scheme to induce his uncle to build the bridge for his benefit. He would, I think, be apt to resent such a suggestion with a good deal of indignation. He would say, and truly, "I made no application to my uncle on the subject; he sent for me and proposed it to me himself; *the fact is, he has so much land and cattle on both sides of this bridge that he needs me more than I need him.* Just consider the immense breadth of land he has on either side of the stream and the enormous plant of animals, workmen, agricultural implements, etc., he has to maintain on both sides of it. If he had the bridge, his force—men, animals, plows, harrows, mowers, rakes, wagons, etc.—could, after finishing their work on one side, pass over to the other and do the work there; whereas, now he has to keep two separate establishments of equal magnitude at double first cost, and double the cost of maintenance and double wages. The saving in these items that the bridge will effect for him will of itself be more than the cost of the whole structure. No doubt that is the reason why he sent for me and proposed this trade to me; and as, in fact, I depend a good deal on the old man, and owe him something, too, in the way of family love and kindness, I accepted his offer; but he, not I, is the author of and gainer by the trade."

That is just the state of things here. The proposed legislation originated, not with the canal company, but with the committee on foreign relations of the Senate. They see plainly that the weak side of our country is its enormous frontage on two oceans, with no easy communication between them. We must either maintain two navies—one on the Pacific and one on the Atlantic, or get a canal across the isthmus. They naturally prefer the latter, as less expensive and more useful; useful in peace as well as in war. They summoned the president of the company before them and demanded a detail of its plans, etc. "Where," asked the members, "do you expect to get the money for this work?" He answers, "When the amount we have ourselves put into it is sufficient to constitute a basis of credit, we expect to borrow it, in our country first, but if Americans won't lend it, we will take it from whoever will." "What interest do you expect to pay?" "We will get the money as cheaply as we can, but will pay whatever rate is necessary to obtain it." The committee inquired, "What will you accept from the United States for the interest of the present owners of the enterprise?" The answer was, "If the Government desires to buy us out, and take the work into its own hands, it should repay us all our outlay, with interest." "You would expect some profit to compensate you for your trouble and time spent?" "Yes; but that need be no obstacle; you may let the Secretary of State and the Secretary of the Treasury decide on the amount and we will accept it." "Will you put that offer in writing and deliver it to this committee?" "Certainly;" and it was done, and *that offer, in writing, remains today on the files of the foreign relations committee, and is still open to acceptance.* It does not suit the Government to accept it to-day, but perhaps the time for accepting it will yet come.

The Committee went into an inquiry as to the details of expense of construction and whether a Government guaranty of the company's three per cent bonds, on the basis proposed in the present bill, would be acceptable and sufficient for the work. Mr. Miller expressed his belief that it would. They then asked him to draw a bill for the purpose, but he declined. He was quite determined to preserve his independence, and under no circumstances to become or appear a solicitor for Government aid. His attitude is just what I have above imagined for Mr. Kinney and the supposed bridge. We are going to build this canal, for the benefit of the commerce of the world, and for the profit to be derived from the enterprise. Its far-reaching effects on the prosperity of the maritime nations of Europe and America we do not ignore. So far as we can influence them in favor of our own country, we will do so. We have proved this intent by asking our charter of incorporation from the American Congress, instead of going to France or England for it, as we might have done. We shall invite the cooperation of our own countrymen in preference to all others. It is the crowning work of the Nineteenth Century, and it is fit that it be done by the most progressive people of the age. If our United States Government desires to push us aside and take it up itself, *en hora buena!* Make your own terms! But in case of Government interference or aid, you gentlemen must draw up your own enactments. I have not come here to ask aid, and I object to putting myself in such false position. *Whatever action you take on the subject must be taken because you deem it wise and patriotic, and because the United States want the canal;* not because this company solicits or desires aid.

The bill was accordingly prepared by the Committee, and stands before the Congress and the people on its merits as a public measure. Do we hear of any lobby agents soliciting Congress for its passage? Has the company an agent or a "solicitor-general" in Washington urging it, or furnishing elaborate printed briefs to Congressmen and committees? Are there any rumors of votes bought, or deals made in its behalf? None of these things. There is no money to be made by anyone out of the pending measure, and hence no lobby to support it. It is demonstrated that the canal will save the Government one half the cost of the new Navy we are now commencing to build, and one-half of the money to be annually spent on the naval establishment forever after its completion, and it will cost the Government nothing, for all that is proposed is a loan of its credit against good security. These are surely reasons enough.

JOHN T. DOYLE.

Letter From Mr. Ohleyer.

YUBA CITY, May 26, 1892.

TO THE EDITOR:—I regret to say that it has been a long time since the writer has availed himself of your "standing" invitation to contribute such thoughts as I might be possessed of for your columns. The neglect was an enforced one, but was just as culpable as my silence may have been acceptable to the RURAL. Be the situation as it may, I propose a venture upon your valuable space and good natnre for the purpose of reviewing a very grave and, I might say, hackneyed question.

I feel impelled to this step by a reference to the hydraulic mining question and to myself to be found in your neighbor, the *Mining and Scientific Press*, of May 21st. The article seems to have been written by a stranger, or one that had forgotten some well-known facts. Your cotemporary reviews the prospects of the mining bill now before Congress in a glowing manner, based on information furnished by Mr. Luttrell, and then quotes the writer as editor of the Sutter County *Farmer*, as throwing doubt upon the project getting the endorsement of Congress.

It is hardly worth while to state that George Ohleyer has not been connected with the Sutter *Farmer* in any capacity for more than two years last past. He submitted to an interview on his return from Washington, wherein he expressed his conviction as to the prospects of the mining measure, which he had a right to do, a right that has been exercised quite freely by the hydraulic press, even to the extent of pronouncing the scheme hopeless in the present Congress.

I should have ventured a reply to the *Mining Press* had I not found on another page some further reference to me, after predicting a resumption of the flow of the golden stream upon Marysville in these words: "Until then, this very able and otherwise estimable gentleman must be permitted to indulge his favorite pastime in peace." Now, if I am not mistaken, this is notice that I shall not appear in the columns of your neighbor, either for censure or defense, hence my appeal to your generosity.

You will doubtless agree with me that it would be passing strange if so momentous a question as the hydraulic mining question, as now before the American people, shall not be discussed. Why, sir, it overshadows every other question that can be raised or thought of by a people who are to reside beneath its influence. It is not necessary to recite its history now. It has has had its day, and has left its ineffaceable mark. After much bitterness and tribulation, there came an unconditional surrender to law and decrees of the highest tribunals in the land. It did not at once follow the adjustment, as it should have done, which caused well-grounded distrust of the little giant, and I regret to say, the cause of the distrust is not entirely removed. But let that pass for the present. Our hydraulic friends, individuals and press, by shouting "*no more injury to land and rivers*," were enabled to construct a plea for national aid. Under no other banner could they have approached the Federal Government. A mountain of faith and hope was engendered for which there was no warrant but a very slender thread found in a certain report. A bill was framed intended to be in accord with it. Like all human creations, this bill is not perfect, and to say that, whether right or wrong, it should be taken without examination and without criticism, is demanding too much at the hands of a jealous and injured people. As an instance of the frailty of the bill, it purports to be a measure to "*regulate hydraulic mining in the State of California*," and then in its construction makes it optional for any mine to accept its provisions; and there is no penalty attached for noncompliance with the act. Would you enact a law regulating the disinfection of trees for those only who would choose to be governed by it? Surely not. Is it any wonder that the people who have suffered untold injury view the progress of such a bill with distrust? Again, the National government is called upon to restrain the coming avalanche from the public treasury, when the very opposite is suggested by the Engineering Commission, on whose report so much reliance is placed.

Now, Mr. Editor, the writer has good reasons for believing that the farmers of the Great Central States and the people of every other calling will very earnestly protest at being taxed for the benefit of private individuals and corporations, many of them nonresidents. The farmers will hold that they, too, are entitled to bask in the favors of Uncle Sam, being also a worthy class of citizens. Even the newspaper man could be of more use to himself and mankind if the Government would supply him free with paper, ink, etc., required in his office. All such contributors to the hydraulic purse will of course still have to labor a dollar's worth to get one. To me the proposition seems irrational, preposterous and unpatriotic.

Much is said concerning the enormous output of gold—past, present and future; and yet the cry for aid shows that hydraulic mining is not, nor ever has been, self-supporting. If this system can only enrich the moneyed centers (as it seems to) and impoverish the mining communities, its claim for federal aid is not well-founded.

But, dear editor, I have written more than I intended, for which I crave your indulgence. While we all wish that the golden treasures hidden in our mountains may be uncovered and utilized, the riparian proprietor must be permitted to scan the process by which it is to be accomplished. Very respectfully,

GEORGE OHLEYER.

Weather and Crop Bulletin for Week Ending May 27th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Lassen County.—Susanville—Highest temperature 86 degrees, lowest temperature 47 degrees, no rainfall. The weather has at last settled down, and everything is growing fine, alfalfa will soon be cut. *Humboldt County.—Eureka*—No rainfall. The weather conditions for the week were very favorable to farm work and growing crops. Considerable corn planting was done the past week; all crops are doing well now, but the cherry, peach and prune yield will be considerably below the average. *Blocksburg*—No rainfall. Highest temperature 91 degrees, lowest 50 degrees. The past week was unusually hot, and although warm weather and sunshine was needed, rain will be needed within a week to insure good crops. Farmers are hurrying in corn, beans and potatoes; so far grain looks fine.

Lake County.—Upper Lake—No rainfall. The past week has been very hot, with no clouds. Everything has grown tremendously. Alfalfa cutting is well under way, crops heavy, but rather poor in quality. Grain and hay improve rapidly, also fruit and grapes.

Shasta County.—Anderson—No rainfall. The week has been all that could be desired, it has been warm. Haying has commenced, good yield; grain crop heavy. Highest temperature 102 degrees, lowest 60 degrees.

Colusa County.—Williams—No rainfall. The conditions for the past week continue all that could be desired.

Glenn County.—Willows—No rainfall. The extreme heat of the 19th, 20th and 21st did no damage. Extremes for the week, maximum 99 degrees, minimum 54.

Butte County.—Palermo—No rainfall. The first three days were very hot, the balance quite cool. Maximum 94 degrees, minimum 51. Haying is progressing rapidly, with rather more than an average yield. Grain still promises a good crop.

Yuba County.—Wheatland—No rainfall. The weather for the past week has been very favorable to all crops. Haying has commenced where land is dry enough. The present moist condition, with continued favorable weather, will insure a big yield of grain. Hops are making rapid growth.

Nevada County.—Nevada City—No rainfall. The warm weather of the past week, and the heavy dews in the mornings have been the most beneficial to crops for the season, and vegetation of all kinds is growing fast. Haying has generally commenced in the foothills, and is yielding well.

Placer County.—Newcastle—No rainfall. Maximum for the week 96 degrees on the 21st, minimum 48 on the morning of the 25th. Hay crop will yield heavily. Peaches will yield full crops in all well-cared for orchards.

Amador County.—Oleta—No rainfall. This week has been one of constant sunshine, and all crops have been greatly benefited, they are growing with a rush. Haying is rushing.

Sacramento County.—Elk Grove—No rainfall. Crops never looked better. Haying has commenced in good earnest, and is of good quality and quantity. *Franklin*—The weather was favorable to all crops. The wheat and barley is showing up in fine shape. The backwater in the sloughs is rising, and if the Freeport levee should break a large amount of grain would be damaged, otherwise there is every prospect of having a good crop.

Yolo County.—Rumsey—No rainfall. The change of weather was very sudden, but what effect it will have upon crops, especially upon young trees, it is impossible to say. So far everything looks well. *Madison.*—If the present weather continues, it will not be many weeks before wheat will be ripe enough to cut. *Capay Valley*—The weather continues favorable for both the fruit and cereal crops. *Chacheville*—The wheat crop is ripening fast. *Dunnigan*—Farmers are busy making hay. *Blacks*—The wheat crop in this vicinity is fine, prospects are good for a large crop.

Solano County.—Denverton—After the rain of the 15th we have had a week of exceedingly hot weather, the thermometer reaching over 90 degrees. Haying is well under way. *Vacaville*—The weather has been warm here during the last week, and crops generally are are doing well. Cherries are about finished, and apricots and plums are coming in freely. Warm weather needed.

Sonoma County.—Forestville—Copious fogs have prevailed during the past week. Highest temperature 92 degrees, lowest 43. Cherries are ripening, haying season commenced, corn planting under way, barley and oats are rapidly heading out, wheat is somewhat slower, owing to so much cold weaather. *Sonoma*—The hot wave of last week, followed by cool, foggy and cloudy weather, has been generally favorable to fruit. The prospects are good for all growing crops. *Healdsburg*—Hops are now about to the pole top and doing well. Hay making has begun, cherries are ripe, what few there are. Prunes, about one-third of last year's crop.

Alameda County.—Niles—Hay not injured much by last rain, early potatoes and peas all harvested, Chevalier barley doing well, peaches, apricots, cherries and almonds all good, French prunes also, 26th wind from the south all the morning, free, with indications of rain. Temperature 100 to 103 degrees, but cool since the 22d. *Livermore*—Friday and Saturday last were excessively hot, resulting in much damage to vegetables, and some to grain and fruit. In the cool weather and sunshine grain is picking up again. Haying is progressing finely.

Santa Clara County.—Santa Clara—The first four days of the week were very hot, but not injurious. Have had good hay weather. *Gilroy*—The hot days last and this week helped grain and fruit. The crops promise to be above the average.

Monterey County.—Salinas—Rainfall 0.10. Continued good prospects for all kinds of crops in this section. Haying fairly well begun and promises to be good in quality. *Jolon*—The warm weather of the past week following the rains brought wheat forward very rapidly. *San Ardo*—The recent hot wheather has very much injured the grain crop. Fruit looks well.

San Luis Obispo County.—Edna—The hot weather has ripened the grain fast, and beans are doing well. *San Luis Obispo*—Highest temperature 88. Cool nights and days foggy and heavy dews, are just what we require.

San Joaquin County.—Lodi—Highest temperature 99, lowest 51. The high temperature of the 21st caused no injury, as it was followed by cool weather, the highest on the 22nd being 83. Haying in full blast; crop light, quality good. Fruit, light crop; apricots, poor; peaches, poor to fair; almonds good. Light northwesterly winds prevailing.

Stanislaus County.—Modesto—The past week the thermometer went higher than any previous year on corresponding dates. Saturday, Sunday and Monday it registered 92, 94 and 93 respectively and caused great damage to grain and fruit.

Fresno County.—Selma—Weather cool and pleasant. Haying all under way. Harvesting beginning. Crops of all kinds promise well, and present weather conditions are favorable.

Tulare County.—Visalia—We certainly are the chosen people, and this is the garden spot. We had .49 of an inch of rain in the city limit, but very little outside, so as not to damage hay that was cut. All crops doing well. Highest temperature 102.

J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The foggy weather of the past week has been favorable to the grain crop. Heading is in full blast. *Bardsdale*—The cloudy weather of the past week has proved favorable to growing crops.

Los Angeles County.—Lancaster—The weather this week has been favorable to grain. The warm spell did not do as much harm as was thought, and the prospects are still good for three quarters of a full crop. *Rodeo de los Aguas Ranch.*—Sugar beets, corn, barley and potatoes are growing finely. Land for winter vegetables is being prepared for fall planting. A large amount of water is being developed in the tunnel. *The Palms*—The cloudy weather during the week was beneficial to early and late grain, as it retarded the ripening and gave a chance for the kernels to fully fill out. *Los Angeles City*—Weather cool and cloudy this week, favorable to grain crop. Highest temperature 77 degrees, lowest 57 degrees. Light sprinkling rain morning of 27th. *Duarte*—The past week has been cloudy and damp, with occasional fog. Grain is ripening slowly; fruit is looking well; oranges promise a good crop, but prunes a light one. Highest temperature 91 degrees, lowest 57 degrees. *Pomona*—Cloudy and high fogs all the week and the temperature below the average. Slight drizzles of rain Thursday. Deciduous fruits coming forward well; some ripe cherries and blackberries of local growth in the market.

San Bernardino County.—Ontario—Weather cloudy the past week, with light showers in the mountains. Hay is curing well. *Chino*—Light fogs, clouds and indications of rain characterized the past week. Hay is of an extra good quality on the Chino ranch, and is mostly stacked in good shape. Sugar beets are making a fine growth; 4000 acres are now planted. *South Riverside*—The temperature and sunshine were about normal during the week.

Orange County.—Anaheim—The foggy nights and cloudy days of the past week helped the corn crops materially. *Tustin*—Several days of cool, cloudy weather were unfavorable for curing hay. Corn is looking well. Young vineyards are making a fine thrifty growth.

San Diego County.—Vineyard—Foggy mornings have a tendency to rust grain, of which there is no indication yet. Barley is turning yellow. *National City*—The hay crop proved fairly good on cutting, much better than was expected. Grain is looking well and was much benefited by the late rains.

G. E. FRANCKLIN.

OREGON WEATHER-CROP BULLETIN FOR WEEK ENDING SATURDAY, MAY 28, 1892.

Western Oregon.—The forepart of the week was warm and cloudless, while the latter part was cool and cloudy. No rain has fallen during the week. The maximum temperature ranged from 70 to 80 degrees; the minimum temperature from 40 to 60 degrees. The weather conditions were exceedingly favorable to all vegetation and there has been a marked growth. There is already a desire for more rain to moisten the surface soil, as it has become quite dry and hard under the influence of the warm, dry days. Fall wheat and oats are heading in most counties, while rye in sections has headed out. Late sown spring wheat is not so promising owing to the warm and dry weather coming on so rapidly, and a good rain would do it much good.

Eastern Oregon.—Warm, cloudless weather prevailed up to Thursday, when it became cooler and clouds appeared. A few local showers occurred, hardly sufficient, however, to lay the dust. The maximum temperature ranged from 60 to 85 degrees; the minimum temperature ranged from 35 to 55 degrees. The weather was extremely favorable to all vegetation. The warmth and sunshine caused a marked growth, while the cooler and cloudy weather assists in the heading and filling of the grain. Some grain that is rank has not a good color. Wire worms are reported to be at work in Wasco and Gilliam counties. All reports indicate first-class prospects in every county.

Corn-planting is about done, and a large acreage has been seeded.

Fruit has been injured more or less in most counties. The green aphis has appeared near Fossil. Apples are as large as walnuts in Wasco county, where Black Republican cherries are coloring. Black and raspberries are in bloom.

B. S. PAGUE,
Observer U. S. Weather Bureau.

Field Notes in Napa Valley.

NAPA, May 26, 1892.

TO THE EDITOR:—The heated spell of last week has been followed by cool weather, comfortable for man, beneficial for crops. Backward though the season is, crops in general look very promising, grain of all kinds having rapidly forged ahead during the last week or ten days. The season has been very favorable for oats, and many fields of that grain in this vicinity are very promising. The same may be said regarding barley, with few exceptions. Wheat is coming along nicely, and if this cool weather holds, will fill out plump and heavy.

Next week haying commences, soon to be followed by harvesting. Evidently a very large acreage of hay will be cut this season, and the yield promises to be very heavy. With this prospect in view, some farmers in this valley will harvest as much of their crop for grain as possible rather than cut as much hay as they anticipated. In some fields of wheat wild oats have appeared in quantity, and wheat and oats will have to be cut with the mower instead of the header.

FRUIT AND WINE.

Our cherries are ripening fast, and the local Fruit Growers' Association will immediately make arrangements for shipping their crop East. Although the yield of some varieties of fruit will not be quite up to the average, the season from this time forward will be a very busy one for orchardists and those farmers who have no special crop. In fact, it may be safely affirmed that the outlook was never more flattering.

Then our wine men are in better spirits than for some time. It is true that frosts damaged the crop in some degree, but to what extend cannot now be ascertained. It is a question if the shortening of this season's crop by frost was not a good thing for the grape grower. It resulted in the advance of the price of the vintage of 1891 from 12 cents to 15 cents per gallon, with a prospectively better price for the wine of this season. With less grapes to handle and fewer expenses, the income of vineyardists may be greater than if there was a large yield. Within a few days a sale of 5000 gallons of last season's wine wss consummated at 15 cents, and some San Francisco parties are in the valley trying to secure 500,000 gallons. So it is evident that the somewhat prolonged period of depression in this industry is about to give way to better times.

It cannot be denied that the acreage of vines is annually decreasing in every portion of the county, principally on account of the ravages of the phylloxera. At the same time, it must be noted that comparatively few new vineyards are being planted. One would naturally infer that prices of grapes and wine must advance and remain at a higher figure than for some years past.

OUR PRIZE LETTERS.

The PRESS is to be complimented upon its enterprise in publishing prize articles upon various topics relating to farming. The amount of information elicited from practical men will be large, and the benefits resulting therefrom to many readers will be great. The plan for publishing topics mentioned is an excellent one. Would the suggestion be in place that, after the subjects enumerated have appeared in the PRESS, an article, or series of articles, upon farm buildings, especially adapted to California, be printed? This is an age of progress, and farmers who do not keep abreast of the times must suffer financially, as well as intellectually. Improvements in every branch of farming are constantly being made, and we of California are more fully alive to this fact than in years gone by. [If the topics set for this year prove popular, others will certainly be taken up later.—ED. PRESS.]

THE COMING FAIR AND THE COMING HORSE.

Arrangements for the annual fair of our Agricultural Association are nearly completed, and, as usual, the event promises to be noteworthy. The display of all farm products, the output of manufactories, the handiwork of the household will, as usual, be lavish. Not the least noteworthy improvement in farm matters developed since our Association held its first fair, six years ago, is that in stock, particularly horses. Each year sees better animals exhibited than were on the list the preceding season. But still there is chance for greater improvement in this direction. What is most desirable in any agricultural community is a class of horses that is suited to general work, that will be of not too heavy weight—strong, hardy, rapid walkers in the furrow and fair travelers on the highway. We may have some such horses, but not many. More attention has been paid to rearing race horses than any others, and it must be said success has, in good measure, been attained. But for general purposes, these horses are too small, are not heavy enough to suit the farmer. The Percheron is not as popular in this section as a few years ago. He is too slow on the farm, and is not adapted to traveling on the highway. He is an excellent dray horse. The same remarks apply to the Clydesdale.

MARKETING EGGS.

"There is one thing you would do well to mention when next you write," said a merchant to the scribe a few days ago. "Many farmers do not take pains enough in caring for, or marketing their eggs. Evidently not a few of them do not gather their eggs more than once or twice a week, and consequently some are unfit to eat. I candle all eggs brought me and throw away dozens, in the aggregate, because should I sell them, it would injure my trade. Eggs should be picked up every day. They should be marketed in a clean, attractive condition; they should be of good size. In order to obtain large eggs, breeds noted for their production should be raised. There is too much haphazard management on the part of many, or rather no judicious management at all. Another thing those who raise poultry for eggs should bear in mind, is the marketing of all, or nearly all, cocks as soon as the hatching season is over. They are of no use until another season, and then if new birds are purchased, the character of the flock will be much improved. Eggs from hens that are in yards where there are no roosters, keep better and longer than when impregnated. Sell off all, or most all roosters; save the expense of feeding them, have quieter flocks and better keeping eggs.

R.

Cankerworms and Big Peach Figures.

NOVATO, May 23, 1892.

TO THE EDITOR:—Judging from notes in your paper, and a recent personal trip, the cankerworm still seems rampant in Santa Clara County. We up here have been through the mill, but banding the trees has saved our orchards this year, and proved itself a most effectual cure Our method is to band the trees with tarred papers—the bands about seven inches wide. the upper edge fitted snugly to the tree, so the moth can't crawl underneath. Commencing about December 1st, and renewing about every five days, we spread on the bands a mixture of printer's ink, procured ready made in San Francisco, for about 9 or 10 cts. a pound. This renewing must be kept up, till the last of the female moths have left the ground, generally the middle of January, when, if this method has been thoroughly followed, your trees will be found free from eggs, and the cankerworm a thing of the past. Have also tried spraying with Paris Green, but without the least result. From young trees, the bands should be removed as early as possible in the spring, as the oil in the mixture may soak through the paper, and injure the bark of very young trees.

Have noticed an extract from the "Bakersfield Californian" in the PRESS lately, which states that a Kern county orchardist has a tree of George's Cling Peach, a two year old, from which he expects to gather 1200 pounds of fruit this year, also a Briggs May, same age, good for 150 pounds. Now, I have lived in Kern county for a couple of years myself, and am prepared to believe anything reasonable, but a yield of 1200 pounds of peaches, from a two year old tree, I must confess, rather stuns me. 1200 peaches, each peach to weigh a pound. It seems to me there is a cipher or so too many in these figures.

MAX A. THEILIG.

The State Fair.

An attractive advertisement on another page shows that the State Board of Agriculture proposes to make its fair this year more fully characteristic and representative of California than ever before. It plans to work directly toward the great display of State products, manufactures and resources at the World's Fair by making its fair in September a "dress rehearsal" for that event. Large premiums will be awarded, and we hope they will set everybody at work collecting and preparing for the exhibition. Get up your committee and work for the county displays, or proceed alone and compete for the individual awards. Write to Edwin F. Smith, Secretary at Sacramento for fuller information.

FRUIT MARKETING.

The Santa Clara Fruit Exchange Organized.

The organization of the Santa Clara valley producers into an exchange was completed at a meeting in San Jose Jose last Saturday. More than 100 subscribing members have already enrolled themselves, and 90 per cent of them are fruit producers.

As to the aims of the organization, Col. Hersey spoke as follows:

The purpose of this organization is to sell the fruit before it is placed upon the cars, and when we ship the fruit no one can remove it from the cars until the money is paid. This is a proper business principle, and is the only one on which we should act. Some have expressed their fear about the canners eating us up. Well, I can say I have no such fear, as we are in the majority. He stated that, as the articles of incorporation set forth, the purposes of the corporation are to receive, prepare, pack and sell the fruit products of the county, owning or leasing land, buildings or machinery necessary for the conducting of its business, and of dividing, after actual and necessary expenses, all the net proceeds among those who deliver their freight. Transferable or warehouse receipts will be issued on delivery of each kind of fruit, to from 50 to 75 per cent of its market value at the time of delivery, and the balance paid at the close of the business season.

ELECTION OF OFFICERS.

The following were unanimously elected directors: Philo Hersey, producer, Santa Clara; W. H. Wright, drier and canner, San Jose; E. S. Dawson, canner, San Jose; G. W. Tarleton, producer, Berryessa; E. F. Adams, producer, Wrights; James E. Gordon, drier and producer, Saratoga; J. R. Johns, producer, Saratoga; F. M. Righter, drier and producer, Campbell; E. H. Hazelton, producer, San Jose.

The board of directors organized by the election of Philo Hersey, president; E. F. Adams, vice-president; W. H. Wright, secretary and temporary treasurer.

ARTICLES OF ASSOCIATION.

As this enterprise at Santa Clara is likely to be the forerunner of other local organizations, we print in full the by-laws, and advise that they be preserved for reference:

ARTICLE I. The name of this corporation shall be the Santa Clara County Fruit Exchange. There shall be a corporate seal, bearing the name of the corporation and date of incorporation.

ART. II. The office and place of business of the corporation shall be in San Jose township, county of Santa Clara, State of California.

ART. III. The capital stock shall be two hundred thousand dollars, divided into twenty thousand shares of ten dollars each. Each share of stock held by a person eligible, shall be entitled to one vote at all stockholders' meetings. Proxies must be held by eligible stockholders only.

ART. IV. The annual meeting of the stockholders shall be held at the office of the incorporation or some suitable and convenient place in San Jose, on the first Saturday of May of each year. Special meetings may be called by the president, and he shall call special meetings upon the written request of the ten stockholders of record. No business shall be transacted at a special meeting except that set forth in the call.

ART. V. All meetings of the stockholders shall be called by publication of notice, signed by the president, stating time and place thereof, in some newspaper of general circulation, published in the county of Santa Clara, for two weeks next prior to the day fixed for such meeting. The secretary shall also notify by letter or card all stockholders of record of such meeting.

ART. VI. At all meetings of the stockholders the presence of a majority of the stock shall constitute a quorum.

ART. VII. The number of directors shall be nine, to be elected at the annual meeting. They must be eligible stockholders, residents of the State of California and citizens of the United States. The interest of a majority of said directors must be greater as growers than as driers or canners.

ART. VIII. The officers of the corporation shall be a President, Vice-President, Secretary and Treasurer. The Treasurer may be a director or some bank located in San Jose designated by the Board of Directors to act as such.

ART. IX. The pay and salaries of all officers and persons employed, except directors, shall be determined from time to time by the directors. Directors, in the performance of their duties as directors for the first year, shall receive actual expenses in attending meetings, and subsequently their compensation shall be fixed by the stockholders at the annual meeting.

ART. X. The Board of Directors shall hold regular meetings semiannually at the office of the corporation, at such times as the board may establish. Special meetings will be held upon the call of the President by personal notice on each director, or by letter or postal card through the mail. Special meetings shall also be held upon notice signed by three directors having been duly served by mail or personal delivery ten days before such meeting. Five directors shall constitute a quorum for the transaction of business, and may adjourn from time to time at their discretion.

ART. XI. The President, Vice-President, Secretary and Treasurer shall be elected by the Board of Directors immediately after the annual election of directors. Such officers shall hold office for one year, and until their successors are elected and qualified. The office of manager shall be filled at the discretion of the board, and his term of office be at their pleasure.

ART. XII. Vacancies from any cause in the Board of Directors may be filled for the unexpired term by the remainder of the board at any meeting, unless ten stockholders shall, within one week from the time vacancy begins, file written objections, in which case a special meeting of stockholders shall be called for that purpose.

ART. XIII. The Board of Directors may from time to time appoint such officers, agents and employes as in their judgment the necessities or interest of the corporation requires, and fix their compensation.

ART. XIV. The Secretary shall be the custodian of the records of the corporation. He shall keep a full record of the proceedings of all meetings of the stockholders and the Board of Directors. He shall countersign all certificates of stock, contracts, deeds and leases signed by the President, keep an accurate account with the stockholders, collect from them all assessments and pay the same to the Treasurer, issue the proper notices of all meetings of the stockholders and of the Board of Directors, and perform such other duties as are appropriate to his office and as are required by the Board of Directors.

ART. XV. The Treasurer shall have charge of the finances of the corporation, receive from the Secretary all moneys collected by him and belonging to the corporation, and keep on deposit all moneys of the corporation at such place as the Board of directors may select, in the name of the corporation, to be drawn only on warrants signed by the President, or such other officer as the directors may name. He shall keep proper books of account, showing receipts and disbursements, and submit a full detailed report of the same at each annual meeting and at such other times as the Board of Directors may require.

ART. XVI. There shall be an Executive Committee, a Finance Committee and an Auditing Committee. The Executive Committee shall have general superintendence of the business; the Finance Committee shall examine the books of the Secretary and Treasurer and report thereon, at the regular meetings of the board, in writing. The Auditing Committee shall examine all bills against the corporation and report thereon. All of said committees shall be appointed by the President from the Board of Directors.

ART. XVII. Upon the issue of a certificate of stock to any subscriber, 25 per cent of the par value thereof must be paid to the Secretary, and the balance upon the call of the directors.

ART. XVIII. Eligibility to ownership of stock requires that the subscriber therefor shall be a grower, a drier or a canner of fruit for sale upon the market, and may be either an individual, an association or a corporation. Ineligible persons acquiring stock by inheritance, attachment or otherwise shall not be permitted to vote the same in person or by proxy. A certificate showing eligibility shall be filed with the Secretary by each subscriber to stock.

ART. XIX. Stockholders shall be paid six per cent per annum on the amount of stock capital actually paid in.

ART. XX. The business shall be conducted, as closely as ordinary prudence will permit, upon a cooperative basis, the Board of Directors establishing such rules and regulations therefor as their judgment shall dictate. No fruit shall be bought by the corporation, except to fill orders or contracts when the supply in the hands or under the control of the corporation is insufficient therefor. Transferable or warehouse receipts may be issued for fruit in store or under control.

ART. XXI. No debt beyond the sum of $5000 shall be created unless by vote of three-fourths of the stock issued, except for money to pay advances on fruit in possession or under the control of the corporation.

ART. XXII. The directors shall correspond with buyers of fruit with the view of establishing and maintaining a system of inspection mutually satisfactory.

ART. XXXIII. The directors shall by all reasonable means seek to enlarge and extend the markets for the fruit product, and shall have power to create a fund therefor, to be used in their discretion, by a special charge not exceeding one-half of one per cent on the sales made by the exchange.

ART. XXIV. The books, records and business papers of the corporation shall be open to the inspection of the stockholders at all times.

ART. XXV. These By-laws may be added to or amended in the manner provided by law.

FRUIT PRESERVATION.

A Canner's Views on Fruit for Canning.

A paper prepared by J. J. GROOM, of Pomona Cannery, for the Farmers' Institute at Pomona.

The first thing for a man to do who contemplates setting out an orchard, is to decide whether he will supply the canneries or the shipper of green fruits, or both. But right here let me say, do not set too many varieties, for unless you have a very large acreage you would not have enough of any one kind to attract the attention of either the canner or shipper. Many fruit growers realize but little from their orchards for this very reason, after years of hard labor, because of setting too many varieties. Go to good, reliable men who are in the business of canning or shipping, and advise with them and find out what variety is most sought after in their line, and act upon their advice, provided you are not competent to judge for yourself. Most people rely upon their nurseryman to advise them what varities to set. The nurseryman has his stock to sell, and of course it is quite natural for him to advise to set a variety and not many trees of a kind. Then again, he is hardly competent to judge which is the best canning or shipping varieties, as it is not directly in his line of business. If you have but ten acres, I would advise to set them all to one variety; but if you have 20 acres, it will do to divide them into three varieties, namely, apricots, peaches and Bartlett pears. These are the staple varieties to can. As to peaches, the best variety to plant for canning is the Orange Cling, and the Lemon Cling comes next. The Muir is the best freestone peach to can. It is a good, regular bearer, and when properly thinned on the trees is sufficiently large to can as extra goods. They are also the best and most profitable peach to dry, as they lose less in weight in drying than any other, as the flesh is naturally quite dry and the pit very small, and when the peach is opened with the knife the pit drops out readily. Another advantage the Muir peach has over the Salway or Crawford is, it is yellow clear through to the pit, which gives it a bright, rich color when canned or dried.

As to the best variety of apricot: In the 16 years I have been in the canning and drying business, I have found the Hemskirk to be the most desirable. It is a regular bearer, and is quite large, plenty large enough to make extra canned goods. It ripens very early and is of good color.

As to the proper size of apricots, peaches and pears necessary to make canned goods, I will say: Apricots should weigh only eight to the pound. I always give the size of apricots by weight, peaches and pears by measurement. A peach, to can for extras, should measure before it is pared two and a half inches across the narrow way after it is cut open. The Bartlett pear should also measure two and one-half inches through the center. How to obtain these sizes, is first: By pruning carefully and judiciously. Second, by proper thinning out when the apricot and peach is the size of a robin's egg. The apricots should be carefully thinned to three and four inches apart on the limb. Peaches should be not less than five to six inches apart on the tree; then with proper cultivation the fruit will be large and fine enough to make extra goods. Some growers might object to thinning down to the distance apart I have mentioned, and would say, at once, that would cut my crop of fruit down one-half or two-thirds, as the case might be. Now to illustrate: I took a drive through this valley about three weeks ago, and I found the apricot and peach trees in most cases overloaded, at least on an average one half. In some cases I counted clusters on limbs not larger than a pipe stem, 10 and 15, and as high as 21 in one case that only covers a space of 11 inches. There were 21 apricots where there should not have been but four or five at most. A majority of the peach orchards I examined were in about the same condition. I said to some of the parties, you ought to thin your apricots and peaches, you would surely get a better price for your fruit, and you would have nearly as many pounds, and it would take less labor to handle them, and your trees would be more healthy, live longer, and bear a regular crop every year, and would be more satisfactory to yourself and the buyer, and would give you a reputation for growing fine fruit; and if all the fruit growers would join in and thin out their fruit to a proper consistency, it would add largely to the value of not only your fruit, but to the trees and the surrounding country. As a rule the tendency is to allow apricots and peaches to overbear. The consequence is the trees are broken down and only bear a crop every other year, and in a few years the trees die out.

As to the condition apricots and peaches should be picked, I will say when they are fully matured and well colored, but not soft. During the ripening season the fruit should be looked after every day, and all that is in condition should be picked at once, if but only a few at a time. Most fruit-growers are inclined to leave the fruit on the tree too long, especially so in the first part of the ripening season, as they say it does not pay to go over the trees for only a few pounds. But there is just where they make a great mistake, for most of the very largest and finest fruit ripens first, and, if neglected, until a large quantity is ready to pick and then brought to the cannery, it is almost worthless, it being too ripe to can or dry successfully. So the grower should watch his fruit from day to day, and gather it as soon as it is in condition. Some have said to me when advising them how and when to pick their fruit: Why you must have a man stand under his trees and watch his fruit all the time. I reply that is just exactly what you ought to do during the ripening season to make a successful fruit-grower, and to bring your fruit into market in prime condition.

Now to illustrate the difference in value of extra fine fruit after it is canned, I will say: Extra apricots, peaches and pears sell at wholesale on an average of $2.50 per dozen cans, while the inferior fruits which have to be put up as standards sell for about only $1.40 to $1.50 per dozen. There is a difference of $1 per dozen, or say $2 per case. That is not much money on one case, but when a canner puts up ten, twenty or fifty thousand cans, it means quite a sum of money, and the difference in the cost of packing and handling extras or standards is very little. The can of extras costs $1 per M. more than the standard, and there is a little more sugar; but that difference is offset by the difference in expense of cutting, packing and handling, for the large fruit can be handled with much less expense than the small fruit. Then, again, should the large fruit be put upon the market in a green state or shipped East, the difference in price would be the same. So I say to all, thin out your fruit. It will pay largely to do so. I have known instances where heavy losses were sustained by the canner where small and inferior fruit was forced on him by neglecting to have it understood at the time of purchasing the crop on the trees that it must be thinned out to a certain distance apart. In one instance there was a loss to the canner of $24,000 in 12,000 cases. The circumstances were these: A new cannery was started, and the first season there was care taken to have the fruit properly thinned on the trees, and the result was the company turned out an extra quality of canned goods and they were shipped to Liverpool and London and were sold there for $3 25 per dozen. The next season the cannery changed its buyer and contractor for the green fruit and still purchased the fruit in the same orchards, but neglected the all-important thing of thinning out the fruit on the trees. The consequence was when the fruit came into the cannery it was small and it was impossible to make extra goods out of it. But the canner had contracted for it and was compelled to receive it. He had also contracted with the same Liverpool and London parties to deliver 12,000 cases of extra goods guaranteed to be equal to the first year's pack, and were sold to arrive in Liverpool at $3.25 per dozen. But when the goods arrived they were condemned and thrown back on the shipper's hands. So the goods had to be sold at a sacrifice of $1 per dozen, making a loss as stated above of $24,000 on the pack.

THE FIELD.

The Value and Importance of Good Roads and Shade Trees.

Read by Miss KATE SESSIONS of San Diego, before the Pomological Society of Southern California, at its meeting in Redlands, May 5th and 6th, 1892.

A short editorial in one of Boston's leading papers brings me at once to the bare facts in regard to our roadways. It says there are now colleges enough in the country. Education has been made so cheap that poor but deserving young men and women can get anything in the line of high learning by making just the amount of exertion that is good for them. We have enough libraries to go around, and bibles are so cheap that even a tramp can save his two cent pieces and buy one in a few weeks. But there is one thing we have not enough of in the United States, and never did have. That is good roads. If any millionaire wishes to immortalize himself and really benefit posterity, let him select the county roads in a region of farms and fix up those highways so that spring mud and summer rains (and I might add California dust) shall never wipe out or budge them from their beds. With those smooth, hard highways he will build his own road to everlasting fame. He will earn the gratitude of every farmer, milkman and peddler for a hundred years. The system of roads should be named for him. His name, whatever it might be, would be remembered when that of the founders of our great universities had gone glimmering down into the night of oblivion.

We have awakened to the fact that our roads are poor, and already a spirit of improvement can be noted. "Legislation for good roads," "The advisability of road commissioners for State and County", "The road question is one of the most important for the American farmer today", "A poor road is the most expensive thing in the agricultural outfit, it is as much behind the times as the flail and the sickle", "The bad road has no rightful place in the domain of an intelligent people." These are a few straws one catches from conversation and periodicals, and they show plainly which way the wind blows.

The several European governments that build rock bed roads and care for them, see prosperity follow such footsteps. None have ever returned to the *primitive* dirt road —the road maintained by each farmer or land owner paying his road tax by work done upon them. This is the road of our country to-day.

While the roads of the United States are passable for horse and wagon, the owner (one small part of the voting or ruling power) has been satisfied to use such roads and keep, as he thought, his money in his pocket. But when the *young* man mounted his own wheel and stepped into the harness himself, within the past ten years, the first consideration was the road. Not a better road, but a perfect road was needed. So with the more general use of the bicycle comes the more universal demand for good roads. The Wheelmen's League will, by its interest in this matter, help on an important American improvement. It would appear as though the carriage manufacturer would sell more wagons if the roads were poor and his vehicles wore out faster. But, paradoxical as it seems, the American Carriage Builder's Associations endorse every movement that tends toward State legislation in behalf of road improvement. The railroad companies encourage good roads and road development for the benefit of their freight trains, and that brings me to one of the strongest arguments in behalf of road improvements; the benefit to the producer, the farmer, the fruit grower, the stock raiser; the men that keep their shoulders to the wheel and are the mainstay of the country. Heavier loads over longer distances, in a shorter time, can be hauled on the best road with the least wear and tear on wagon, horse and man. Quick transportation is the all important question for every farmer and fruit grower everywhere. In this big State of California, with its few railroads, it is particularly important. California in general, and San Diego in particular, has been unfortunate in the location of their railroads. When the roads were built the main object was to reach San Francisco and the ocean in the shortest line over the easiest grades. The land was barren, dry and unoccupied. The bird in the hand of the railroad company was the passenger travel, mail subsidies and the freighting of goods to California, which was producing very little save mines, cattle and climate. But, like the California gold fields of '49, every acre of land is proving itself fertile, and California is fast becoming a rich agricultural State, with still more wonderful possibilities in view. As the railroads in California do not tap to-day the most productive sections, over good roads only can be brought the product of many a fertile valley apart from the line of travel. This beautiful valley before us has been favored at an early date, and to-day we see the iron horse speeding on his smooth, hard road around these productive lands, gathering eagerly his golden load. In time, more such branch railroads must be built. The Southern California producer needs good roads for all seasons of the year, our products are so varied. We have in our oranges, lemons and olives a crop to be delivered to market during the season when the rains are most abundant. In early summer the honey and hay crops begin to move, and when the heat is greatest the fruit of the deciduous tree is on the road. This must be protected from dust and sun and delivered in sound condition to bring the best prices. Over a rough road only unripe fruit can travel, while over a smooth, clean road riper and softer fruit can be moved in larger loads. Prices rise accordingly, and the producer is the principal one benefited.

If there are proofs that the people prefer good roads and are not indifferent to their benefits then by proper legislation good results ought soon to show themselves.

Would a resident of Ontario feel satisfied to allow his guest to depart without a drive on Euclid avenue, seven miles long? Would a visitor to Riverside be indifferent to a drive on her famous Magnolia avenue? The traveler in San Francisco does not half enjoy the Golden Gate park and Cliff House if he visits it by car line, but with a good team and pleasant companionship he must speed over the broad, hard roadways among trees and past green lawns and flower beds, and drive against the breezes that sweep up from the ocean's rugged shore. Inspired and invigorated, he returns to the city not over the sandhills and steep grades, over which the untiring cables pass, but by the more circuitous route to Golden Gate avenue, one of the few streets free from car tracks. Does the railroad magnate, resting a few days at Del Monte, leave without a spin over her famous drive to Cypress point? Another winter will find on Coronado beach a boulevard leading along the ocean front for over ten miles, and in time it will be ornamented with trees, and will become one of the principal features of Coronado. No one is oblivious to a good road, and wherever there is one it is well patronized and appreciated. It offers to every one a means of entertaining guest or tourist in a most agreeable way.

Southern California may overrate her *immediate* advantages in soil, products and the financial returns, but she can never overdo her climate in comparison with that of the rest of the United States, or many of the countries of the world. We must keep our visitors out of doors in the fresh, pure, mild air and bright sunshine of winter; in the warmer but dry air of summer, restore new cells to their lungs, paint roses, tan and freckles upon their cheeks, and stimulate their appetites; for that, nothing excels a good, long drive. The first recreation prescribed for every invalid is a drive. Not over the roughest and dustiest and narrowest road that can be imagined, not behind a slow and decrepit horse, but over the smoothest and most beautiful boulevard, in a comfortable carriage, drawn by horses full of spirit, strength, intelligence and gentleness. Such a drive is the quality the doctors prefer. Who is quite so dear to the family as the physician who has cured the aching head and wrecked body? Fresh air and good roads will be equally as dear, and no tax payer will ever grumble when he is cured by such a specific. The dose is too pleasant, the bill most moderate.

As a good road was the first necessity for the Yosemite Valley, so none too soon can Southern California and all of California realize that good roads for the farmer, the tourists and the invalid mean health, happiness and prosperity.

Nothing is a greater incentive to permanent improvements than well graded and paved street or road; proof is on every hand. The first improvement of such a roadway is naturally its ornamentation, and in no way can that be done better than by trees. This brings me to the second part of my subject, and I shall not undertake to say what are the best sort of trees to grow, the best way of planting and caring for them, but only attempt to give a few suggestions how to make the street the most beautiful, and how it may grow old gracefully.

My observation as well as thought has proven to me that the first necessity of tree planting along any street is to have the *same sort* of a tree planted, on both sides, for as great a distance as possible. Nature everywhere gives us examples of such symmetry. The weeds and shrubs growing on either side of the road are about the same; of course, soil and conditions are the same, but nature has made the tree, the shrub, the flower, the seed pod, the shell of the sea, symmetrical to some medial line. She has not laid out her parks, the forests, in square beds and straight lines, but she has ornamented the paths through them harmoniously. The rivers, her highways, are symmetrically ornamented on the banks. If high trees grow on one side, they do on the other, or where they are growing, man detects the greater beauty. We do not tire of an avenue with the same tree on both sides for a mile or more, or even five. We do not wish some other tree would appear, but, on the contrary, the repetition, the continuation of the same intensifies our enjoyment and appreciation, and we are proud and interested in the length and regularity of the avenue. We compare tree with tree, we observe the foliage, the branching, the bark, the flower, the seed, we calculate the age and the habit, and become a student filled with thoughts of nature, inspiring us to better deeds and thoughts.

The next great need in tree planting to the one already mentioned is that the trees be set far enough apart. In California, and particularly in these southern counties, where the growth of plants is so continuous, owing to the slight difference of the seasons, in a few years we find trees with their branches closely intermingling, forming a perfect hedge and barrier in mid-air, their graceful outline against the sky, entirely obliterated except at the top, and the individuality of each tree entirely lost, Often beautiful views of mountain and landscape are entirely hid by the wall of green, while if the trees were well apart the scene would be even more beautiful viewed between their graceful boughs. If we stop to calculate and observe a little, we are soon convinced of the short time it takes for trees to touch each other. Trees growing symmetrically extend as far on one side as the other. If set twenty feet apart they will only need to throw out branches ten feet long before they are touching. Where can you see a shade tree in California, only a *few* years old, that has branches less than ten feet long? You find more with branches twenty feet. If the trees are set fifty feet apart that space will allow each plant a perfect development for at least ten years before they appear to think of approaching each other, and yet many a tree can be found shading and spreading over more than fifty feet—observe the pepper, the rubber, the locust, the oak, the eucalyptus that have been properly trimmed. Most of our trees can be made to spread more if trimmed, but they grow out of our convenient reach so soon that we stand helplessly at their base, and well it is so. I would recommend no tree-planting on street or highway less than fifty or seventy-five feet, and even one hundred feet offers advantages. If, for the first five years or so, the row seems scant, and we think more of ourselves than posterity, set some deciduous tree, or slender and slower grower between, or plants like the dracæna. We do not need trees upon our streets in California for *shade*, but for beauty. In fact, the pedestrian during the summer finds shade too cool a resting place. The beauty of a street ornamented with trees is most inviting in its length, as we look along the vista and see the swaying boughs meeting in the distance beyond. It matters not whether the trees are twenty, fifty or a hundred feet apart to give such an effect. [In hot interior regions trees are needed for shade; along the coast beauty is the chief consideration as the writer claims. ED. PRESS.]

The style or manner of growth of the tree selected becomes a most important factor in street ornamentation. One with a straight, strong stem, or trunk branching high, is the ideal tree, while a conical shaped tree like the cypress, broadest at the base and occupying all the sidewalk and roadway with its longest and heaviest branches, is the very worst sort to grow. If trimmed so that one can pass, it is so mutilated that it stands a helpless deformity.

Our native Monterey cypress is one of our most useful and handsomest trees, but it must be grown in the right way. If it is to be trimmed, it must be trimmed for a hedge, so that every semblance of individuality is entirely lost, and we see only the long, continuous wall of bright evergreen, as true and even a wall as ever a mason built. Otherwise, the cypress must be allowed to grow naturally. Then the shape is perfect and size and proportions grand. Only large grounds and parks admit of such a growth. The date palm is better adapted for the avenue that is planted for posterity. During its first ten or twenty years it is one grand, graceful fountain of green, capable of occupying the whole sidewalk and half the street, but from twenty to fifty years it throws a huge tuft of graceful plumes high above our heads, and out of reach of man or beast, and grows on and on, apparently in anticipation of a life of centuries.

The selection of dust-shedding trees is an important consideration. The pepper is the best example, the cypress the worst.

At present everyone is so anxious to maintain the general impression that is current of California by the States to the east of us, that she is one great, grand garden, full of evergreen trees, blossoming roses, shrubs and vines and fruit laden boughs, that the deciduous tree is quite condemned wherever an evergreen will thrive. I believe, in time, the deciduous tree will be in greater favor, and we will enjoy the bare limbs and sturdy trunk of the elm, maple, locust and sycamore, and appreciate better the contrast with our evergreen citrus grove and blossoming winter garden. They will be a dial to tell us when spring is here.

With united effort, it seems easily possible that a bounty might be offered for the growing of the sycamore and cork oak trees along our county roadways, on at least each quarter of every mile, a bounty payable for every tree of certain size and vigor, and increasing in liberality with the age of the tree.

California, in her more populous sections, has few woods and natural forests, and where trees are growing man destroys them for the rich land they occupy. Small places, highly cultivated, is the tenor of California's improvements to-day, and that is right, but the plan allows for very little space for shade trees. There is then all the more need that our streets and highways shall become our boulevards and parks, the pride of every citizen, every city, town and county, and maintained at public expense.

SHEEP AND WOOL.

Wool Samples for the World's Fair.

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., May 20, 1892.

TO THE EDITOR:—The Secretary of Agriculture, recognizing the importance of the sheep industry of the United States, has expressed a desire that there be made at the Columbian Exposition an exhibit of the wools of the world.

The collection of samples will be more complete, it is believed, than ever before shown and will be of great value, giving, as it is proposed, the characteristics of wools from the highest type of sheep to the very lowest; also showing in a comprehensive way the modifications and effects of climate upon standard varieties and the adaptability of varieties to special localities. Mr. Edward A. Greene of Philadelphia, Pa., and Hon. John T. Rich of Elba, Mich., have been appointed by the Department to collect and classify these samples.

The wools of each State will be arranged so as to show completely all grades and classes of wools of that State. The Department is desirous of accompanying each sample with all information possible and has therefore decided to obtain the samples from the growers. The Department has prepared blanks to be filled up by contributors. Any special information not asked for on the blanks may be given by letter.

Samples of each quality must not be less than 14 or more than 17 ounces. Seedy, burry or sandy wool will not be exhibited.

The samples will be placed in glass jars, which will be labeled with the grower's name and address, together with a description of the sheep and quality of the wool.

All samples must be sent to Mr. Edward A. Greene, 24 S. Front Street, Philadelphia, Pa., who will, upon application, furnish small bags, in which the wool may be sent by mail free, and to whom all correspondence should be addressed. Where more samples are received than are necessary, the best representative samples will be exhibited. A circular will be sent by Mr. Greene giving details of what is wanted, also the manner of selecting, reporting and sending the samples.

EDWIN WILLITS,
Assistant Secretary and Representative.

Mr. Greene's Circulars.

From the circulars alluded to we make the following extracts:

The Agricultural Department will exhibit at the Colum-

bian Exposition between three and four thousand wool samples from all parts of the world. They will cover all classes of wool, from the highest to the lowest. Especial attention has been given to the collection of samples of wools that compete with our home-grown wools. These were procured through a special agent of the Treasury Department, sent abroad for the purpose of procuring samples for Custom House standards.

The Department is desirous of obtaining the American samples direct from the growers, so that comparison can be made with wools of the same character, grown in different parts of the country.

It is desired that the exhibit shall cover all qualities of wool raised in the United States, therefore it is not necessary that the sheep shall be a blooded animal to entitle the wool to exhibition, but that the samples shall be fair ones of the type they represent. Skirts or bellies should not be included in the samples. Desiring that the samples shall represent as many clips as possible, I suggest that not over two of any one clip shall be sent, and in no case over one of the same quality of wool. A limited number of fleeces will be exhibited, but they must be from registered sheep. Particulars can be obtained from me.

Assistant Secretary Willits is giving wool and sheep especial attention, as he is desirous of furthering the interests of this great industry. With this view he has requested Hon. John T. Rich to make a report to accompany this exhibition. Mr. Rich will, when the collection is completed, examine the samples comparatively, and being a practical sheep breeder of long experience, his report will be of great value. Each sample should be about one pound in weight and be taken from the body of the fleece.

Action by the Oregon Wool Growers.

The North Pacific Sheep Breeders' and Wool Growers' Association met in Portland last week, Hon. John Minto, Salem, presiding.

A brief address was delivered by the president, pertaining to the best interests of the association, including the subjects of protection to wool growers, Government assistance to insure the orderly grazing of the public lands, and a strong recommendation that the question of the use of shoddy, which is assuming alarming proportions in the manufacture of woolen goods, be thoroughly investigated, and some means, if possible, be adopted by our Government that will prevent this evil, which very materially injures the wool industry of this country.

The following resolutions were unanimously adopted:

WHEREAS, Certain leading members of Congress seem determined that no time shall be allowed in which to prove the adequacy of the present law levying duties on imports to give encouragement to wool-growing, but are determined to attack the law in detail, for no other apparent purpose than for partisan effect; and

Whereas, In thus beginning a merely partisan attack with a proposition to admit foreign-grown wool free of duty, they assail a branch of industry which, more than any other labor in the land, requires the protective care of the citizen so embarking his capital and of the Government he helps to sustain, the action subserves foreign against American interests; but,

Whereas, The present rate of protective duties on wool, though scarcely adequate to give needed protection against countries having climatic conditions more favorable and land and labor at cheaper rates, will permit a continuance, and perhaps a slow increase of the wool-growing interest; and

Whereas, The National Wool Growers' Association—first formed to induce farmers to give additional attention to wool-growing, and joined with them to procure legislation protective of both wool production and wool manufacturing as a means of making our country independent of the business interests of others—has already petitioned Congress to let the present tariff laws alone; to cease agitating a sufficient time to let it be manifest whether they will or will not sustain American labor life in the field and in the factory, and so enable it to maintain itself on the high plane which has made the United States the envy of the nations; therefore be it

Resolved, 1st, That we protest against the passage of the bill known as the Springer bill as low political action, calculated to deter enterprise from engaging in the production of wool, and having for its sure result, if not intent, the encouragement of foreign manufacturing interests and the development of foreign labor; and be it

Resolved, 2d, That we join the National Wool Manufacturing Association in demanding that the present law known as the McKinley law shall remain undisturbed for at least four years longer, so as to give reasonable time for proof as to whether the important and essential interests connected with the production of wool and its manufacture can maintain themselves and yet give our people cheaper and better clothing than they ever had under nonprotective laws; and be it

Resolved, 3d, That we favor the total prohibition of imports of shoddy or goods of which shoddy is part, and declare ourselves in favor of the use of cotton in admixture with wool where light goods are required.

The election of two delegates to attend the National Convention of Wool Growers, to be held at Minneapolis, June 5, 1892, was the next order of business. Dr. James Withycombe, Portland, nominated Hon. John Minto; seconded by Mr. David W. Craig, Macleay. Mr. W. W. Baker placed in nomination Hon. Charles Hilton of Gilliam county; seconded by Mr. R. C. Halley, Salem. Upon motion, both of these gentlemen were elected by acclamation.

JOHN MINTO, Pres.

JAS. WITHYCOMBE, Sec.

Selecting the Ram.

J. G. Buckhardt, of Missouri, is of the opinion that the points sought for in rams with which to improve a flock, are those which directly add to the value of the sheep, or those which are evidence of the possession of valuable qualities. Thus the abundance of yolk, or the fineness of the wool, or its curl, or the depth or form of carcass upon which depends the quality and the quantity of the fleece, are esteemed in the Merinos; in the Southdown, the small head and legs and small bones, with the black muzzle and legs, are highly regarded, as these denote quick fattening properties, and hardiness of constitution. The breadth of shoulder, the straightness and levelness of the back, the breadth of loin, and the spring of the ribs and rotundity of the frame of the Cotswold, Leicester, Shropshire and other heavy-bodied sheep, indicate capacity for feeding and digestion, and laying on of flesh, and are therefore regarded as valuable points. Large bones are an unfavorable point, as they denote an abstraction of nutriment which should otherwise go to the formation of flesh and the greater value of the carcass. The absence of horns, for the same reason, is desirable in sheep bred for mutton. A soft, mellow feeling of skin and the tissue underneath, and a softness of the fleece, are indicative of a tendency to the rapid formation of fat. A round frame and broad loin indicate the existence of abundant flesh, where it is most valuable, and a general squareness of the outline of the figure proves the existence of large muscular development, and consequently heavy quarters. In short, for sheep which are not kept solely for the production of wool, what is wanted is all the flesh possible, with no more bone than can carry it, and that the flesh should be where it will be the most valuable, viz., on those parts which bring the highest price in the butcher's stalls—the loins and quarters. Where wool is the sole object, weight and fineness of fleece alone need to be considered. Where wool and mutton are each equally sought for, the matter becomes complicated by many considerations, each of which should be studied with a view to give the preponderance to those which have the greatest special or local importance.

HORTICULTURE.

Is Fruit Sulphuring a Benefit or Injury?

An essay read by LEONARD COATES before the State Horticultural Society.

I have the misfortune to hold opinions on this subject, which at present are not popular, and therefore I wish to treat of it in a practical and business-like manner, following a line of argument which I hope will commend itself to the most thoughtful.

There are two main classes of dried fruits, known in the the market as "evaporated" and "sun dried." Some 10 or 15 years ago, when the industry of fruit-drying was in its infancy, the first named signified, very naturally, those fruits that were cured in an evaporator, in contradistinction to those dried in the sun. So far so good. One would sell at 15 cents a pound while the other was worth but five cents. Men of brains and inventive genius set to work to make machines of sufficient capacity which would cure first-grade fruit as economically as possible, but their endeavors were soon of no avail. "Sun dried" fruit fell into disrepute, and rapidly became a term of opprobrium, relegated the refuse of the orchard, and dried upon the roof of the farmer's chicken house. It has been found that by using care a very good article could be cured in the sun, but that it would not sell until labeled "Extra Evaporated." This is history. I claim that no business can prosper when founded upon a lie.

It is claimed that "the public" demands a light colored, bleached fruit, and that if that is so, it is our duty to produce it. A dealer will have displayed a variety of "Extra Evaporated" goods, neatly packed and faced in boxes, temptingly paper-lined and lithographed, and in a corner will be a dirty sack half full of "sun-dried" peaches above described. Now, what choice can the public have, as represented by the lady purchaser or housekeeper, and which will the salesman recommend? That which yields a profit of 50 per cent or that which barely pays expense of handling?

The wholesaler now issues his special circulars with detailed plans for the sulphur box, urging upon the grower to bleach his fruit to suit "the public." The grower sees the point: the more sulphur the bigger the price. Poor "public!" Because it prefers a box of beautiful looking, clean fruit to a bag of filthy rubbish, we say: "It demands bleached fruit, therefore it is our duty to supply it." This is the chief argument, and a very powerful one, in favor of sulphuring—that is, sells higher—but, as Prof. Hilgard said in a recent article, "it is precisely for this reason, and because of the consequent tendency of producers to sulphur more and more heavily and recklessly, that I think it high time to call a halt."

All this talk about the public preferring bleached fruit is mere assumption. It has not been given an opportunity to taste any other. The great annual increase in the sales of dried fruits is brought forward as a convincing argument in favor of their popularity. It is, however, no argument when we take into consideration the extent of the territory and the many millions of people who have not tasted our products.

A permanent and increasing market can only be secured when the consumer is not satisfied with one dish only of California fruits. Who of us in this room will eat bleached peaches, apricots and silver prunes? If, perchance, we taste them once, it is the last time. Then if we, our families and friends do not eat them, who is this mystic "public" that the dealers would have us believe is so ravenous for California dried fruits?

Believe me, our dried fruits are in disrepute wherever known. If you doubt it, then go through the East and talk to those who have eaten them.

A well-known grower from Santa Clara valley relates his experience with silver prunes in a recent issue of a leading horticultural paper. He, too, had learned that he must pick the fruit before it was ripe, expose it all night to the beautifying influence of the sulphur fumes, and then give the finishing touch by again subjecting it to this process after drying, in order to meet the approval of the "market." Those for his own use he dried without the sulphur. He concludes the article by saying: "It has been said that the loss of prestige of silver prunes is due to the mixing of yellow egg plums. I doubt this, but I satisfied myself of the reason by throwing a few handfuls of dark-colored silver prunes (unsulphured) mixed with an equal amount of bright-looking ones (sulphured) before my hogs; the result was, they picked out every one of the brown prunes, but rejected the bright."

A gentleman from the San Joaquin valley writes to another paper, relating his experience in drying peaches, where a consignment of unbleached fruit was ordered returned to him from San Francisco, "for it did not sell." He loaded it into his wagon and drove about the country selling it where he could. His friends afterward repeatedly inquired where they could get more, as it was the best they had ever tasted. He bought dried apricots for use in the family, which, he says, were beautiful to look at, but after a meal or two, they remained untouched by themselves and the hired men. "The trouble is," he says, "there is so little unbleached fruit in the market that we cannot find it when we want it."

These instances could be multiplied indefinitely, but, without occupying further time, I will suggest the remedy, whereby our dried fruits—peaches, apricots and light plums and prunes—shall become deservedly popular and increasingly in demand.

1st. The assistance of the press. The public needs to be educated to know the difference between unsulphured and sulphured fruits; to learn that the pale golden apricot or the snow-white apple is not necessarily any cleaner than those that are darker colored, and that they are devoid of their natural fruity taste, and frequently injurious to health by the presence of sulphuric acid, but, as Prof. Hilgard says, "the only persons not likely to object to sueh a state of things are the dentists."

2d. The more extensive use of evaporators, where most fruits are much more perfectly cured than in the sun, are free from dirt and insects, and much lighter in color than when exposed to sun and air.

3d. The formation of a company to this end, which will produce a *real* evaporated fruit, on the boxes containing which shall be set forth, from both the scientific and practical standpoints, the difference between ripe fruits cured in an evaporator and unripe fruit dried in the sun, after being bleached in the sulphur box. Whole fruits, such as grapes and prunes, may well be dried in the sun, but not the delicate, cut fruit, which lies exposed for days to the attacks of insects and to clouds of dust.

Our dried fruits are being more extensively introduced into the English markets, and the reports come back that peaches do not meet with favor. The bright golden apricot may sell at first, but if the flavor is not there, they might as well be kept at home. Three years ago I exhibited samples of our best fruits in London; and, while there, in an interview with the fruit buyer and the general manager of the firm of Hanson, Sons & Barter, one of the largest fruit-importing firms in London, I was told that the peaches were no good. They did not want to look at them. I finally persuaded the two gentlemen to take samples to their respective homes and prepare them for use according to directions. Shortly afterward, I received a flattering letter from each of them in which they expressed entirely different views from those before held.

This is somewhat of a digression, but it only goes to show, as I then stated, that to introduce our fruits there through the ordinary channels, and without more careful study of that market's needs, will result in failure. The smart Yankee in London is not a success in introducing Californian specialties.

To conclude with some remarks by Prof. Hilgard: "With the present perfected appliances, fruit can be dried with so fair a color that no sensible person will object to it, particularly if it insures the possession of a fine flavor. If, unfortunately, it is true that at present most persons *do* prefer the substance to the shadow, and are willing to pay double price for the doctored article, so much the more need is there that they should be better informed; and I, for my part, will continue to do my best to induce fruit driers to be chary of, and careful with, sulphuring, and to convince consumers that their preference for bleached fruit is as irrational as is that of a certain part of humanity for painted cheeks or enameled countenances."

THE STOCK YARD.

The Importation of Live Stock.

The full text of the amended Treasury regulations governing the free importation of animals for breeding purposes has now been made public. All who take an interest in the breeding of thoroughbred stock of any kind will know that the rule adopted in circular No. 10 of Jan. 22, 1872, required that on and after April 1, 1892, no animal brought into the United States from foreign countries for breeding purposes should be admitted free of duty, unless the importer furnished a certificate which should contain a pedigree, showing that the ancestors had been recorded in a book of record established for that breed for five generations on the side of the sire, and four on the side of the of the dam.

This is the rule adopted by the Shorthorn breeders of Great Britain, in admitting new families to record in Coate's Herd Book. It is also a rule which requires that there be no less than 46 recorded ancestors; viz., 30 on the side of the sire and 16 on the side of the dam. Such a ruling would bar the free entry of some breeds of both cattle and sheep, notably South Devon cattle and Southdown sheep, for the reason that herd or flock books have been so recently established for these and some other breeds that the required number of recorded crosses, above-named, could not be given.

We have never heard of any one denying that the Southdown is a distinct and pure breed of sheep. It was so in the time of Arthur Young, who, writing in 1776, thus speaks of them: "Fine wool is certainly a very considerable object, provided it is gained on a well formed carcass, but if a fine coat is procured at the expense of a thin chine, low fore end and rising backbone, the advantage is purchased too dearly. The faults most common in the Southdown breed are these three."

"Youatt, writing some 60 years after the above date, in referring to the breed as it then was, says: "Since that

time they have materially improved, yet not by any admixture of foreign blood, for even the cross of the Leicesters was a failure, and the promised advantages to be derived from the Merinos were delusive."

The first great step in improving the breed appears to have been taken by one Mr. Elman, who lived in Arthur Young's time, and who, during his own lifetime, says: "They are now much improved both in shape and constitution. They are smaller in bone, equally hardy, with a greater disposition to fatten, and much heaver in carcass when fat. They used seldom to fatten till four years old, but it would now be a rare sight to see a pen of Southdown wethers at market more than two years old, and many are killed before they reach that age."

Arthur Young again says, in one of his later tours through England: "Mr. Elman's flock of sheep, I must observe in this place, is unquestionably the first in the country, the wool the finest and the carcass the best proportioned; both these valuable properties are united in the flock at Glynde. He has raised the merit of the breed by his unremitting attention, and it now stands unrivaled."

Since that time the breed has been kept pure, and there have been some very noted breeders of the same who have made still further improvements, so that it has long been noted as one of the choicest and purest breeds of mutton sheep in existence.

The same remarks will, in a great measure, apply to several other breeds of sheep and cattle that were for a long time kept in comparative obscurity in various parts of Great Britain, but such has the paramount importance of pedigree become, that all breeds that are known to have been kept in their original purity have now their various herd, stud or flock books to show forth their history and pedigrees.

It will thus be seen how unfair it would have been to discriminate against the importing of those well-known pure breeds that have but recently established books of record.

Among the breeds of horses, the new rule does not recognize what is called the select Clydesdale as a pure breed, though there is a book of record for them in Great Britain, and some of the very best types of draft horses have been of that way of breeding.

The breed has been, so to speak, created by the selection and breeding together of the best of the Shire and Clydesdale breeds that could be found, the idea being to produce a class of Clydesdale horses with greater weight and shorter legs, by the infusion of Shire blood, than the old unimproved breed possessed. The idea appears, from all we can gather, to have originated with Mr. Lawrence Drew of Merryton, Scotland, on whose methods and success as a breeder of draft horses we propose giving some account hereafter.

LIVE STOCK INCREASE.—In the latest issue of the United States statistical abstracts may be found some interesting figures showing the relative increase of the various domestic animals. Taking the 20 years between 1870 and 1890, we find that in round numbers the horses have increased from eight to fourteen millions; mules from one to two millions; milch cows from ten to fifteen millions; oxen and other cattle from fifteen to thirty-six millions; sheep from ninety-six to one hundred millions, and swine from twenty-six to fifty-one millions. While in numerical increase that of swine has been surpassed by that of cattle, in good quality and improvement, swine have surpassed all other varieties of domestic animals. The fact that the production of pork has doubled within the past twenty years, and the product is mainly absorbed by the home market at fairly remunerative prices indicates that the future of hog-raising will be at least as profitable as that of any other stock-raising. There is a steady increase in the foreign demand, which has been broadened by recent concessions, and new markets will be attained that ought to stimulate the industry.—*Western Swineherd.*

ENTOMOLOGICAL.

Destroying Insects by Spraying.

Read by C. B. MESSENGER of Pomoma at the last meeting of the Southern California Farmers' Institute.

There seems to be an increasing need that farmers should post themselves on insects and on methods of destroying those that are injurious to our crops. I say increasing need, for our insect enemies seem to increase with great rapidity. Agents of the Department of Agriculture are constantly endeavoring to introduce natural enemies of those insects, and in one instance, at least, that of the *Vedalia*, have succeeded in a most wonderful manner, and, today, strong hopes are entertained that a formidable enemy of the red scale has been introduced. But, while waiting and lending as much encouragement as possible to any such undertaking, we should not relax our efforts and allow the various pests to get the upper hand of us. Then, how can we best exterminate them, is a question which we must attempt to solve.

Hydrocyanic acid gas has accomplished much good and deserves credit for saving many valuable orchards from the red scale, and in case of that pest, I would say, by all means employ the gas treatment. But for nearly all other insects it is not practicable, or, if it is, it is often more heroic than necessary, especially for black, brown or white scale.

Therefore, how to spray the most effectually and the most economically, is a question we will consider from a purely practical side. To syray effectually would be a comparatively easy task, if it were not for that other side of the question—that of economy. That restricts us to materials that are within reasonable bounds as to cost.

Insecticides are divided into two classes: (1.) Those that kill by external contact and which are applied to that class of insects called haustellate, which are supplied with sucking tubes through which they get their nourishment. (2.) Those that kill by internal contact, which are applied to that class of insects called mandibulate, which are supplied with jaws and eat the leaves and fruit.

The external contact class kills either by closing the pores through which the insect breathes, as is the case with resin, whale oil soap and paste, or else by irritation of the skin, as with kerosene, lye, or sulphur wash.

FOR THE SAN JOSE SCALE.

The pernicious scale (more commonly called the San Jose scale) is probably one of the worst pests with which we have to deal, being the most destructive and, at the same time, the most difficult to exterminate. It belongs to that class of insects supplied with sucking tubes. It infests in a greater or less degree nearly all of the deciduous trees.

Perhaps the remedy most successfully and most universally used for this pest is the sulphur-lime wash. Of all the washes it is, by far, the most disagreeable and the most difficult to handle, and I hope that, soon, some remedy equally as effective that will be cheaper and more easily handled may be discovered. The preparation of this wash requires no great skill or experience, but it *does* require great care and attention to details.

The formula I have used is as follows: Lime, 20 lbs.; sulphur, 50 lbs.; boiled in 20 gallons of water from one to two hours, or until it assumes a dark red color.

Mean while in an open barrel slake 30 lbs. lime, and in some other vessel dissolve 30 lbs. salt.

When the lime in the barrel is perfectly slaked add the dissolved salt; then, if the sulphur, which has been boiling for an hour or more in the kettle, has changed from the muddy yellow color which it first had, to a dark red color, it should be added to the lime and salt—pouring through a sieve made of wire screening, such as used for windows and doors.

This collects any undissolved sulphur, which may be thrown back into the next kettle of solution. When French sulphur is used there is little if any of the sulphur remaining undissolved in the kettle after boiling an hour; but with the California sulphur, which is commonly used, there will be some residue with each kettleful, but by continually throwing back and reboiling there will be little or no waste.

But to return to the solution which has been mixed in the barrel. This is sufficient for 100 gallons of solution after it is diluted. This should be run through a fine strainer made of brass strainer cloth, when the proper amount of water should be added to make up the 100 gallons. It should be applied warm, not necessarily hot, for I think nothing is gained by that, but it must not be allowed to get perfectly cold, for in that case it at once begins to precipitate, which weakens the solution more or less according to the time of standing after it gets cold. During spraying it must be kept thoroughly stirred.

It is now ready for the pump which should be a good one. It should be in fact a better one than I have ever yet seen. I use the Bean, and presume it is the best yet offered in this market, but for the price charged it should be better made, and arranged so that it can be more easily repacked in case of worn-out valves.

For nozzles with the sulphur wash, I use only the old-fashioned San Jose nozzle with rubber disks. It cleans itself the best, and if fresh rubbers are kept in the caps it makes a very desirable spray.

One application of this wash on trees moderately affected with the pernicious scale is sufficient; especially is this the case with the peach and all rough barked trees. But where prunes, pears and other smooth bark trees are badly affected they should be sprayed twice with the sulphur, or what is preferable and cheaper, once with the resin solution, which is composed of 25 lbs. resin, 5 lbs. of caustic soda and six pints of fish-oil to each 100 gallons. Then, perhaps thirty days later, spray with sulphur. The best success I ever had in spraying was by proceeding in this manner, and, if given good weather this treatment will clean the worst of trees,—that is, the worst of trees that are worth saving at all. But any tree nearly dead with scale should at once be put on the wood pile, for it is of no use to attempt to save it when too far gone.

Care must be taken not to apply this wash after the tree begins to grow, for injury will certainly be done, especially on pear and prune. Peaches I have sprayed after the bloom was well out, and it seemingly did no harm. But it is better to apply only when tree is perfectly dormant.

FOR CODLIN MOTH.

The next spraying of the season is for codlin moth, which causes the small worm which infests the fruit of the apples and pears. It belongs to the class called mandibulate, being supplied with jaws, and after hatching, eats its way into the fruit. Consequently it is to be reached by the internal contact insecticide.

Those commonly used are London purple and Paris green, which is an arsenite of copper, containing 55 per cent of arsenic. Owing to the variable strength of the former, Paris green is now about all that is used. It is quite uniform in strength, and is cheap. Its greatest drawback is that it is not soluble in water, consequently while spraying it requires constant stirring to keep it suspended in the water. Therefore I have a boy on the wagon whose sole business it is to stir the solution constantly, using a common garden hoe, which, churned up and down, keeps the mixture thoroughly mixed. The published formula for this spray varies from one pound to each 100 gallons, to one pound to each 300 gallons. The former I think to be entirely too strong, as it is liable to injure the foliage. Last year I had excellent results with one pound to 200 gallons at the first spraying which was applied to the blossoms, then spraying two weeks later with a pound to 160 gallons. This year I have used it a little stronger and find I have burned the foliage—a few caess; consequently I conclude that a pound to 160 or 200 gallons is sufficiently strong. However, much depends on the weather, for any wash that tends to injure the foliage has stronger action during very hot weather. I understand that the addition of a little lime water lessens the danger of burning of foliage, but this I have not tried.

In using this wash it is necessary to use a nozzle which delivers from its side, as the only place to which the spray need be applied is in the blossom end of the fruit, and this should be done while the blossom end is pointing upward. For this work I have used the Cyclone nozzle, excepting on winter Nelis pears. On these the foliage becomes so dense before the fruit is ready to spray, that it is impossible with the fine fog of the Cyclone to reach in to the fruit. But with a San Jose nozzze it has force enough to push the leaves aside and reach most of the fruit.

The fear that fruit sprayed with Paris green may be unhealthful is without foundation, for no case has ever been known of injurious results.

THE BLACK SCALE.

I once heard a large fruit grower say that the black scale is the worst pest we have to contend with, because nearly everyone seems to think it amounts to nothing, consequently it is allowed to go on with its quiet work of taking the best life from the tree. This scale is easily controlled with the resin wash, and there is no excuse for the thousands of dollars annual loss. This wash I prepare as follows:

For each 100 gallons of solution I mix 25 pounds of resin, six pints of fish oil, five pounds of caustic soda 70 per cent. Add 12 or 15 gallons of water, and boil thoroughly for three or four hours, which will make a solution of the consistency of soft soap, then add water to make 100 gallons, which applied to trees infested with the black, brown, white, or even the red scale, will result in practically clearing the tree. With red scale I have with two thorough sprayings killed 98 per cent. On the olive I have used a solution of 18 pounds of resin to each 100 gallons, and had excellent results. The time for spraying orange trees for black scale is after the fruit is half or two-thirds grown, as before that there is danger of marking the fruit. Or, it may be effectually applied in the spring before the fruit is set. With this as with Paris green, avoid extremely hot weather.

There are many other insecticides, such as whale oil soap, tobacco extract and kerosene emulsion, the latter being preferred by many for the black scale on olives—but the resin wash is cheap, easily prepared, and as a general thing as effectual as any wash can be.

I thtnk the prune rust and other fungi will soon require us to be prepared to apply fungicides to some of our trees, but that is outside the limits of this paper.

Asphaltum for Young Grasshoppers.

Grasshoppers were very numerous last season and inflicted a good deal of damage. The Kern County Land Company, early this year, employed careful observers to see if it were possible to find such a thing as a grasshopper nursery, or the places where the things started. The Bakersfield *Californian* says their home was hunted up and its metes and bounds pretty accurately defined, it being found that within the limits of ten sections of mesa lands well up toward the Tulare county line, the most of the pests appeared to be hatching out. Samples of the soil were taken and in some of them grasshopper eggs were found in countless numbers.

Then came the question of how to carry out the idea of killing the pests while they are yet young. It was ascertained that for the first five or six weeks after birth the hoppers remain in the vicinity of their hatching places without anything to eat and simply grow in size and prepare an appetite against the time that they are ready to march out in squadrons and devour everything within reach.

Poisonous mixtures of many kinds were found of no avail, and the average grasshopper seemed to grow fat on food highly seasoned with different poisons.

Then a sheet of iron was fixed so that it could be heated red hot by fires kindled upon its upper surface, and then dragged over the ground in the hope that it would cook the little hoppers; but not only did it not affect the live ones, but the heat imparted to the ground hatched other eggs more rapidly.

Finally, a successful method was found, and is now being used to such effect that the home of the grasshoppers is invested, and they are being routed and slain almost to extermination. A sheet of iron, sixteen feet long and four feet deep, turned up like a sled runner at the front edge, is hitched behind two horses. Between this iron sled and the horses small chains are so fixed as to sweep the ground, thus causing every grasshopper to get out of that. There is a slight rim all around this plate of iron and upon its upper surface very liquid asphaltum is poured. Then the team is started up, dragging this plate upon the ground behind it, with the result that every single grasshopper in its course, which is large enough to jump, sooner or later falls into the asphaltum and perishes. The least particle of asphaltum ruins him, so that those who even touch it, are lost.

In places it has been found that in a trip of half a mile, the asphaltum became so loaded with grasshoppers, that it must be scraped off and a fresh layer added. It is estimated that each layer of asphaltum will hold 125,000 grasshoppers, a harvest of 250,000 of the creatures per mile.

Having proved the efficacy of this method the land company has gone right at the work of extermination in the most thorough way. Eleven of these plates, 16 feet by 4 are hauled abreast making a moving line of asphaltum 176 feet long and 4 feet wide, capable of catching 2,750,000 grasshoppers every mile provided that the supply holds out. And as 18 miles' travel is a day's work, that makes 49,500,000 grasshoppers in asphaltum sauce every day if the crop can equal the capacity of the machines.

This is a straightforward, determined attack upon a pest, and the whole six thousand acres will be run over again and again if need be. So far, not a grasshopper that is large enough to rise eight inches from the ground has got away, and the only need for a second trip over the same ground is for those that are yet too small to hop and for the product of eggs that are not now hatched.

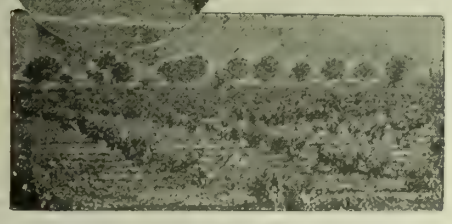
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FARMERS, FRUIT GROWERS, HOME

THE members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.



They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous



irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

KERN is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.



The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

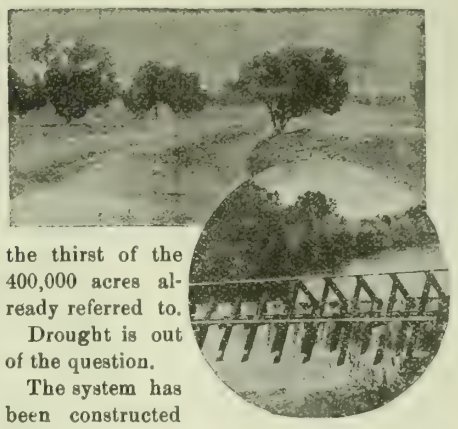
Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

THE advantages of good soil and of sun, which occur in the Valley, would have been of avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake



the thirst of the 400,000 acres already referred to.

Drought is out of the question.

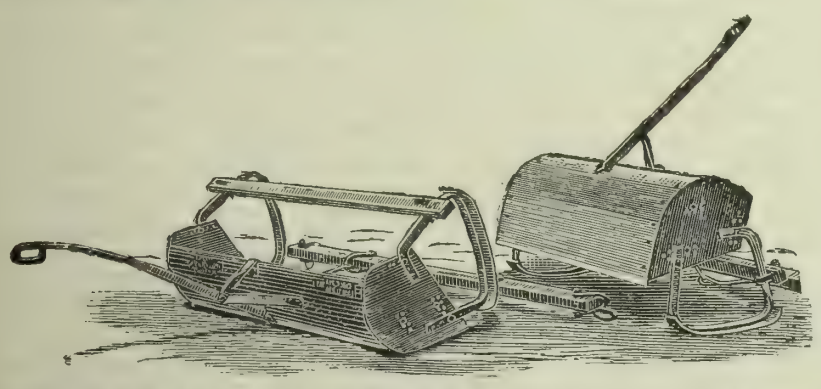
The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

For further particulars address

KERN COUNTY LAND COMPANY,

S. W. FERGUSSON, Agent,

BAKERSFIELD, · CALIFORNIA.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS

FIREBAUGH, CAL. (Poso Farm), November 8, 1889

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

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FRESNO AGRICULTURAL WORKS

FRESNO, CAL.

By Reducing the Interest of the Debt

The Nation Makes a Saving.

By using CARBOLINEUM AVENARIUS

1000's of Dollars will be Saved.

FARMERS, Orchardists, Wine-Growers, Hop-Growers, Chicken-Ranchers, let us tell you:

Save money and work by painting your Fences, Barns, Stables, Troughs, Stakes, Poles and all wood exposed to moisture or climatic influences with the celebrated Carbolineum.

IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.

It is at loggerheads with Insects, Chicken Lice and Vermin. They don't like Carbolineum; they keep away.

It is an enemy to Rats and mice; they lose their appetite for wood treated with Carbolineum.

It disinfects Barns and Stables and destroys Microbes.

It prevents Shingles coated with Carbolineum from rotting, warping or cracking.

It makes Rope nice and pliable, it beats tar coating.

It contains no acids or injurious or poisonous ingredients.

It is THE BEST WOOD PRESERVER IN THE WORLD. We state facts and have testimonials genuine and indisputable.

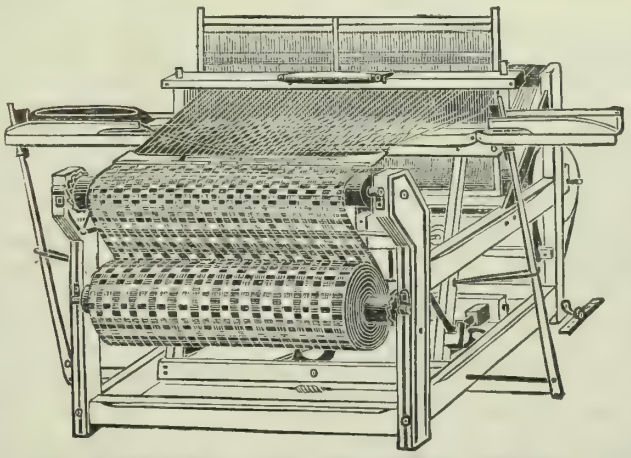
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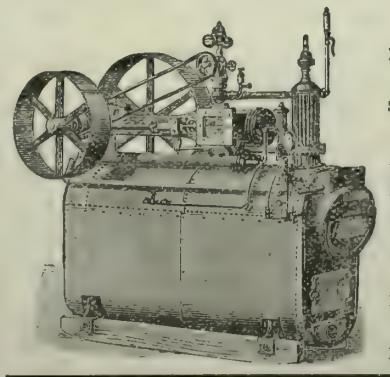
We have hundreds of testimonials and many sworn affidavits which prove the capacity of this Loom to be 100 yards per day, and upwards.

There is a fine opening for a good business in your town. Write to-day for circulars.

Mention this paper. Address

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Oakland Branch, 908 Broadway.

Country Correspondence Solicited.

THE HOME CIRCLE.

Your Mission.

If you cannot on the ocean
Sail among the swiftest fleet,
Rocking on the highest billows,
Laughing at the storms you meet,
You can stand among the sailors
Anchored yet within the bay,
You can lend a hand to help them
As they launch their boats away.

If you are too weak to journey
Up the mountains steep and high,
You can stand within the valley
While the multitude go by;
You can chant a happy measure
As they slowly pass along,
Though they may forget the singer
They may not forget the song.

If you cannot in the conflict
Prove yourself a soldier true,
If where smoke and fire are thickest,
There's no work for you to do;
When the battlefield is silent,
You can go with careful tread,
You can bear away the wounded,
You can cover up the dead.

If you cannot in the harvest
Garner up the richest sheaves,
Many a grain, both ripe and golden,
May the careless reaper leave;
Go and glean among the briars
Growing rank against the wall,
For it may be that their shadow
Hides the heaviest wheat of all.

Do not, then, stand idly waiting
For some greater work to do;
Fortune is a fickle goddess,
She will never come to you.
Go and toil in any vineyard—
Do not fear to do and dare;
If you want a field of labor
You can find it anywhere.

—Anonymous.

How a Reporter Filled His Assignment.

"Send Mr. Harding in."

The managing editor irritably dropped the speaking tube and exclaimed half to himself, "Why in the world couldn't those bothersome Cresson operatives have taken some other time to air their grievances?"

The managing editor did not mean to be unreasonable, but he did wish that the employes of the great Cresson cotton mills had not chosen for their strike a time when every news field was overcrowding the paper, and when an unusually active political campaign was beginning.

At this moment an alert and very young man, scarcely more than a boy, clear-eyed and frank in appearance, looked in at the door.

"Come in, Mr. Harding. I shall have to send you away on special work. Those everlasting spinners and weavers at Cresson have struck. I want you to reach the ground by the first train to-morrow morning. You know upon such a matter it won't do for the *Magnet* to be beaten, and I needn't tell you that the *Magnet* wants the whole truth about it. That's one reason why I send you."

"Thank you, sir. I shall be glad to go."

"Return to-morrow night, if you can. If you cannot, stay over; but see it through, if it takes a month."

When the *Daily Magnet* special correspondent alighted from the morning express in the city of Cresson, the looms and spindles were idle; the millyards were deserted, save by the policemen detailed to guard the property there; agents and other officials were in consultation in the offices and counting-rooms; angry and discontented operatives were gathered around the street corners.

Harding found that he could return on the evening express, and when he took the train at a quarter past seven his report of the matter was already nearly completed.

Under the dim car lights he scribbled on industriously, sure of a triumph. The other newspapers, he had found, were depending upon inefficient local correspondents for their accounts of the matter.

The train rushed through the gathering darkness, and the lights of Benton were only two or three miles distant when the whistle sounded a wild, shrill note of alarm.

Then came a shock, a crash, the splitting and shattering of timbers, the snapping of iron and steel, and, above all other sounds, the cries of human agony.

Tom Harding was stunned by a broken timber, but only for a moment. He roused himself with a half-dazed consciousness of disaster that left no room for any immediate sense of pain.

In the sudden awakening to the realities of the situation he became aware that his legs were so pinioned that he could not move and that pains were darting through his body—unaccountable pains, growing constantly more intense.

Men approached with lanterns. He called to them, and they came and relieved the pressure about his legs, waiting for him to climb out of the wreck.

"I don't know what's the matter," he said, painfully, "but I am hurt somewhere. I can't move alone."

He was raised and laid to one side upon the ground wet with dew. A flask was held to his lips, and the swallow from it revived his strength.

"Where are we?" he said. "Is there a telegraph office near?"

One of the men, who had remained for a minute beside him to see what care he might need, answered, "This is Benton near by."

"I must get a dispatch to the operator—quick. It is of the greatest importance."

"I'd make it short. He'll be busy enough to-night. Here," the man called to a boy from a neighboring farmhouse. "My boy, you can make yourself useful. Here's a man who has been hurt, and wants to send a telegram. There'll be other errands you can do in town. The men are all needed here."

The boy, his face white and his eyes big with horror at the scenes around him, came and stood by Tom, who had written the direction with difficulty, and was tearing the leaves from his notebook. Handing them to the boy he said:

"Tell the operator to send all he can of this before half-past two o'clock, sure." Then he added, "Wait," and wrote hurriedly:

"The south-bound express, leaving Cresson at 7:25, struck a freight train just north of Benton this evening at 9 o'clock, and was completely wrecked."

A physician approached and stopped to look at Harding.

"Are you badly hurt?" he asked.

"I don't seem to be hurt externally," said Harding, "but sharp pains keep shooting through my body, and I can't move."

The physician, grave and compassionate, knelt, and, with quick, skillful touch, examined the young man. He asked a few questions, and shook his head sadly.

Meanwhile, Tom had made a few rapid inquiries of the doctor about the disaster, jotting them down to fill in his dispatch. He then said, quietly:

"How is it with me, doctor?"

"Can you bear the truth?" asked the physician.

"Do you mean that I am going? Yes, I can bear it. How soon?"

"Very soon, I fear."

"Doctor, my name is Harding—Thomas Harding. I am a reporter for the *Daily Magnet*. I was on my way to the city with an account of the labor troubles at Cresson. It must be in the *Magnet* office before half-past two. Here I have scribbled a story of this accident. You've given me nearly everything but the names of the killed and wounded—I can't get those. Doctor, will you see that my paper has those names? Can I trouble you so much? I can't fail my paper now."

Dr. May knew that he had a night of anxious work before him, but he could not refuse the pleading look in the boy's white face.

"Yes," said the physician, "I will see that it is done."

"Oh, thank you, doctor!" Harding's voice had almost a ring of triumph in it."

"Your name is——"

"May."

Tom added a few lines to his dispatch.

"Can't get list of killed and wounded. Dr. May will send it. This is my last dispatch. Tell mother. Good-by. HARDING."

It was two o'clock in the morning in the office of the *Magnet*. The roll of the ponderous trucks overhead told that the first forms were being rushed down to the stereotyping room.

The managing editor came in with a worried look on his face.

"Nothing from Cresson?" he said. "What can be the matter with Harding? If he were not coming back to-night he would have wired long ago; and if he were coming he would have been here before now."

Just then came the office call on the telegraph instrument. The operator answered, and began to write. The managing editor leaned eagerly over his shoulder.

Dated at Benton? What did it mean?

Page after page came rapidly from under the operator's hand. The story was vivid, graphic and complete.

"It will be a beat!" exclaimed the managing editor.

"Probably Tom was stopped by the accident, and had to send it from Benton," suggested the city editor.

But the click of the instrument had begun again.

BENTON, July 14.—The southward-bound express, leaving Cresson at 7:25, struck a freight train just north of Benton and was completely wrecked, this evening at nine o'clock.

Then followed a brief but vivid story of the accident, read eagerly and anxiously by the strong men who stood about the operator.

The operator had grown white, and his hand twitched nervously as he laid down his pen and touched the key. The managing editor was the first to read the sheet, with its ink still wet on its brave words:

"Can't get list killed and wounded. Dr. May will send it. This is my last dispatch. Tell mother. Good-by. HARDING."

The managing editor dropped the sheet and turned away.

The *Magnet* that morning contained two special dispatches which attracted extraordinary attention. Contrary to the usual custom of the paper, both of these bore signatures, and in each case the name signed was that of Thomas Harding.

Above the telegram telling the story of the disaster, first in the death roll that was so anxiously scanned by so many eyes, stood the name of "Thomas Harding, reporter."

That was all; but the world soon learned the story.—Boston Daily Globe.

That Old Tin Can.

Written for the RURAL PRESS by ISABEL DARLING.

What shall we do with it? If it was almost anything else we needn't ask. If it was an old broom, we could cut off its head, unwind the wiry tie about its neck, and, while that is getting *bendable* in the kitchen fire, separate its bushy hair into small bunches, then wrap the wire around each bunch two or three inches from the end, and have something much better than a Chinese brush for cleaning dishes and saving our hands—just the thing for scrubbing the ears of milk-pails (I never tried it on the children) and down the seams; just the thing for "ashing" (why, isn't that quite as proper as "dusting?") the stove, brushing pantry shelves and washing the sink.

The other part of the broom would make one of the three legs needed for a small stool or stand, a rod for a curtain before some corner cupboard or half-grown window, or a crutch for weak plants. Best of all, if one does not care for any of this "tinkering," the kitchen crematory may always afford apparent annihilation. A similar fate awaits many other worn articles, among them the crimpy zinc from the old washboard, which, when nailed to the wall over the sink, the upper edge with long nails so as to let it spread, makes a holder that will not show through nor get spoiled by water for the before mentioned business; but—what *shall* we do with the old tin can?

We may cut gallon syrup cans into dear little pans of various sizes for bread, biscuits, pies and puddings; we may do much less with fruit cans, much more with the oil can. We may take off one side, leaving the faucet near the bottom, and we have a tiny sink; at one end, and it is a wash-boiler or a safe for bread; take out as much as we like of one or more sides, take a slate frame, or make one, cover it with wire gauze or mosquito bar, fasten wooden slats above and below the opening with burnt nails that will clinch, slide in the door and we have a meat safe. We may cut off one end, punch holes for a big wire or old pail bail, and we have what many call a tin *bucket;* cut in two, with the handle end spread at the corners so it will slip over the other, and holes punched in the bottom of that other, it is a steamer; opened at the seam and spread flat, it is roofing for sheds; with a close-fitting tin door, it is an oven for a coal-oil stove; on a hillside, it might even be opened at both ends, one edge pinched so as to slip into another done the same, and used for a temporary sewer, especially if coated and cloaked with mineral paint.

But we get tired of this after awhile, yet keep on using oil, gasoline, fruit, oysters, sardines, spices and numerous other things, so the cans accumulate and the question comes up again. The junkmen will buy only the large ones and the very best of them, so the highways and byways, river beds and hollows of the field are disfigured by hideous heaps of rust-spotted tinware. What shall we do with it? Will not some chemist come to the rescue and manufacture a simple or compound acid powerful enough to utterly and quickly dissolve the trash, and will not the same or another earn the sincere thanks of the community by finding a use for the liquid made from *that old tin can?*

—"There ain't agoin' to be good livin' in trampin' this season," said Raggles.

"I'm afraid not," said Tatters. "These here cooking schools is teachin' gals how to use up the cold wittles."

Along the Color Line.

A Social Problem.

Written for RURAL PRESS by DUANE MORLEY.

John Proud took unto himself a wife, and in time, as the result of that union, two daughters came into the world and were reared to womanhood, both graceful and beautiful to look upon.

It matters not that this union of Proud and his chosen was in among the pine-clad mountains of California, and at a time when the population was sparse and chiefly aboriginal.

John Proud's chosen was a scion of the first family tree, a daughter of Eve—remote—and that is enough for the story we have to narrate. A woman, a wife, a mother, and, sad as it is to narrate, one to be despised.

In time, John Proud grew rich—whether from purloining timber from Government land or not does not pertain—he grew rich, built a grand mansion upon a hill, and was as proud as he was rich. Gradually, there was an influx of white population, the social status of the neighborhood changed, and fingers of scorn were pointed at Proud.

Poor Proud! Had he cared less for his neighbor's opinions than for himself and the welfare of his own—*his very own*—all would have been well. But he did not. The opinions of others were weightier to him than matters of heart and life—the wife, the mother, the aforetime domestic drudge and home-maker, was ostracised and cast out to satisfy an imported and false social sentiment. She, who had before been worthy, was now, by the terms of a social decree, unworthy. So it is that society, of whatever caste it may be, sometimes dominates the home to its destruction In the grand mansion on the hill, which towered to the skies, that woman never entered, or, if she did, 'twas under protest. In a little dell, where the pines stood thick, a hut or cabin was furnished her, and, though stored with the things calculated to keep life in the body if not joy in the soul, the divorcement was inhuman. Living in the hut, outcast from the mansion and her loved ones, and by no fault of her own, she from time to time made nocturnal pilgrimages thither to gaze in, Arden-like, upon their bliss. Not all at once did the hearts of the daughters cool, and become estranged, but the fierce sword slash of social prejudice had been made, and time and education widened the breach and completed the separation. For three brief seasons the mansion was quiet and John Proud alone—no daughters to brighten and cheer his waking hours.

Then they returned to him with strangely expressive phrases of modern English upon their tongues and eye-glasses astride their noses. They were Bostonese in speech and manners, and—as far as they had absorbed their chosen cult—*in heart*. A certain disciple of Blackstone, enamored of one of the daughters, had written her tender missives while she was away at school. Immediately upon her return the proper warrant was obtained, a preacher summoned, and the mansion on the hill made to blaze from cellar windows to attic with warmth and light. A father with no wife and two daughters with no mother at the wedding festivities—such was the spectacle. The bride of an hour, from the flambeau-lighted lawn, had retired to her balconied chamber three stories up for a glove or a handkerchief. On her way there by a rear door and the staircase, she passed an odd, dusky shape—a shape from the lips of which issued the word daughter, coupled with yet another word—one of endearment. But that word of endearment issuing from lips that had been ostracised, clashed against a heart of stone. There was no response.

Soon, all at once, from that balconied chamber, above the din of mirth and music below, sounded a fierce cry of agony and alarm. The chamber was on fire—seemingly a very hell of flame within—and its fair occupant, there for a bit of adornment, was involved in it. Proud and the bridegroom ran to the staircase to ascend, but were beaten back by the flames. Then Proud ran to the barn for a ladder, which proved all too short to reach the balconied chamber; then to the mill he flew for a yet longer one, while the bridegroom and every other onlooker was paralyzed with terror Then, for a moment, the bride was seen upon the balcony wringing her hands in the agony of despair. Then, again, she was lost in the smoke and flame-tenanted chamber. When Proud was half way up from the mill, bearing the longer ladder, just then a dusky shape, her clothing on fire and her countenance itself strangely alight, bore a blanketed bundle out upon the balcony. This she lowered, by means of a massive rope cable, to the lawn beneath. In another instant,

the mansion, gutted to its bones, tottered, a blackened skeleton, in the breeze newly sprung up, only to collapse, with all that was in it, into perfect ruin. From the bundle came the bride safe and unscorched—John Proud's daughter by an Indian mother; that mother, ostracised and scorned, freely giving up, in the act which saved her child, her own life. A few burned bones, and a heart of flesh—which would not burn—now rest beneath a massive monument in a cemetery in Northern California, while both memory and mention of the wife and the mother are exalted above reproach.

They Had Met Before.

Not long ago a well-known young Indianapolis man, who is fond of the ladies, took a business trip up the Cincinnati, Wabash & Michigan railroad to Benton Harbor, says the Indianapolis *News*. When he left Anderson the train was well filled with passengers, and the farther north he got the more the passengers crowded on the train. At Wabash there was only standing room. A very handsome young girl, dressed in the latest—the very latest—fashion, had a seat all to her own sweet self. The young Indianapolitan asked, in his own soft, North Meridan voice, if he might not occupy the seat with her. He had been perching on the coal-box and was real tired.

"Certainly," she said, in a voice as sweet as maple molasses. And as she spoke she moved over, and the young man from Indianapolis crowded into the seat beside her. She was reading a paper. The young man at her side looked out of the corner of his eye and declared—to himself of course—that he never saw one more beautiful, and the rays from the great diamond on her finger sought out the dark places in the car and made them as bright as if an electric light had flashed upon them. Of course any one knows the Indianapolis young man is aware of the fact that he is awfully diffident and lacking in what is vulgarly called "gall." So it was fully ten minutes after he had taken his seat before he had broken into conversation. She was rather talkative herself, and they soon became fast friends for such recent acquaintances. The man from Indianapolis lied like a pirate about himself and his ancestral halls and the large tract of land he owned at Fairview Park. Then she had her inning and told how she lived at Benton Harbor, but spent her summers in the east and her winters in Florida.

"It's such a poky old town, you know," she said, "that I would not stay there at all if papa did not insist. Poor papa is getting old, and we have to humor him a great deal. But next summer I am going to Europe. Brother Charlie is over there, and his wife is just the loveliest little woman on earth. She is related to the royalty of Spain, but that does not make her the least bit proud. Where did I understand you to say you were going? Oh, Plank's tavern! That's a nice place. I go over there once in a while when I am at home. It relieves the monotony, you know."

It is not necessary to tire the reader with a recital of all they said, but the young man was badly smitten with the supposed heiress, and she seemed to think "right smart of him," as they say down in Brown county. When she left the train at Benton Harbor, it was not until they had agreed to write to each other. Their parting was so protracted that he missed his train, and under the protecting wing of Conductor "Dud" Olney went to a hotel. He had happy dreams that night, and wondered when he would see his fair charmer again. He had an early breakfast. His head was lowered over the table, and his eyes were glued on the pages of a Chicago paper. A soft step at his side, a rustle of garments, and then a low, sweet voice murmured:

"Beefsteak smothered in onions, veal cutlets, ham and eggs, baked potatoes, fried potatoes, fish, vegetables, wheat bread, rye bread, rolls, corn cakes, tea, coffee and milk."

With a start he raised his head. That voice had a familiar sound. His eyes sought her eyes. 'Twas she—his companion of the evening before on the train. Around her lips was the least bit of a smile, and a blush slowly mantled her cheek. Straining every nerve, he stared at her in a cold, general-manager kind of a style, and gasped:

"Gimme some beefsteak and plenty of onions."

—Another Anglomaniac.—He—"I am rather in favor of the English mode of spelling."

She—"Yes?"

He—"Yes, indeed. Take 'parlor' for instance. Having 'u' in it makes all the difference in the world."

Little Girls' Gingham Gowns.

In small plaids, and checks forming plaids, these neat fabrics appear in blue, pink and tan shades, cross-barred with red, yellow and such bright contrasts. They are undoubtedly very pretty when made up on the bias; but when so cut they will pull askew when straightened out for ironing, writes Emma M. Hooper in her department of "Home Dressmaking," in the April *Ladies' Home Journal*. All of the skirts are gathered, two breadths answering for the tiniest tots, and three being in the skirt of a girl of five years. The low-neck waist worn over a guimpe, has a fringe of gingham or embroidery, and if made high-necked, the frill may simulate a bertha. Coat sleeves, full at the top, have an edging or turn-over cuff of embroidery, while with white sleeves attached to the guimpe the dress sleeves are tiny puffs. If a belt is worn, have it of insertion, though many of the gathered skirts are sewed to the round waist, which buttons in the back, and has only under-arm and shoulder seams. Over a guimpe of tucked nainsook the low waist is perfectly plain, or gathered, top and bottom. A little vest of embroidery is sometimes seen, also bretelle frills of gingham, or edging from the waist line in front, over the shoulders, to the waist at the back. High waists are trimmed with narrow vests, a square of tucked nainsook, jacket fronts finished with edging, and opening over a flat front of embroidery, or a plaited one of the gingham. Other waists are full from the shoulders and crossed at the waist line in surplice fashion over a V of embroidery. Girdle pieces, forming a point in front, are sewed in the side seams, and tucked fronts also appear. The collar is of narrow edging turned over. White or ecru Irish point lace trims some elaborate cotton frocks, as a yoke, cuffs and girdle.

—Weary looking man—"Doctor, can insomnia be cured?"

Doctor—"Nothing is easier. Anyone can fall into a sound sleep by simply trying to count a thousand."

Weary looking man—"Y-e-s, but baby can't count."

Young Folks' Column.

The True Blues.

Molly's father was a village blacksmith.

The shop beside the cross-road was, in the spring 1862, a grand resort for the patriotic owners of the Dobbins and Dollys that needed a shoe, as the big, brown blacksmith was enthusiastically patriotic.

One June morning the birds, not a whit annoyed at the anvil's ring, sang sweetly in the big maple shading the small, dingy, weather-beaten shop.

Richard Noe, tall, broad-shouldered, strong-armed and kindly-faced, carefully pared an ancient, flea-bitten, gray Dolly's hoof.

Molly Noe, tawny-haired and eyed with complexion to match, small and slender, her father's "wise little woman," stood near looking on.

"Pappy," said Molly thoughtfully, "Mr. Bigg's has taken Selim to the other shop. Selim's a fine hoss, Mrs. Swipes' Dolly isn't worth much, yet you're takin' extra pains in shoein' her. Mr. Biggs pays extra for blacksmithin'."

"See here, Molly," replied Richard Noe, standing straight and tall, "Old Dolly is Mrs. Swipes' main dependence gittin' in her crops. Since the three Swipes boys are down at the front an' their old mammy must run the farm, Dolly gets my best work free of cost. There's them that can keep Selim in trim. He's a fine animal. He'd carry a cavalryman in first-class style."

Molly understood now just why the Noe family finances decreased steadily instead of improving.

Patronage was not lacking, but there were so many Dollys and Dobbins that must be shod free gratis.

A rival smith across the way wasn't runnin' a "war widders' blacksmith shop." He was never too busy to attend to the needs of the valuable Selims.

There came a day when Richard Noe went to the front.

The little shop was deserted. The Dollys and Dobbins had lost a kind and generous friend for a season.

"I'll be back afore long, 'Mandy. Keep up heart," said the big blacksmith to the brave little woman in a shabby cotton gown, who comforted Molly and Polly with the tearfully, cheery assurance—

"Pappy'll soon be home with a pocket full of money."

Molly watched her soldier father out of sight, waving her red, white and blue apron, trying bravely to smile a good-bye.

Molly liked to wave her flag-spangled apron, a gorgeously gay affair—a "true blue" apron.

Richard Noe selected the material. A white ground thickly dotted with tiny flags, the stars and stripes, surprising "a good little girl" with the lovely present upon her eleventh birthday.

The recruiting officers came often to Lyon. The Ohio boys (and a number of the old men) were too patriotic to stay at home.

In time, the minister each Sabbath morning preached to a congregation composed mainly of really aged men, women and young people.

Mrs. Noe's eyes grew large. They told a story of suspense and hope deferred, when weeks wore on and there was no news from her own particularly beloved soldier.

One afternoon the soldiers' mothers, wives and daughters were filling a box with camp and hospital stores, having collected together in the Noe cottage jars of wine, crimson, amber and pale green tinted jelly, jam or preserves, with other good things—a contribution representing loving sacrifice and patient work.

In the highway fronting the cottage a recruiting officer drilled a number of recruits.

Molly sat upon a gate-post lustily cheering and frequently waving her true blue apron when a thought came to her.

"I'll risk it, I will," she cried, hurrying into the house to slyly secure a small pot of the favorite sweet, wrapping about it a strip of the "true blue" print torn from her apron sash.

Molly accompanied the recruits to the station where the "special" came gliding around the bend.

She decided that the young recruiting officer, Bob Benson, was the "trustiest lookin' chap," the "pick of the crowd."

"Say, Bob," confided Molly to the smooth-cheeked, laughing, brown-eyed young soldier, "I wish you'd carry this pot of jelly to pappy.

"I've been foragin' for him.

"Tell him to send us a letter. Bad news is better than no news.

"Tell him we're keeping up heart in first class style an' mothers true blue.

"We want him to come home the very minute he isn't needed at the front. The Dollys an' Dobbins hain't any kind friend now."

"I'll take this, Molly, but there isn't one chance in a hundred that I'll see"—

"You'll be likely to see him. Don't forget to tell him we are all true blue," urged the small forager waving with her flag-spangled apron a good-bye salute.

Three months more of waiting paled to a ghastly whiteness Mrs. Noe's cheeks.

Molly no longer inquired early and often of the fretful postmaster for "a letter from pappy."

One unlucky afternoon adventurous Lieutenant Bob Benson fell into unfriendly hands. He speedily saw the interior of a prison where he found a worn, anxious, familiar face—Richard Noe.

The genial, hopeful blacksmith chafed under prison restraint. He had grown morose and silent.

When the small, flag-spangled scrap was placed in the large, thin hand, the scrap torn from the true blue apron, which had been through perils and adventures carefully guarded, the father's eyes grew bright and moist.

"Molly's apron. Her true blue"—

"Yes," whispered Bob.

"Molly asked me to tell you they are all true blue"—

A guard came that way and Richard Noe was forced to wait impatiently for an opportunity to hear the remainder of Molly's message.

"The Dobbins and Dollys miss you," said Bob an hour later.

"I hope I'll muster through, but I've been turribly downhearted an'"—

"Of course you'll muster through all this bad luck. There's your true blues to help you," replied Bob cheerily.

"Yes," said Richard Noe, "I've got the truest of blue to hearten me."

"I'm glad you've come, Bob.' Not glad to meet you in a prison, but its put new life in me. You'll get out soon.

"One of the guards is raly a friendly, good-hearted fellow.

"I'm true blue myself, but I can appreciate a feelin' man an' a Christian if he does wear the gray."

In four weeks the prison doors swung open for Richard Noe and Lieut. Benson, and one happy day the true blues forming a happy procession marched to the station to meet the returned soldier, husband a n father.

Molly's apron stiffly starched and beautifully ironed, the true blue apron, served as a kerchief when the happy tears so blinded her eyes that she saw dimly during the first few joyful moments the dearly-loved, honest face.

"Lieutenant Bob did find you pappy. I'm afraid you did't get the jell," said Molly, spying the scrap of flag-spangled print pinned to the blue coat lappel.

"Bob brought me new courage, an' I'm wearin' your colors, Molly," replied the father tenderly.—Ella Guernsey in Prairie Farmer.

The Girl Who Brags.

Ella Wheeler Wilcox in the April *Ladies' Home Journal*, deprecates the tendency of American girls to the habit of bragging. Only last week, she writes, I asked a young bachelor who is comfortably situated in life, why he did not marry? "Well, I will tell you," he replied. "I want a home, which, of course, means a wife, but I am discouraged about making the venture. I admired a young lady greatly, and was beginning to think seriously of paying her court. She seemed to be my ideal. She was a model daughter, progressive-minded, intelligent, industrious. She was always neatly but simply dressed, and her cheerfulness was like a sunny day. Recently I I met her on the street just as she was emerging from a milliner's establishment.

"See my new hat?" she said brightly, as I walked along by her side. "Isn't it pretty?

"I had not noticed the new hat, but now I saw a simple open-work straw on which reposed a few flowers and a bow of ribbon."

"Yes, very pretty and becoming," I replied. "I have a finer one being made" she continued. "This is only a hack affair. I paid only twenty dollars for it. It is stylish, though, for the price, I think."

"My heart sank at her light way of estimating cost. I have no sisters, and my mother possessed a knack of trimming her own bonnets, so I had never known what ladies' hats cost. If that simple bit of straw and ribbon cost twenty dollars, what would be the price of the 'finer hat being made'? Thirty dollars at least. I realized at once my inability to properly support a girl who paid fifty dollars for two hats in one fleeting season. What a fortune it would require to furnish all her wardrobe at that rate? Yet she is so simply dressed to all appearances; nothing at all showy about her. I suppose all girls in her station pay as much for their clothes, and so I think I will leave marriage for richer men. The average young man cannot stand that sort of thing, I assure you."

Now, I happened to know who this young woman was, and I happened to know that she was not an extravagant girl. If she had paid twenty dollars for a hat it was an unusual expenditure for her, and would trouble her conscience and purse for many a day, and cause her much self-denial in other directions.

But she possessed the foolish idea so prevalent in this age of great fortunes, that men admire women who use money lavishly and who pay large prices for their garments.

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Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

THE CROP OUTLOOK.—Haywards *Journal:* The recent hot spell has done no damage to the grain crop so far reported, coming at a time before the grain was advanced far enough in the head to injure the kernel. The present outlook is favorable to a fair yield of barley and the hay crop will probably be more than an average. A visit to the warehouses at the depot this week showed that arrangements were being made to handle a good season's business. Additional storage room will be provided for hay the coming season, as the proprietor informed us that he was unable to accomodate all his customers last year. Considerable hay and grain will be hauled to Haywards from Dublin and San Ramon, owing to the lower freight charges from this point. Very little hay was injured by the rains, owing to the lateness of the season in this valley. Take it as a whole, the outlook is better than an average for the farmer.

Colusa.

PECAN TREES.—Colusa *Herald:* A numb r of pecan trees on the premises of John Farris are simply weighted down with blossoms, and the yield will be very heavy. Mr. Farris has between 40 and 50 pecan trees, all growing nicely, and others were planted last year by different parties. This will undoubtedly be a great source of future profit in this county, as there are numerous trees and the nut brings a good price.

Fresno.

FARM NOTES.—Fresno *Californian:* Land-leveling has occupied the attention of many farmers this spring, and several thousand acres of new land have been prepared for irrigation. All of it not yet seeded will be planted to trees, vines or alfalfa next winter. There are some lands in Fresno county too strongly impregnated with alkali to grow trees or vines, but will make excellent pasture. Such land should be thoroughly leveled and sown to alfalfa. Where the alkali proves too strong for alfalfa, Bermuda grass should be sown, and a pasture of alfalfa and Bermuda grass will give far better results than either alone. Cattle will not bloat from eating alfalfa where they can get Bermuda grass with it.

GOOD RETURNS ON APPLES.—Fresno *Republican:* L. E. Grove, an orchardist of Mariposa county, visited Fresno yesterday and related to his friends what a good thing he has made out of his little 10-acre apple orchard, 30 miles from Raymond and 4500 feet above the level of the sea. He received recently from a small consignment of apples the highest price paid in the San Francisco market in a good many years. This year his 10-acre crop amounted to 1000 boxes of 50 pounds each, being 200 boxes less than his crop of the year before last. His first shipment was 27 boxes of Newtown Pippins, Hunstman's Favorite and Winesaps, to a commission house in San Francisco. The commission merchants wrote to him that his apples were the best they ever saw and that they brought the biggest prices obtained in many years. The prices obtained ranged from $2.50 a box for the poorest grades up to $5 for the best, the lot selling at $2.50, $3, $3.50, $4.50 and $5. The $5 apples averaged 72 to the box, or a fraction less than 7 cents each. His receipts were $103, less 8 per cent commission, 81 cents for cartage and $10.93 for freight; total expense of shipping and commissions, $19.98; leaving him a net balance of $83.02, a fraction more than $3 per box net.

Kern.

LARGE HAY CROP.—*Californian:* At the Tejon ranch about 1400 acres sowed with grain have already been cut over for hay, with the prospect that the yield will be about two tons per acre. This, it must be understood, is a product from unirrigated lands and is certainly a very satisfactory showing. The hay will be stacked up upon the grant, to be used during the winter emergencies and any time when, for a little season, pasturage gets poor.

THE TEHACHAPI GRAIN FIELDS.—Bakersfield *Californian:* A few years ago everybody seemed to think that there might be 3000 or 4000 acres of land at the most in that elevated plateau, known in general as the Tehachapi valley, which, during favorable seasons, could be made to yield a fair crop of grain. But every season during the past ten years has seen a thousand or two new acres changed into productive grain fields, and during all that time there has never been a failure of crops. So things have run along, the opportunities of the land becoming each season more clearly seen and more duly appreciated until it is estimated that there are now 30,000 acres sown in grain, from which will be harvested at least 40 sacks to the acre. In plowing time the dark brown patches which mark the limit of turned-over soil, creep higher and higher up the smooth and treeless hillsides, resulting in richly waving green billows, followed by that corn-color blend which betokens harvest time, where be ore was only the dullest russet brown of dreary unproductiveness. And while the plows have been each year climbing higher and higher on the hillsides, enterprise and prosperity have come with the newly turned furrows, until now the fame of Tehachipa as a grain-growing region is known throughout the State.

Mendocino.

WOOL FOR THE WORLD'S FAIR.—Carl Purdy writes: There is one matter to which the attention of Mendocino county wool growers should be called at once. As all know, the World's Fair Association of this county will try hard to make up a thoroughly representative exhibit. Such an exhibit would be incomplete without good examples of our wool. Wool comes close to second place in our county's products. In quality it leads the Pacific Coast, as market reports will show. For each wool grower to save some fine samples would be but very little trouble and less expense. There is no standard size for samples for exhibit, but four inches square taken from the best of fleece should be ample. I would earnestly request every grower of fine wool to save two or three samples from the finest fleeces and send them to Harrison Price, Secretary of the Association, at Ukiah. We will see that they are attractively put up and sent with the county exhibit. Wool growers, will you do it and advertise your county?

Napa.

HAY AND GRAIN.—Napa *Register:* The acreage of grass to be cut this year is above the average, and the yield will, in many fields, be heavy. The haying season bids fair to be prolonged. Some fields of early sown barley in this part of the valley are rapidly turning and will be ready for the header before haying is over. The yield will be from fair to middling. Acreage not large. There has not been a season so admirably suited for oats as the present one. This grain requires considerable moisture and cool weather. There are many handsome fields in this valley which, as a general rule, are not especially adapted to raising this variety of grain. Both white and cultivated wild oats now look very promising. The acreage of black or cultivated wild oats is annually increasing in this county, this variety being deservedly popular. Wheat, both the club and Chili varieties, is heading out. The cool weather is very favorable for this grain, and if it continues, the heads will fill finely. There never was a season when hay and grain looked more promising in this vicinity than at present, and the season from this time on will be a busy one.

Orange.

HORTICULTURAL NOTES.—Santa Ana *Blade:* At the Horticultural Commissioners' meeting, Perry, of the Anaheim district, reported 22 fumigating tents in operation in his district. He said that the new Riverside tents and derricks had been tried, and it was found that the dead limbs in the trees tore the tents. In order to remedy this, a new style of derrick which will raise the tents higher has been made, and will undoubtedly prove a success. He reported a yellow bug, which stayed in the ground during the day and at night came out and ate the leaves of the prune trees. They are very numerous and are proving quite destructive. Coal oil is being poured around the trees to kill them. Hamilton reported but little work done in his district. A lot of prune trees on peach roots, from Duarte, were inspected yesterday, and held until a certificate as to the navity of the peach could be obtained. Rafferty reported two kinds of scale—the soft orange, and the frosted scale—brought to his notice. Neither are especially harmful, and are easily killed.

Sacramento.

HOP NOTES.—Sacramento, May 26: Growers now report that the number of decayed roots are much less than was reported two weeks ago. The cool weather retarded the growth of the hops so long that it was thought the dormant shoots would not put out at all, and the situation was universally reported as gloomy. It is now discovered that while the growth has been slow the shoots accumulated much nourishment, and the shoots have come out large and strong. This, with the heavy subirrigation caused by the flood tide of the river, will insure a large crop. Growers, however, should watch their vines and cut them back, if necessary, or instead of hops, vines will be the crop, and the catkins will be large, green and coarse. Too much water is said to make large, coarse and undesirable hops, if pruning is not resorted to.

CROP NOTES.—Sacramento *News:* M. Van Gelder reports flattering prospects for farmers and orchard men in the vicinity of Acampo. Haying is in active progress and laborers are in great demand. The grain crop never promised a heavier yield, and orchards, as a rule, will yield an average crop in quantity and a superior quality to that produced for several years. Cherries are light and the pear crop will be less than last season, but the increase in some of the other fruits, Mr. Van Gelder thinks, will fully make up the deficit. "The nut crop," said Mr. Van Gelder, "about Acampo and Lodi will be large, especially that of almonds. Some of the largest almond groves in the State are located near Lodi. The industry has proven quite profitable and a large acreage has been planted during the past two years. Almonds, in most localities, are shy bearers, and for that reason orchardists have hesitated about planting extensively. However, in Sacramento valley the nut is a reasonably sure crop, and, with a certain market which is insured, almond growing will undoubtedly prove a very profitable branch of the orchard business. The warm weather is having a salutary effect upon trees and vines, and it is quite wonderful to note the daily growth. Nursery stock, of which our company has over a million and a half large and small, is making very satisfactory progress. The plantlets are springing up as if touched by magic and will be trees before the growing season is over."

San Diego.

SAN PASQUAL FARM NOTES.—Cor. Escondido *Times:* Our pretty valley is still here, though not heard from for so long. Everything is growing and blooming and every one is busy. The alfalfa is being cut and stacked or sent to market. Grain hay is all attended to here, and heading begins this week. Cattle and horses are looking well. Hogs are being raised in large numbers, and are fat and impudent as hogs usually are.

San Luis Obispo.

CROPS AROUND CRESTON.—Cor. S. L. O. *Tribune:* This hot weather has injured the grain crop throughout this section hundreds of dollars, fairly cooking the soft grain in the mesh and boot and fairly burning the grain stalk. We are now having heavy fogs in the morning which is a little benefit to the crops, but it cannot place them where they were one week ago. You can set it down that for anything like a fair yield of grain for this section of country, as a whole, this season is passed. The farmers are now trying to save a portion of the crop by cutting it down and making it into hay. There is a great call for mowing machinery at this time. Some of our ranchers have been sending out for extra machines. This is going to be a hard season on the average grain farmer.

Shasta.

FRUIT GROWERS' COOPERATION.—Anderson *Enterprise:* A large number of fruit growers of this vicinity and Happy Valley met at Bedford's Hall to take final action toward the disposition of their fresh fruits. J. H. Sumner, in the absence of T. W. H. Shanahan, temporary chairman, was called to the chair. He introduced letters from various fruit firms of the East and principal home-shipping points. J. C. Kesler was elected temporary secretary. An estimate was then given in by the growers present of the amount of fruit, of the several varieties, each one expected he could furnish, aggregating 321 tons, or 32 carloads of choice fruit. Permanent organization was decided on, and J. H. Sumner was elected president, A. Dozier treasurer and H. P. Dodson, secretary and manager. It was decided by vote that the officers of the association be an Executive Committee. Motion carried that shipping contract be entered into with Barnett Bros. Following are the names of those who signed the roll of membership and estimated tons of fruit each can furnish, which was handed to us after the above was put in type: Shasta County Fruit Co., S. H. Frisbie manager, 115 tons; S. P. Hussey, 10; Alexander Farm, J. H. Sumner manager, 50; J. C. Duncan, 5; Jesse Ulry, 20; S. C. Parker, 5; H. M. Alexander, 10; David Hill, 25; G. W. Burtner, 1; A. Dozier, 1; Wm. McGuinness, 40; H. P. Dodson, 15; H. B. Frisbie, 8; C. M. Palmer, 2; S. C. Dick, 5; Clyma, 5; Ludwig Fruit Farm Co., 1; E. J. Tillman, 3; a total of 321 tons. The orchards of the men represented in this list are nearly all young, especially the larger ones, and are bearing for the first or second time. The principal fruits are peaches and pears.

Sonoma.

FRUIT NOTES.—Santa Rosa *Democrat:* In company with Viticultural Commissioner DeTurk, we took a ride up the valley a day or two ago. Our itinerary was via Fulton and Windsor and then to Russian river. We have never seen the country looking more promising for an abundant crop. The foliage upon the trees, the natural grass and wild flowers are at the height of their beauty, and on the river bottom present the appearance of a tropical soil and growth. We visited the orchards and vineyards of both Mr. Hotchkiss and his near neighbor, Mr. Miller, and it will be pleasant for vine growers in Russian River township to know that, after a careful and critical examination, the President of the State Viticultural Commission could not discover the slightest evidence of disease among the vines. On the contrary, they were pronounced to be in all respects in first-class condition. The vines are on the upland, the orchard on the river bottom, which is subject to overflow. Like the delta of the Nile, its wasted fertility is annually renewed. Two years ago the water covered the tops of the trees in a young orchard without injury. In falling to its natural level the surplus moisture drains out of the porous soil like water from a sponge, leaving over the surface a mulch of alluvium from four to six inches deep. Under such a stimulant, vines, shrubs and weeds fairly struggle with cultivated plants for supremacy. The peach crop, both on the bottom and hill land, will be large. The prunes are very light set, but of large size. Of other fruits the yield will be fair.

THE CHERRY CROP.—Petaluma *Imprint:* Will Cassiday, who is well posted on the cherry crop, says: "You will notice by the San Francisco papers that there are only 839 ten-pound boxes of cherries shipped into the San Francisco market yesterday. A year ago at this time there were from 3000 to 5000 boxes going there. The cause of this is a short crop all over the State. At this time last year the prices paid for cherries ranged from 30 cents to $1 a box. This year the range of the market is from 75 cents to $1.75. I would further say to the cherry growers that they had better hold on to their cherries, because, notwithstanding the general shortness of crops, I know for a fact that the Alameda, Haywards and San Jose cherries will all go East. I do not believe that the crop in the State this year will be one-quarter of the usual yield.

CROP NOTES.—Healdsburg *Enterprise:* In the Healdsburg district no damage has been done to crops by Jack Frost, and from present indications the grape crop will be a large one. The fruit crop will not be so large, perhaps, as last season, but with the exception of cherries, there is plenty of fruit upon the trees. The Eastern fruit crop is almost a total failure. The fruit crop of California is light. The demand will be brisk, and good prices will prevail. The canneries are prepared to handle immense quantities of fruit, the capacity of the Magnolia having been doubled, and that all four canneries will run, and largely too, is almost an assured fact. The grain crop is a fine one, and prices for cereals are firm. The hop prospects this far are favorable, although it is too early in the season to predict a crop.

Stanislaus.

FOUL FIELDS.—Lorain Cor. Modesto *Herald:* A large area of the land sown to grain in this locality will be cut for hay, owing to the heavy mixture of oats and wild vegetation. The unusual amount of oats that is mixed with the wheat crop this season cannot be accounted for by our farmers. The theory has been advanced that this incalculable damage to the wheat crop results from the use of combined harvesters; that by a continuous use of the combines the soil will eventually become so poisoned with foreign growths that wheat-growing must be abandoned from necessity. This theory is denounced by those who, after growing rich while using an old-time "horse power," now believe a wheat farm is utterly worthless without a combined harvester of the latest patent.

Sutter.

FRUIT MATURING.—Yuba City *Farmer:* In the orchards the fruit is developing rapidly, and in about ten days apricots will be ready for shipping. Considerable of this work will be done this season at this place, as an association will be formed for that purpose. The cannery will begin the apricot pack about June 20th, the same as last year. Thinning peaches will soon be finished, and some are preparing for summer spraying where the scale is seen on the trees. The fruit crop will be very good, from present indications, taking it as a whole, and the warm weather is hastening its maturing rapidly.

HAY, GRAIN AND HOP NOTES.—Nicolaus Cor. Yuba City *Independent:* Farmers are watching the clouds to see what time they can with safety start their mowers. Alfalfa, in particular, needs cutting badly, so let us hope that the time for fair weather has come. Grain crops here never looked better, and if rust doesn't set in, all will be well and a bountiful harvest will be gathered. Our hopyards are very backward, on account of the very cold weather lately and the ground being heavily soaked with water. Only let them have one week of warm weather, and the vines will be ready for tying to the poles. This is to be a year of good prices, as dealers are already in the field eager to enter into contracts at 17 cents per pound for the new crop. These are paying figures for the hop growers, and should failure set in in other parts of the world, prices would be much higher, and the California grower would be in his glory. California always feels safe on the failure part, as she never had one yet, her climatic conditions being most favorable. Indians are to be introduced into the hopyards extensively as pickers. They are known to surpass the Chinese as clean pickers, and the best of it is they do not take all their earnings away with them.

Tulare.

CROP PROSPECTS.—Tulare *Register:* The fruit crop of this season is now beyond danger, and may be counted upon to fulfill its present promise. That promise is for an abundant yield in Tulare county. Many of the new orchards and vineyards come into bearing this year, and many more which bore their first crops last season are now so full of fruit that thinning out is necessary. These orchards will increase their yield each year for the next three or four years, and it has been estimated that if there should not be planted another tree or vine, the natural increase in production of those already planted would require, to properly handle the fruit, an addition of 1000 persons each year, for the next three years, to the population depending on Tulare City for supplies and for a shipping point. Let proper attention be given to thinning on the trees, and Tulare fruit will rank with the very best in the State. It takes "nerve" to thin fruit as it ought to be thinned. At Paige and Morton's, preparations are being made for an immense amount of fruit-handling. The yield will be four times as large as ever before, 12,000,000 pounds being the estimate. Year before last the yield was 3,000,000 pounds. The thinning process is still going on, and will continue for about ten days, when apricots will be ripe. From that time on till the close of the season, the different varieties will follow and there will be no rest. The number of hands employed, men, women, boys and girls, will make quite a large community. Subirrigation was resorted to this season instead of flooding as formerly. It was found that the latter method resulted in a crust being formed over the ground, which broke up into clods. Subirrigation has done away with this. The water level has raised to four feet and six inches, and capillary attraction has been the means of wetting the ground clear to the surface, even softening the clods caused by former flooding, so that the ground is in better condition than it has ever been. No water remains in the low places as was formerly the case. Reports from various directions bring news that the fruit outlook is first class, even though in a few localities some damage was done to the first crop of grapes.

Yuba.

CROP NOTES.—Wheatland *Four Corners:* Haying is in full blast. The crop is of good quality and will be large. The first crop on the bottom lands is in the stack. The barley crop is large this season. Already many fields are putting on the yellow. The wheat crop is way up in the clouds, both in yield and quality. If the warm weather continues, harvesting will not be so late as was announced earlier in the season. Wild blackberries are ripening. Our berry reporter has not canvassed all the patches as yet, but from indications near the town the crop is larger and of better quality than it was last year. The present high water, however, will make many rich patches inaccessible. The tame berry vines are full of blossoms and green fruit. Cherry shipments continue daily from the Kirshner orchard. The crop is exceptionally small. The prune crop in this neighborhood is a failure, while varieties of plum trees are fairly loaded. The peach and apricot crop will be large and of fine quality. The Bartlett pears were never better. The weather for the past few weeks has been just to the wants of the truck gardens. Their beans, corn, melons, etc., are in fine condition. The hopyards are backward and growth uneven. It is doubtful whether the crop will be as good as last season.

TO THE PRUDENT FARMER—DON'T NEGLECT TO INSURE YOUR GRAIN.

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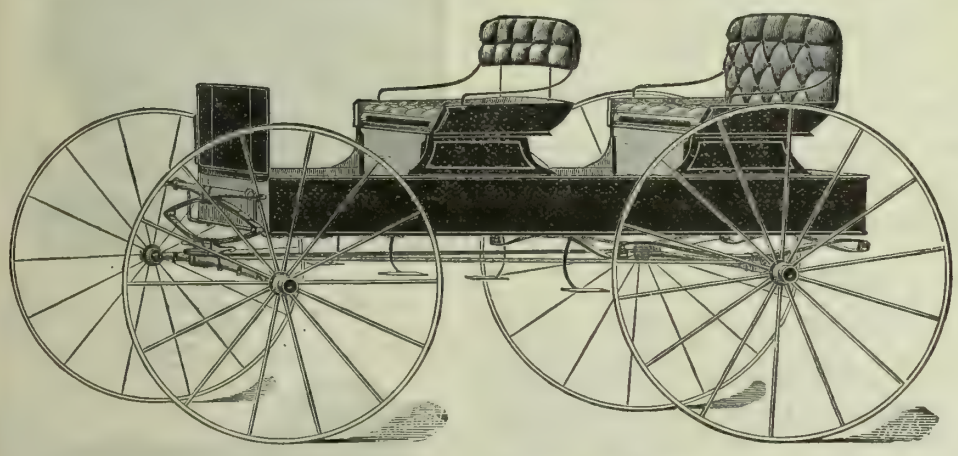
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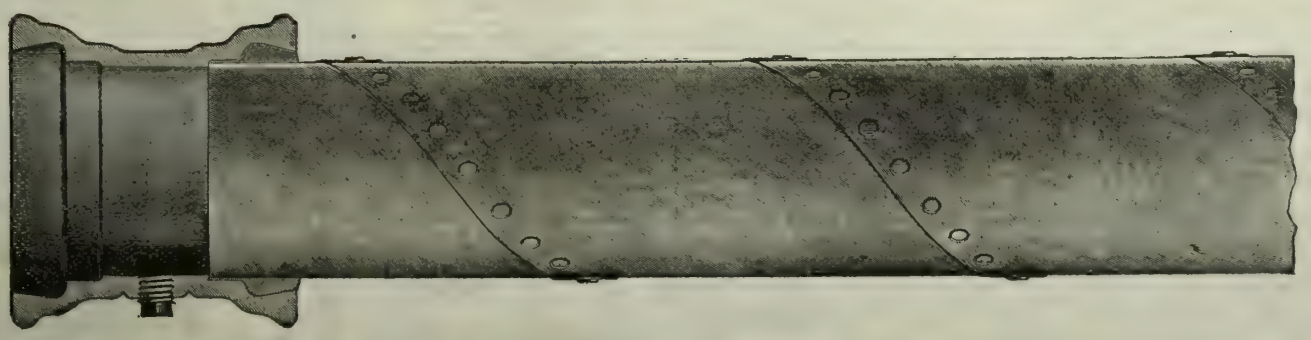
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THE GEO. F. EBERHARD COMPANY, Managers.

Sweet Stock vs. Sour Stock for Oranges.

Read by PROF. C. R. PAINE, of Crafton, before the Pomological Society of Southern California, at its meeting in Redlands, May 5 and 6, 1892.

When our predecessors in orange culture first came to this coast, they did not find natural groves of orange trees, as for generations back has been the case in Florida, the moist lowlands of the latter State affording favorable conditions for growth as contrasted with our arid plains. Yet, doubtless, the original settlers of either coast brought from the same mother country of Spain the varieties in favor at home for stock and fruit. Here, by cultivation, upon the mainland and islands of the Pacific has been developed a stock of citrus trees of the sweet variety adapted to their surroundings, with characteristics of both treee and fruit peculiarly their own. Why, in view of this fact of history, should any doubt that they are suited to be grown here? Why should any say that they are inferior as a stock to Atlantic grown, either sweet or sour, considering only their common origin but different conditions of development? Even if it were said that the stock here is from the East Indian or China orange, is not the same region the original source of the Spanish and Mediterranean fruit? I think we may fairly conclude, theorizing only, that our Pacific stock, whether Tahiti, Mexican or Californian, is its own kind, and perfectly acclimatized and suited in every way to its own home.

Then, look around upon the remnants of the early California planting of 1804 to 1840, and the forests of orchards of the present day from seed of the same stock; pass from theory to fact, and who, whether old resident or newcomer, viewing either budded or seedling tree, will deny their wonderful thrift and productiveness, doubtless, in our well cared for orchards, unsurpassed in the world?

Planters ought to be satisfied to let well enough alone, as most have been.

A laudible desire on the part of dealers to supply a more abundant and cheaper stock for the large demand for planting, sent them to Florida for the sweet and sour stock of that region. For one, I cannot see the force of the reasoning that because the sour root is largely used in Europe and Florida that it is better for this coast than stock proven good here. Though there is some difference of opinion in the peninsula State as to the suitability of localities for sour and sweet stock, yet there is general agreement that their sweet stock does best on upland soils and the sour stock on low lands. This consideration ought to have limited the planting of the swamp-loving sour root on dry uplands, yet its cheapness, the pleasant quality of the budded fruit grown upon it, and the fear of extensive gum disease or footrot on our own sweet seedlings, have induced large planting of the sour stock of Florida in this State.

Since its introduction five or six years ago, sufficient time has elapsed to form a fair judgment of its adaptation to our soils and conditions. Of course, we shall not all agree in this, be the evidence ever so strong, for that is not human nature. Believe me, that in my advocacy of the superiority of home stock, I am actuated by no prejudice, nor even restrained by regard for the interests of my friends who hold and practice contrary views. I simply want to help to hunt the truth.

I ask you, then, who are interested in the same hunt for truth, to note the comparative growth and appearance and market value of orchards on sour and sweet stock, to which I could cite you by name of owner and location.

Here is one: Three year buds on sour root of an age not definite, two years in orchard form; near by another, the same age of bud and orchard, and probably a younger root on California sweet stock. I do not ask you to note *carefully* the difference, because it is striking. It is not too much to say that the bulk of foliage limbs and body is three times as great in the sweet tree as in the sour. In another orchard, five years old, on sour stock, adjacent to a four-year-old on sweet stock, the latter has plainly four times the amount of growth and a market value of $1500 per acre, as contrasted with an $800 acre value of the former. Another fine orchard on sweet stock, three years planted, has sold for $1600 per acre. There is another on sour stock of same age, near by, which could not command nearly that price. Again another, four years, set on sour stock, and two years older than an adjacent sweet stock orchard, is greatly inferior in appearance and selling, and probably intrinsic value. I refer you to another of 20 acres in the hands of the same owner, the upper 10 acres budded on sour stock and the lower 10 on sweet stock. It does not take a practical eye to note the line of demarcation between the two sorts, nor is it a surprise to learn that the lower piece has valuation of $15,000, and the other, of equal age and treated in all respects as favorably, is not counted as worth $10,000. The owner is keenly aware that this difference, and his loss, are due to his choice of sour stock for one 10-acre tract. Instances are numerous like those I have named and the difference is too uniform to be explained by difference in treatment and care. There is one orchard, the one referred to in the advocacy of sour stock, in which the bud has been trained to a height of 10 or 12 or more feet and kept in place by cords tied to long poles. This has yet no full-formed fruit-bearing head, and though planted four or five years, has, I think, yielded little profit. This orchard, peculiarly treated, forms an exception to the general low appearance of sour stock orchards, but would not, I think, be chosen as the equal of many a sweet stock orchard brought to the same age with less labor than has evidently been bestowed on these tall buds. Again, you may contrast a grower on Florida sweet stock with one on sour on our mesas, and always favorably to the sweet stock, which in reality, as well as in theory, is best adapted to our high lands.

It is true that the sour stock bud and young tree here, but more especially in Florida, grows rapidly at first, but according to excellent Florida authority on orange culture (Moore), it will finally make a smaller tree than the sweet. This writer in his treatise says: "The sour stock budded should have least distance of all in orchard setting." The truth of this observation as to sizes of trees may be seen, as I have seen it by visiting California orchards, though yet young.

Again, look at the dark colored bark and irregular contour of the stem to learn that the sour stock is ill-fitted to make a new home in the dry air and sunny clime of California, afar from its habitat in damp surroundings.

Another reason, aside from its cheapness, for the introduction of the sour stock into this State, was its freedom from gum disease or footrot, of which, rare examples were found among our sweet seedlings.

We do not claim yet to have found the causes of this condition. Certain it is, that it can be produced by too deep planting, inducing decay of bark beneath the ground, and by the stimulus of excessive fertilization of newly planted and young trees, and over irrigation, producing a rapid flow and exudation of sap, and the injury in question. Also, when trees are pruned too high, the bark may be scalded by the water or water-saturated soil too close to the trunk of the tree. When better judgment is used in these respects, there will be less injury of this kind to complain of. It is certainly too little to warrant a change on that account.

It has also been claimed that trees and fruit on the sour stock are hardier. After one of the severe freezes of Florida some years ago, I made a special inquiry by letter of a friend interested in orange culture in Marion county, near Ocala, Florida, and his answer was that there was no difference in damage by frost. I have examined the fruit of various localities in this county since the cold night of Christmas, 1891, and I find the fruit of buds on the sour, nay, even the fruit of the sour seedling itself, equally susceptible to damage by frost with the sweet.

I have one more charge, and that a serious one, to allege against the use of sour stock as a basis of California orchards. It is, that the oranges and probably the lemons grown thereon have not good keeping qualities. As many know, one gentleman of this county raised seedbed stock from seed of the sour orange, budded the best known varieties on them, and fruited them for a number of years. At the citrus fair opened in Van Dorin's hall in San Bernardino, February 13, 1889, plates of specimens of several varieties were exhibited and their qualities discussed. I, for one, found less toughness in the fibre than in the ordinary sweet stock. This fair was protracted on account of wet weather into the third week, and while we were preparing at its close to remove the fruit, my attention was called to the condition of those plates of oranges grown on sour stock. On one plate remained three specimens, and where they touched each other the three oranges were blue with the mold of decay to the core; other plates containing more specimens had rotten oranges in the interior of each and every lot. They were gathered from the trees, as I learned from the exhibitor when tasting them near the opening of the fair, a few days prior to the exhibit, as was the case probably with all others. I conceived the idea at once that the very tenderness of the fibre contributed to their early decay. A careful examination by myself and others (whom I might name) of the large number of lots grown on sweet stock, of course, displayed on the long tables up stairs and down, failed to discover a single specimen of decayed fruit among them all, except such as had been punctured by nails, etc. A similar instance occurred in a San Diego fair, of which I was not personally cognizant. In this case the fruit had taken a prize in the first days of the fair, but it was necessary to throw it away before the protracted exhibit closed.

To be sure, particular seasons and circumstances are against the soundness of any fruit when shipped a long distance, but I believe the orange of Florida is well known not to be a good keeper, probably because grown so largely on sour stock.

If my limited experience is an index of the truth in this matter, is not this the strongest of reasons for planting the Pacific Coast stock, strong-growing, acclimated, healthy, cheap enough, and producing fruit that holds up well in transit to a market over long lines of rail, and doubtless ere many years, from our ocean ports by refrigerator steamers through the Nicaragua canal to ports of another ocean.

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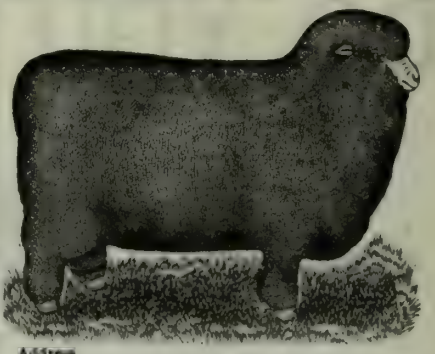
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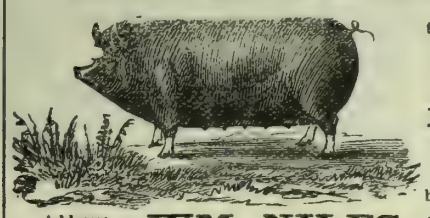
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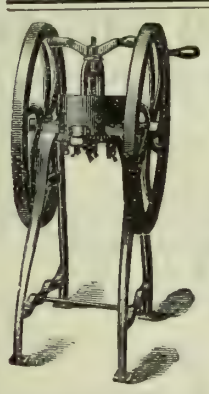
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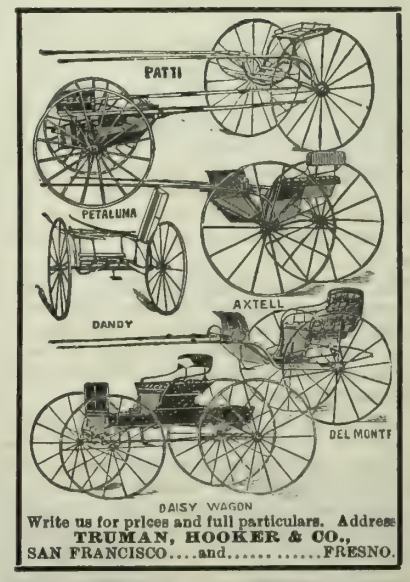
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PATRONS OF HUSBANDRY.

The Secretary's Notes.

AT Dutch Flat on last Saturday we had the pleasure of meeting Past Master Giantvalley and wife (of Eureka Grange), with other good Patrons who had come to welcome the Eastern editors. They spoke encouragingly of the future work of their Grange.

AT her Monte Vista home, near Dutch Flat, Sister C. E. Kinney briefly entertained Secretary Thomas and daughter, of Pennsylvania State Grange. They were both delighted with their visit to the mines and Monte Vista.

BROTHER AND SISTER STEVENS, of Temescal Grange, are tarrying for a short season at Monte Vista.

AT Grass Valley, Past Master Peterson, one of the faithful Patrons who have "held the fort" in that foothill and mining region, recently appreciatingly mentioned the late visit of the State deputies. He believes that Grange has now a prosperous outlook, which we hope will be realized.

HON. GEO. OHLEYER recently returned from his Washington visit on California Mining Commission duties, attended the the picnic at Chico last Friday. He is in good health and faith in the farmers' cause.

CHICO, it would seem, should have a strong and prosperous Grange. What neighboring Patrons will lead in the effort to reestablish our Order in that prosperous town?

New Hope Grange has just been organized in San Joaquin county, 12 miles from Lodi, with 30 members, by County Deputy Robert G. Williams. Just sound the name of this new Grange throughout the jurisdiction, and let it be the incentive for the formation of at least a dozen more before our next State gathering at San Jose. Arthur Thornton was elected Master, and Mrs. P. A. Kise, secretary, of New Hope Grange.

Bennett Valley Grange no doubt gave one of its pleasant picnics on Friday last, with Master Davis, Past Master Coulter and Bro. McConnell within the circle of able participants. Past Master Steele missed being present with much regret.

As the Worthy Master remarks, the Grange campaign is pretty well completed for this spring. Much good seed has been planted, and some immediate good results are manifest.

PETALUMA GRANGE was reorganized May 25th by Worthy Master Davis and A. T. Martin, with about thirty members. The installation of officers will take place June 4th. The following officers have been elected: C. D. Grover, M.; David Walls, O.; Theo. Skillman, L.; Mrs. D. M. Winans, S.; M. D. Hopkins, A. S.; Mrs. D. G. Heald, C.; A. S. Hall, T.; Mrs. D. Walls, Sec.; Miss Grace Hynes, L. A. S.; Miss Laura Walls, P.; Miss Sarah Heald, F.; Mrs. Frank Ennis, C.; and D. G. Heald, G. K. We are glad to see Petaluma Grange wheel into line again, with the belief it will prove a strong and helpful Grange. When previously reorganized, some five years ago, it had no outside helpers like Bros. Martin and others, or it would never have given up the fort. Success to our new Petaluma friends.

The Secretary of the State Grange recently received one copy of the new (National Grange) Digest, and a quantity has been ordered for sale. Within a week or two, copies can be furnished, post paid, from this office, at 35 cents each.

WHILE the RURAL PRESS has voluntarily ceased to be the *official* organ of the Grange, it will endeavor to continue to be a desirable and helpful weekly medium of communication for Grange news and such thoughts and information as will be of benefit to its readers and the cause generally.

OREGON STATE GRANGE convened at Albany last Tuesday. Its sessions usually continue three days. Capt. H. E. Hayes completed his second term of two years as Master, and Wm. L. Hilleary his first term as Secretary. Both have proved able and faithful officers, doing almost gratuitously a large amount of efficient labor. Oregon has been fortunate, as a rule, in elections and no doubt has again made a good selection of officers. For four years past we have been welcomed, in kindness to California, at the annual council gatherings of Oregon's chosen Patrons. The lessons and fraternal privileges bestowed upon us and other California visitors will never be forgotten. Bro. J. G. Heald of Santa Rosa Grange was probably the only California Patron at Oregon's present session. Our Worthy Master Davis writes regretfully of not being able to attend.

A. T. D.

Work of the National Lecturer.

WASHINGTON, D. C., May 16, 1892.

TO THE EDITOR:—In the issue of May 7th of the RURAL PRESS—which is a welcome weekly visitor to my office—I find your notice of the "National Grange Lecturer," saying that he "resigned some time since to take a place as an Inspector, with special reference to its work for the farmers of the United States, in the National Weather Bureau," to which you also add some very kind words of appreciation, all of which I value very highly. But as I have *not* resigned as Lecturer of the National Grange, and cannot think of any office that I would accept if it required me to resign, give up, or as you say, "lessen" my "labors for the Grange," I write to request a correction of your notice, that the wrong impression may not prevail among the many good sisters and brothers I count among my friends in your great State.

Doubtless you obtained this wrong idea from the fact, that having about completed the work upon which I had been engaged for over two years in the Eleventh Census, Secretary Rusk gave me an invitation to "come up higher" to my present place in the Department of Agriculture, and I therefore resigned my place in the Census and have, since the middle of February last, been doing what I can to extend the benefits of the Weather Bureau among farmers; and this is right in line with the action of the National Grange at its last session, as will be noted by a reference to page 136 of the "Proceedings," slip containing which I enclose herewith. The work remaining to be done in the agricultural part of the census was merely that of the routine of making the tabulations from the schedules. The figures of all the special investigations of live stock, viticulture, tropic and semitropic fruits and nuts, floriculture, truck farms, and other branches of horticulture never before taken in a U. S. census, and which I had in charge, were completed and published. So I accepted the "call" and am doing what I can for agriculture in this new field, but ever and *always* as Lecturer of the National Grange "performing all the duties of the office so far as I am able."

Since the last session of the National Grange, I have attended the annual meetings of five State Granges, assisted in the dedication of two Grange halls and the organization of five new Granges. Attended Pomona, subordinate and public Grange meetings in eleven different States, also a number of Farmers' Institutes, Clubs, etc., and have engagements already made for picnics, mass meetings, fair grounds, etc., as far ahead as next October. Have promised Bro. Hawkins a series of meetings in Alabama the last of July; on the invitation of Bro. J. B. Long, Master of the State Grange (and one of our good Grange members of Congress) I will go to Texas in August; have also promised to go to Missouri and Illinois in September, etc. Then as a part of my duties under direction of the Executive Committee of the National Grange, I have issued two official circulars each month on Grange work and progress, copies of which have been sent to upward of 300 agricultural and other papers and to officers of State Granges, Deputies and "Workers.'

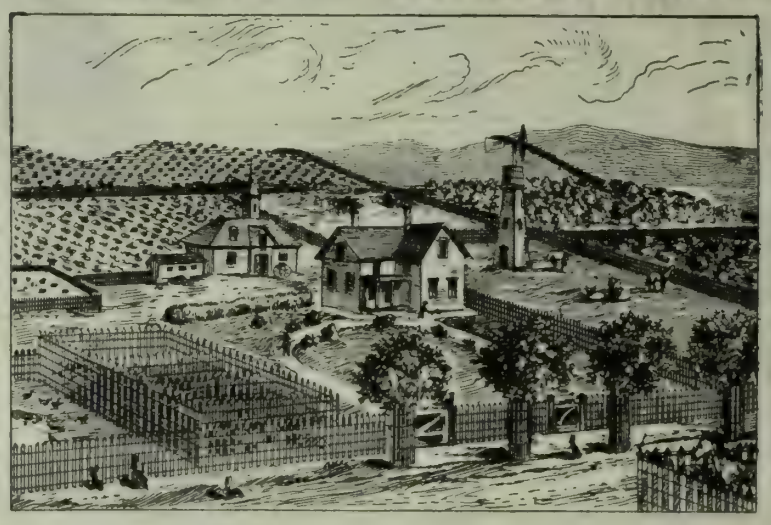
As this has been a busy session of' Congress for our Order I have been glad, in answer to the invitation of our good National Grange Committee on Legislation—Bros. Brigham, Trimble and Rhone—to cooperate with them, by going before Committees of Congress, etc., to push the measures our Order is working for at this time, especially the Pure food bill, Option bill, Rural Free-delivery of Mails, Silk culture, Free coinage of silver, etc. The official duties of my office as Inspector do not require me to give up Grange work any more than to give up running my farm; to the contrary, they take me as occasion may require to all parts of the country, and I am sure all good Patrons must rejoice at the grand progress and improvement that has been made in the Department of Agriculture of late years, in the practical benefits it is bestowing upon our greatest industry. It has been a part of my life's work in the Grange to help raise it from a simple Bureau, to a Department of the Government, with its head a practical farmer and *Patron*, ably filling his place as the representative of agriculture at the council table of the President. No, I have *not* resigned as Lecturer of the National Grange, nor as a worker doing my best to advance the objects of the Order I so thoroughly believe in and to carry them to their ultimate and highest end.

With best wishes for the good Patrons and their work in California, I remain

Yours Fraternally,
MORTIMER WHITEHEAD.

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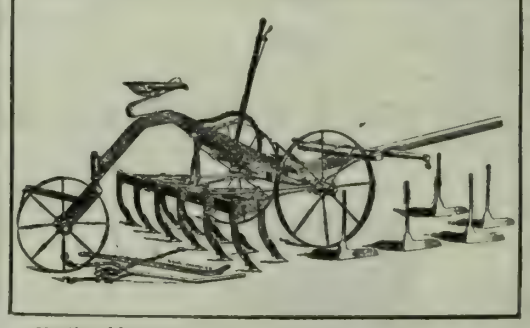
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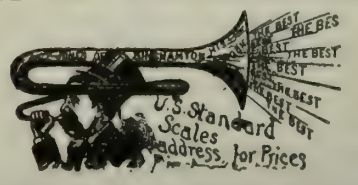


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GOOD HEALTH.

Milk Supply in Cities.

Wm. T. Sedgwick contributes to the *Technology Quarterly* an article from which we take the following:

Milk, to a great extent, man still uses much as his primitive ancestors used it; namely, in the raw or uncooked condition. And yet the milk of a modern city is altogether different from the milk consumed by primitive man. It is seldom fresh; it is often adulterated, and it is usually dirty. The stable, and travel more or less prolonged, have had their effect, so that the milk when delivered is often far along on its way toward decomposition.

Milk is an animal secretion prepared in much the same way as are the tears, the bile, the gastric juice, the urine, the sweat, and the saliva. It is secreted in the mammary gland, or udder, by certain epithelial cells which manufacture it from the blood. During the process of secretion these cells break open and contribute of their own substance to the mixture of water, salts, sugar, and fat, which constitute milk. At every milking a portion of the udder substance, the actual animal stuff, is given off; and thus it comes to pass that milk is strictly an animal food, like an infusion of muscle or of liver. It is unnecessary to say more to make it plain that it is highly unstable, highly decomposable, highly putrescible.

It is well known that milk, especially as it is found in large cities, is usually swarming with living bacteria. Most of these are probably harmless vegetables; nevertheless they constitute a host of organisms entirely foreign to the milk itself. The so-called "pure" milk ordinarily obtained in cities, even when it has not been tampered with, frequently contains in a teaspoonful millions of these microscopic vegetables, luxuriantly thriving in a soil most favorable for their development. Moreover, although themselves invisible, they do not fail to produce obvious effects. The souring and chemical decomposition of the milk, which soon appear, are due exclusively to their vital activity, and the milk which was originally sweet, and which in their absence remains forever sweet, becomes, owing to their activity, sour and chemically decomposed. In this condition it has important uses, but it is no longer "fresh" or "sweet" or "normal" milk. Under the worst conditions milk may actually be delivered to the consumer nearly or quite sour. That milk must be regarded as normal which is drawn from the teat of a healthy cow. In such normal, or udder milk, we have found no trace whatever of bacteria.

There are two principal sources of the bacteria in milk; namely, contamination during the act of milking, and the natural multiplication of the bacteria thus introduced during the interval between milking and the consumption of the milk. The result of these investigations was to show that even under the most favorable conditions, cow's milk as ordinarily drawn, becomes, almost necessarily, infested with hosts of putrefactive bacteria at the very outset. Under worse conditions, with unclean stables and dirty milkmen, to say nothing of half-cleaned pails and cans, it is easy to understand why milk swarms with bacteria; and if we allow time also, the wonder is, not that it contains so many germs, but rather that it is still potable at all.

When we reflect upon the indescribably filthy condition of many cow stables; upon the fact that the cow's udders and flanks are not infrequently covered with flaking excrement; upon the quality of the men employed to do the milking, etc., etc., it becomes a simple matter to understand how this rich animal fluid—sterile at the start, but drawn by unclean hands into half-cleaned pails, and meantime sprinkled from above by the dust of the stable, by hairs, dandruff, dirt, and particles of excrement from the skin and udder of the cow vigorously shaken by the milker or brushed by his hat—becomes infested with organisms. That these multiply swiftly and enormously in the warm and rich fluid, well aerated by the act of milking, is also a natural consequence of favorable conditions.

Tannin in Tea.

"Some examples which have been forwarded to us," says the *British Medical Journal*, "of the results of analyses for tannin and theine in tea indicate considerable variation in the amount of tannin, according to the quality of the tea and the state of growth at which it is picked. In some blends of China teas the percentage of tannin extracted by infusion for thirty minutes was 7.44; theine, 3.11; and a similar result was given in the examination of the finest Moning; while, on the other hand, with fine Assam tea a percentage of 17.73 of tannin by weight was extracted after infusion for fifteen minutes, and two blends of Assam and Ceylon tea gave, respectively, 8.91 and 10.26 of tannin. On the whole it is probable that the Indian teas are much more heavily loaded with tannin than the China or Japan teas. Moreover, the common method of prolonged infusion in boiling water is well calculated to extract all the tannin, while it dissipates the flavor of the tea. To be drunk reasonably, tea should not be infused for more than a minute, and with water of which the temperature does not exceed 170° F. It should be taken without sugar or milk, which would drown the flavor of the delicate and aromatic infusion thus obtained. This at least is how tea is drunk both in China and Japan, whence we have borrowed the use of it. With our European method of prolonged infusion in boiling water we destroy all the best flavor of the tea, and we extract such heavy proportions of tannin as to cultivate indigestion as the result of tea drinking. Indigestion is unknown among tea drinkers in the East, and it is in all probability only the result of our defective use of the leaf."

Developing Plants by Electricity.

The employment of electricity in horticulture forms an interesting subject for experiment and investigation, and results have already been obtained that justify the hope that the idea may soon be turned to practical account on a scale of considerable magnitude. Spring vegetables have already been forced by its aid for market, and there is no doubt that roses and other flowers can be made to bloom more plentifully and more profitably with its assistance. The Department of Agriculture at Washington has been experimenting in this direction for some time past. It has been found that lettuce is particularly susceptible to the influence of the electric light, by means of which, it is said, it can be grown for market in two-thirds the usual length of time. Other vegetables respond likewise in varying degrees. But everything depends upon the proper regulation of the light, and how to do this can only be learned by careful study of the results produced under all sorts of conditions. The effect of electricity being to hasten maturity, too much of it causes lettuce to run to seed before the edible leaves are formed.

Electricity is not employed for such purposes as a substitute for sunlight. It is merely used in a supplementary fashion. The greenhouse that has the sun in the daytime is illuminated at night with arc lights, toward which the plants incline their leaves and flowers. It has been supposed hitherto that vegetables required intervals of darkness for their health and development, just as animals need sleep, but it has been shown that, supplied with electric rays, they will go on growing thriftily between sunset and daybreak.

The electric gardener usually employs opal globes to diminish the intensity of the light. When the lamp is left bare and permitted to shed its unshielded rays upon the plants the latter grow pale, run up quickly in sickly stalks and soon die. It remains to be discovered exactly how much light is beneficial, and during precisely what period of development of the vegetables it ought to be applied.

The influence of the light upon the color and productiveness of flowers has been shown to be extraordinary. Tulips exposed to it have deeper and richer tints, flowering more freely and developing longer stems and bigger leaves. Fuchsias bloom earlier under like conditions. Petunias also bloom earlier and more profusely, growing taller and more slender. It is the same way with many other flowers. In fact, there is every reason for believing that the electric light will be very profitably used in future as an adjunct to forcing establishments for both flowers and garden vegetables. Already one market gardener in New Jersey is employing it with a succes which he reports as marvelous.—Western Electrician.

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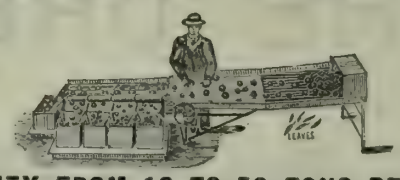
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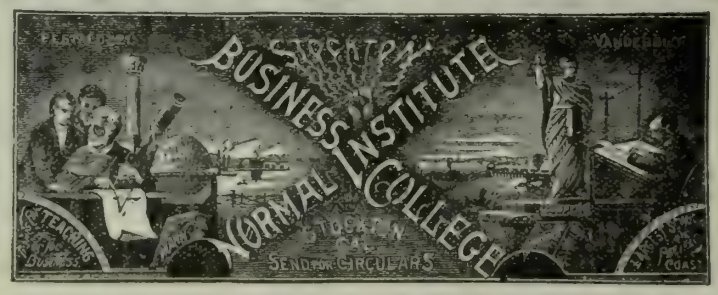
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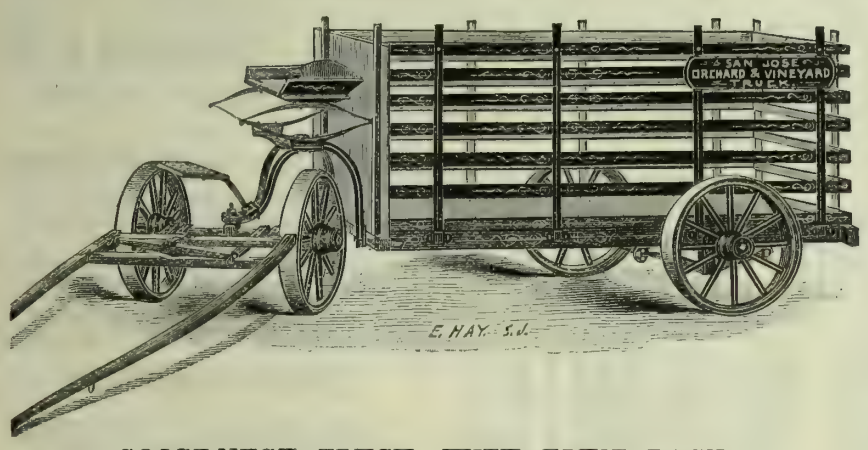
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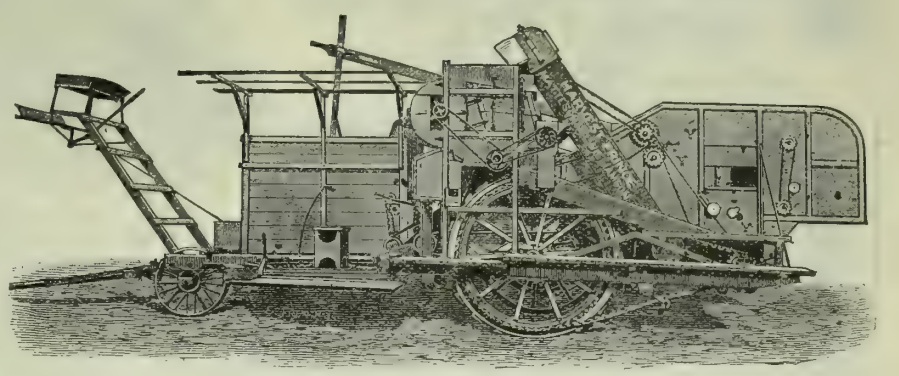
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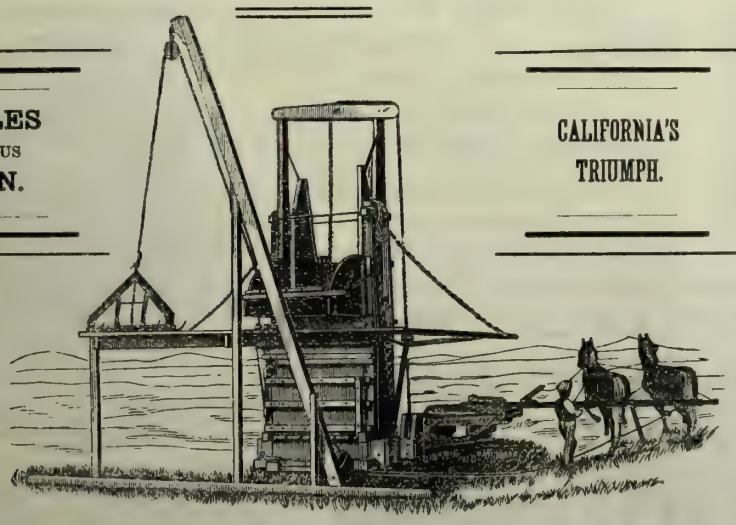
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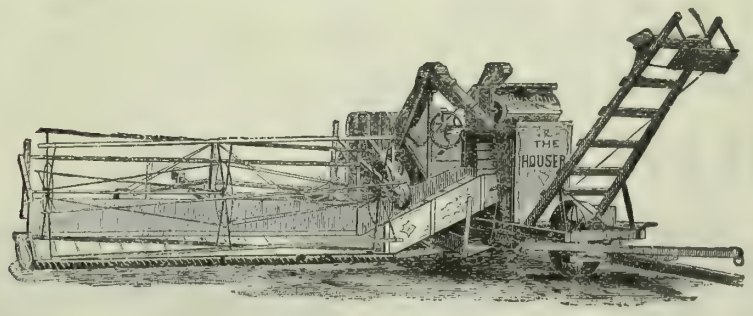
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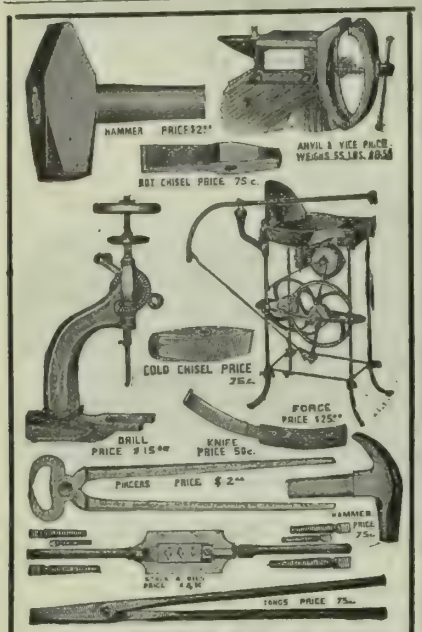
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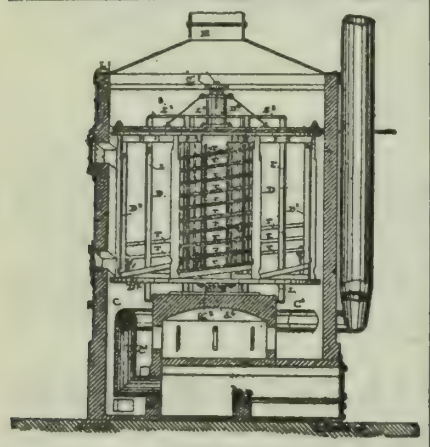
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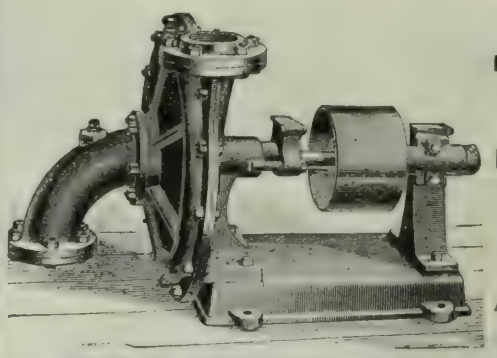
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 1, 1892.

The week's business was interrupted by a two day's holiday, from which, at this writing, it has not fully recovered. Clear skies and warm weather are now the characterizing features of the weather, which come at an opportune time for maturing crops. The crops of all kinds, cereal, fruit and hay, are more spotted this year than before known, which makes it difficult to form even a fair estimate of the probable aggregate outturn. The quality, as a rule, will average much better than was expected two months ago. Money continues in liberal supply. There is a steady growth of confidence not only on this coast but at the East and also abroad. With confidence fully restored, the markets should show more activity.

Foreign Grain Review.

LONDON, May 30.—*Mark Lane Express* says: English wheats are 6d lower. Sales are moderate. Stocks of wheat and flour in Great Britain aggregate 2,700,000 quarters. The American supply is estimated at 3,826,000 quarters. Last year they were respectively 1,431,000 and 2,287,000 This difference causes weakness. Foreign wheats have also dropped 6d. California is readily taken at 36s. Corn is firm. Prices at Liverpool have risen 1d. Barley and oats are 3d lower. At to-day's market English and foreign wheats were 6d lower; corn was 6d dearer.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June.	July.	Aug.	Sept.
Thursday	6s08½d	6s08½d	6s09½d	6s10½d	6s10½d
Friday	6s08½d	6s09 d	6s09½d	6s10½d	6s11 d
Saturday	6s08 d	6s08½d	6s 9½d	6s10½d	6s11 d
Monday	6s08½d	6s08½d	6s 9½d	6s10½d	6s11½d
Tuesday	6s 8½d	6s09 d	6s10 d	6s11 d	6s11½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	36s0d	35s9 d	35s9d	Quieter.	Favorable
Friday	36s0d	35s9d	35s9d	Quiet	Very warm.
Saturday	36s0d	35s9d	35s9d	Easier.	Brilliant.
Monday	35s9d	35s9d	35s9d	Quiet.	Fine.
Tuesday	35s9 d	35s9d	35s9d	Flat.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, June 1.—Wheat—Quiet but steady; California spot lots, 7s 3d; off coast, 36s 3d@3s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, downward tendency; on passage, rather easier; Mark Lane wheat, turn easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug.
Thursday	151½	151½	1:2½	151½
Friday	151½	151⅝	152½	151½
Saturday	....	....	....	....
Monday	....	....	....	....
Tuesday	152½	151	152½	151½

The following are to-days' telegram:

NEW YORK, June 1.—Wheat—90¼c for June, 91⅛ for July, 91⅛c for August, 90⅛c for September, and 93⅛c for December.

CHICAGO, June 1.—Wheat—83⅜ for July and 82½ for September.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	142½	142½	142	142	139⅜	139½
Friday	....	....	....	....	139½	139¾
Saturday	....	....	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	138⅝	138½

The following are to-day's recorded sales on Call:

Morning Informal Session.—Wheat—Seller 1892, 200 tons, $1.38⅛ ₩ ctl. Regular Session—Seller 1892, 500 tons, $1.38; 1000, $1.38⅛. Buyer August, 100 tons, $1.41; 900, $1.40⅝. August, 100 tons, $1.40. Buyer September, 100 tons, $1.41. September, 100 tons, $1.39½ ₩ ctl. Afternoon Session—Seller 1892, 400 tons, $1.38; 900, $1.38⅛. Buyer September, 100 tons, $1.40¼ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller 1892. H.	L.	December. H.	L.
Thursday	*97	95½	*95½	95	....	....
Friday	*96½	96	*96⅝	95½	....	....
Saturday	....	....	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	*97½	96½	....	....

*New Crop.

The following are to-days' recorded sales on Call.

Regular Session.—Seller 1892, new, 700 tons, 95c; 300, 95½c; 100, 95¾c ₩ ctl. Afternoon Session—Seller 1892, new, 100 tons, 95½c. December, 100 tons, 99¼c; 100, 99½c ₩ ctl.

Markets by Telegraph.

Russia Grain Crop.

ST. PETERSBURG, May 31.—The Imperial Economic Society reports that the protracted drought has caused serious damage to grass, and there is damage to crops in every province. Farmers are complaining of a lack of pasturage. The society recommends the storage of grain and fodder.

Eastern Wool Markets.

NEW YORK, May 27.—*Bradstreet's* says: The light stocks of domestic wools in all markets necessitate buying on the part of manufacturers. New wools from the Western States come forward slowly. Those from Wyoming and Utah are said to be heavy and short staple. The season is backward owing to the unfavorable weather, which prevented shearing. The prices paid in these States are as high as those of a year ago. The receipts of Texas and California wools are increasing. New wools from Ohio and Michigan have not as yet come forward. The stocks in the East are about exhausted, and whatever lots remain are held at an advance. Pulled wools still meet with a fair demand, but the sales are not as large as they were two weeks ago, because there is not the wool to choose from. Prices remain about the same. Australian wool is are meeting with good demand, but the supply is not large, and for choice lots dealers are asking an advance. The next London sales open on June 14th. Dealers expect that the advance made at the last sales will be maintained. Conditions are not favorable for heavy purchases for this country. Carpet wools are less active and prices are not as firm as a week ago.

NEW YORK, May 30.—The market seems fairly started. Attendance is good at all seaboard places, and there is a noticeable departure of operators for the interior. There is no speculative tendency, as it is well believed that manufacturers will not respond to any sudden demand, or even attempt to force prices in the face of their pending contracts and ventures in goods. It may be said that full late prices are paid without reluctance for an offering that has no marked attraction, and this may develop into at least fractionally better figures when qualities stimulate competition. Sales at New York, 529,000 pounds domestic. Philadelphia reports firm at old price, and lack of stock for trading. Boston sold 1,926,200 lbs. domestic.

Eastern Canned Fruit Markets.

NEW YORK, May 29.—Canned fruits have a favorable outlook, helped by the pretty generally conceded likelihood of reduced crops this summer, while the spring washouts at many points have injured chances of production. Opening coast prices for extras are met to a moderate extent. Standards show no shrinkage from the last reported list.

Eastern Dried Fruit Markets.

NEW YORK, May 30.—No peaches remain. Prunes are scarce and higher from second hands; fifties, 10½c; sixties, 9¾c; seventies, 9c; eighties, 8½c; nineties, 7¼c. Gray lots hard to sell. Raisins retain good sale. Closing prices were fine. Bags advanced. Eight hundred boxes even, good quality layers sold at $1 30; 2000, including seal brand, $1; common to fair layers were offered at $1@1.20; 1000 three-crown bags sold at 3¾@4c, good order; 2½c for damp; prime to extra now quoted at 4½@5c. Apricots are scarce. Buyers have to replenish from second hands and from lots that Philadelphia will spare. Any decent marks 9@10½c.

CHICAGO, May 31.—California Dried Fruits—Outside of the market for raisins, supplies are found to be very light, and quite a firm feeling prevails for good qualities of prunes, peaches and apricots, but of raisins there is a good supply, and under moderate demand rule steady but no better.

California Fruit East.

NEW YORK, May 30.—Express cherries sold at $3@4.50 per box, good to best; $2.25 in poor order. The first small springle apricots brought $2@2.50.

CHICAGO, May 31.—Cherries—Rule easy and the demand is tame; arrivals were small; boxes, 8@10 lbs, white, choice, $1.50@2; off stock, $1.25; black, choice, $1.75@2.25; off stock, $.50@1.50. Apricots—Are ruling quiet; half crates, $2 50@2.75

NEW YORK, May 31.—Four years ago 1,000,000 pounds of California fruit was the annual amount sold in New York. Last year 7,000,000 pounds found purchasers here, and this year, a fruit auctioneer who has just returned from a four months' stay on the Pacific Coast says, the amount of fruit sent to New York to be sold will be 20,000,000 pounds. From this time on the fruits from the Pacific Coast will be shipped to the East in less time than was dreamed of a few years ago. It is safe to say that in three years the production in prunes and raisins in California will be enough to supply America and preclude importations altogether. Last year 14 days was the average time in transit from California, and reducing the time to seven days makes the probability of landing fruit here in perfect condition unquestioned. In this event $500,000 can be saved to growers yearly over what has been realized in the past. England has been made an outlet, possible for green fruit, already, by placing refrigerating boxes on board the fast steamers, an experiment that has been recently tried with considerable success.

Eastern Hop Markets.

NEW YORK, May 30.—Feeling for choice Pacifics is unchanged. No important trading. All brewers fill moderate wants from under grades. Rather more activity in options at better bids. A closing sale of prime California, July, was at 26¾c.

Miscellaneous.

NEW YORK, May 30.—Lima beans are firm at $1.75 per bushel spot. Appreciation of this valuable coast product is commendably increasing. Mustard seed, unchanged.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 30, '92, were as follows:

Flour, qr. sks	31,813	Bran,	sks		4,664
Wheat, ctls	92,667	Buckwheat	"		
Barley, "	8,078	Middlings	"		1,703
Rye, "	626	Chicory, bbls			100
Oats, "	532	Hops,	"		14
Corn, "	2,194	Wool,	"		2,684
*Butter, "	1,318	Hay,	ton		1,518
do bxs	1,126	Straw,	"		90
do bbls		Wine, gals			216,790
do kegs	15	Brandy,	"		10,600
do tubs	191	Raisins, bxs			104
do ½ bxs	276	Honey,	cs		
†Cheese, ctls	856	Peanuts, sks			
do bxs	122	Walnuts	"		
Eggs, doz	40,200	Almonds	"		
do " Eastern	48,060	Mustard	"		
Beans, sks	6,324	Flax	"		
Potatoes, sks	14,623	Popcorn	"		
Onions, "	4,410	Broom corn, bbls			

*Overl'd, 239 ctls. † Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 23, '91.	July 1, '91 to May 21, '92.
Flour, ½ sks	361,999	444,457
Wheat, ctls	1,371,926	1,280,415
Barley, "	269,912	55,602
Oats, "	347,552	419,183
Wool, bales	6,409	7,383
Hops, "	455	431
Rye, sks	210	3,498
Potatoes sks	100,687	137,742

Grain in Call Board Warehouses.

G. A. Abel, Grain Inspector of the San Francisco Produce Exchange Call Board Association, reports the stock of grain in city warehouses on May 31st as follows:

	Feb. 29.	Mar. 31.	Apr. 30.	May 31.
Wheat, tons	1,068	2,182	2 475	2,925
Barley	13 837	12,718	10,978	8,776
Oats	3,709	2,556	2,097	1 688
Corn	2,564	1,893	2,091	1,860

The quantity of wheat in the warehouses at Port Costa on the 31st was 15,472 tons, and at Stockton 24 210 tons, making a total of 42,607 tons in all Call Board warehouses, a decrease of 9,976 tons during the month of May. A year ago the Call Board warehouses held 38,070 tons, of which 23,067 tons were at Port Costa and 13,195 tons at Stockton.

Washington Hop Notes.

Puyallup *Citizen*.—Roderick McDonald who came from Bucoda, Monday, reports a general increase of acreage in that locality. Marion Ogle will increase his ten-acre yard. Miss Sumner will increase her six-acre yard to ten acres, and Mrs M. A. Shead will add several acres to her eight acres. President of the State Board of Horticulture, Henry Bucey, examined many yards and reported finding lice upon the vines at the outskirts of the yards and the straggling vines which grow at a distance from the plantation. In the yards he did not find any but observed many ladybugs throughout the vines. He recommends the destruction of all straggling vines and an immediate and concerted action. He is of the opinion that buildings and fences are places peculiarly favorable to hybernating the lice. He says that if the ladybugs are as thick over the district as they are about Puyallup that they will make great inroads upon the lice. He does not think that spraying is liable to kill these lice-destroying insects, as they are carnivorous and are not a parasite of the hop-vine and are moreover provided with wings that will enable them to fly away from the dangers of the spraying machines. From all over Western Washington reports come in of the appearance of lice, but though they seem to be everywhere in numbers which as yet do no material damage, presage, nevertheless, an almost certain invasion later on. The infested condition of the outside rows of hops which gave an impetus to the general rumor of a few weeks ago to the effect that the yards were reeking with the aphis—does not seem to be an indication of the condition in the interior of the yards where but few lice are to be found. The lice have made their appearance on the Skagit and reports from Lewis county say that they are there also. E. C. Merrill received a letter from the foreman of his Oregon ranch yesterday in which it was stated that there were no lice to be found about Independence as yet, though about Buena Vista the yards are pretty generally infested. The vines are going up the poles at a pretty lively rate, and a few may be found in the advanced yards which would measure from five to eight feet.

Cereals.

The last official Hungarian report stated that the crops generally deteriorated in April, owing to unfavorable weather conditions. *Beerbohm* says that the wheat crop is very backward, not only in the United Kingdom, but in France. In Germany favorable weather was desired, but there were no specific complaints. The consumption of wheat in the United Kingdom for the coming season, exclusive of seed, is estimated at 216,000,000 bushels. The consumption during the summer months is 16,800,000 bushels a month or 4,200,000 a week. Regarding the appearance of the growing crop in Russia, the St. Petersburg *Bourse Gazette* says that the daily information is that the prospects of both spring and winter have improved. The weather conditions have been favorable, and spring sowings have made good progress. The London *Millers' Gazette* says that the stock of foreign wheat now on hand in France is equal to about 20 000,000 bushels and it is believed that the imports for the entire season will foot up a total of about 104 000,000 bushels The prospects for the growing crop indicate that the total requirements for the coming year will be about half of what they have been in the past.

New York mail advices, May 25. The planting of corn has been so much delayed that it is now generally thought that the area will be reduced considerably and corn planted at this period of the year is likely to be caught by a September frost. The foreign markets were firm on corn, showing quite a disposition to follow the advance here. An announcement comes from Servia that the export duty on all kinds of cereals will be reduced from one franc per 100 kilos to 30 centimes. The total shipments of wheat from India since April 1, have been 8,340,000 bushels, against 7,280,000 bushels for the corresponding time last year. The advices from the Argentine are that total shipments of wheat for the quarter ended March 31 were 113,873 tons of wheat and 3,734 tons of corn. The Milwaukee *Sentinel* says that there was no improvement in the spring wheat situation up to the close of last week, May 21. Not more than 50 per cent of the area was seeded north of the line of the Northern Pacific, and probably very little more would be seeded. Under date of May 10 the information given out by the Russian Minister of Finance was favorable for the winter grain crop in Poland, the Baltic Provinces, the Northwest, Southwest and Central Provinces. The south and southeast were less favorable, and the vegetation in the north and east is reported very backward. Of the enormous exports of wheat from the United States for the ten months ended April 30 of 133,410 000 bushels, more than one-third, or 50,290,000 bushels, were from New York.

The official report of the Italian Minister of Agriculture says that the cold weather has arrested the growth of vegetation, but the impairment is by no means general. The condition of wheat is good, and planting of corn is in active operation. Dornbusch says that it is slowly being comprehended that no country excepting California has the promise, much less the likelihood, of a good wheat crop. The quantity on passage has absorbed rapidly for Continent account, France and Germany taking more than one-half the cargoes coming forward for orders. The Iowa crop bulletin says that crop conditions have become serious in certain portions of the State. Oats and small grain on high ground are doing nicely, but on low ground the crops are in unfavorable shape. The Michigan report states that the crops are backward, but not seriously damaged excepting on low ground. Two weeks of good weather would make a great change. The Indiana report says that farmers and merchants are becoming anxious about the delay in corn-planting, but wheat, oats and grass are promising nicely.

London cables of May 31st report as follows: Wheat and flour on passage to United Kingdom, 2,763,000 qrs.; Continent, 984,000 Imports of wheat into the United Kingdom during the past week, 357,000 qrs.; flour, 221,000 bbls

In the local wheat market trading is of a bearish character. It looks now at if the rings are pursuing their old tactics of hammering down, on Call, the markets for futures to enable them to enter the new crop season on a low range of values. In this they have been largely assisted by speculative holders (farmers and others) throwing their old grain on the market. With more sellers than buyers, the latter had the whip handle, which they were not slow in using. Buying cheaper, they broke the demand markets abroad by offering cargoes for shipment at lower figures. There is nothing, so far as we know, to justify present low quotations, but there is much to warrant better prices, and which will certainly be realized before the summer months pass.

Crop advices are of a most favorable character in this State, Oregon and Washington. The wheat outturn in this State will probably be fully 1,500,000 tons, while up north it will be fully 10 per cent more than was harvested in 1891. The barley crop will also be larger, but the oat crop will probably be less.

Persistent hammering of barley futures on Call has caused spot barley to sell at lower figures. Receipts are light. The demand is not so free, owing to millers not taking so much. The falling off in the demand from millers is due to a lessened call for ground feed from the Hawaiian Islands and also from home feeders. Buyers of feed barley appear disposed to let the market take care of itself until new begins to put in an appearance. Brewing barley is scarce and wanted, but malsters do not appear disposed to bid up, but on the contrary, they try hard to get concessions.

Oats are steady at full figures, notwithstanding the near approach of new crop season. Feeders will for some time to come give preference to old oats, and therefore while the latter will hold to firm prices, new crop receipts will sell at a lower range.

Corn is steady. Trading is light. Receipts are only fair. The supply in this State is light Unfavorable advices regarding crops in the Central States are in favor of holders.

Rye is dull and weak.

From the summary statement of the imports and exports of the United States for the nine months ending March 31, 1892, compared with the corresponding period of 1891, we tabulate the following quantities and values of breadstuffs exported:

Barley, bush	2,402,125	405,685
Bread, lbs	10,791,522	11,857,803
Corn, bush	57,575 367	24 233,683
Cornmeal, bbls	212,126	251,804
Oats, bush	7,213,015	896,605
Oatmeal, lbs	18 430 673	6,668,075
Rye, bush	10,375,772	322,912
Rye flour, bbls	3 911	3 322
Wheat, bush	128.347,897	36,688 707
Wheat flour, bbls	11,529 425	8,434,838

The above affords an interesting study in showing the remarkable resources of this country in meeting any unexpected scarcity in breadstuffs of European countries.

Feedstuff.

There is a lessened call for ground barley, owing to a falling off in the export demand. Bran and middlings are fairly steady, as is feed meal. Feeders are not buying beyond immediate requirement, believing that with the new crop season for cereals, lower prices will obtain.

Hay, contrary to general belief, rules steady. Receipts are fair. Haying is in active operation in all parts of the State, and it is only reasonable to conclude that selling offers will soon be on an enlarged scale; but whether farmers will be willing to accept much lower figures remains to be seen. It now looks as if choice, well-cured hay will command full prices.

Dairy Produce.

Butter is weak at slightly lower prices. Receipts are free, while the warm weather is against its being kept in stock for buyers. This necessitates the hunting up of buyers. Eastern butter is coming in fairly free. The output of the dairies east of the Rocky mountains, it is expected, will be considerably larger than it was in last year.

Cheese is still weak under free receipts and only a fair demand. The grade this year shows a uniform quality, which is in favor of producing an enlarged demand.

Strictly choice fresh-laid eggs are wanted, for which as high as 23 to 24 cents can be secured. Warmer weather makes a wider range in values.

Vegetables.

Warmer weather and clearer skies are causing more liberal receipts of garden stuff. Peas are very weak at lower quotations, string beans are barely steady, asparagus is hard to sell owing to free receipts, and canners being out of the market. Summer squash is slowly shading. Tomatoes continue to come from Los Angeles; the boxes are small.

Quotations for old onions are withdrawn. New onions are coming in quite freely; the better keepers command outside quotations.

Old potatoes are hard to sell. Even the best Oregon Burbanks do not fetch more than 85 cents per 100 pounds New potatoes advanced slightly, but yesterday prices gave way, and to-day the market is weak. The Southern part of the State is in the market as sellers for overland shipments, which is against the market in this city. The home trade gives boxed potatoes preference.

Fruit.

The market, outside of strawberries, is slowly sinking for early fruits. Cherries are coming in freely, and sell at lower prices. Heavy shipments overland are being made. Canners bought some to-day. Black sell at 4 cents and white at 6 cents to canners and shippers. The fruit is larger and better. Apricots are lower. The quality is slightly better. A few Royals are coming in. Gooseberries are steady. Currants are weaker. Canners' views are below sellers'. It is said that San Leandro growers have combined not to sell below $5.50 here. Cherry plums are weaker.

Shippers and canners bid as follows: Cherries, black, 4 cts. per lb.; white, 6 cts. per lb.; apricots, $25 to $35 per ton; peaches, $20 to $40 per ton. Driers are bidding $35 to $50 per ton for French prunes.

In dried fruits there is nothing new to report. Stocks are light, as is the demand. The same remarks are applicable to raisins.

Live Stock.

Warm weather is against the market for bullocks; but as the offerings are light, prices are no lower. Mutton sheep meet with a good demand at current quotations. Hogs are slightly weaker for medium to heavy, but block hogs are steady. Calves are firm.

Wool.

With a broken week, trading has been light. Receipts have increased. While buyers report a fairly active inquiry at the East, yet they claim that manufacturers are not willing to advance bids except for a desirable consignment to meet a special and urgent want. It is said that the wool coming from the northern counties shows a decided improvement over that received in last year.

Miscellaneous.

From reliable advices up to June 1, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	257,882	341,441	*†143,338	55,043
San Diego	16,454	17,111	2,603	.....
San Pedro	5,470	12,205	.....	
Oregon	22,396	32,108	16,756	13,312
Puget Sound	16,785	31,815	.....	
Totals	318,987	434,681	162,697	68.355

*Engaged for wheat, 1892, 17,170; 1891, 34,809 †For new crop loading, 16,759.

The statistics of produce exports from this port from July 1st to May 25th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,580,007	12,982 290
Flour, bbls	1,014,907	1,113,724
Barley, ctls	1,103,376	305,963

Hens and roosters are steady at firm prices. Spring chickens are higher. Other fowls are steady.

Hops are firm for old. It is said that 25 to 30 cts. can be readily obtained for good to extra. For new crop, buyers bid 16 to 18 cents per lb. It is said that some damage is done to one or more hop yards in Yolo by high water.

Beans are steady. The new crop will not be as large as was that in 1891.

Grain bags are weaker under freer offers by outside holders.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 1, 1892.

Limes, Mex	7 00	@ 8 50	Apricots, Pringles, pr box	50	@ 75
Do Cal	—	@ —	Royal, pr box	1 00	@ 1 50
Lemons, box	50	@ 3 50	Cherries, box		
Do Sicily	5 00	@ —	Black	40	@ 60
Oranges, Seedlings			Red	30	@ 50
Redlands	2 50	@ 3 00	White	40	@ 60
Riverside	1 50	@ 2 50	Beets, sk	—	@ 1 00
Los Angeles	1 50	@ 2 00	Carrots, sk	50	@ —
Do Navels—			Okra, dry, lb	15	@ —
Redlands	4 00	@ 5 00	Parsnips, ctl	—	@ 1 25
Los Angeles	2 50	@ 3 00	Peppers, dry, lb	10	@ —
Riverside	3 00	@ 4 00	Do green	—	@ —
Duarte	3	@ 4 00	Turnips, ctl	50	@ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			Cabbage, 100 lbs	45	@ —
			Garlic, lb	8	@ 12½
			Squash, Sum, bx	50	@ 1 50
			Tomatoes, box	1 00	@ 1 75
Strawberries, per chest—			Asparagus, box	25	@ —
Longworth	7 00	@15 00	Do choice to ex	75	@ —
Sharpness	5 00	@ 8 00	Peas, green, sk	40	@ —
Gooseberries, ₩ pound	2	@ 3½	Do sweet	50	@ 70
Large do	4	@ 5	Rhubarb, box	50	@ 1 00
Raspberries, dr	65	@ 1 00	String Beans	3	@ 3½
Currants chest	5 00	@ 6 50	Do do wax	3	@ 4
Peaches, box	65	@ 1 50	Do Refugee	4½	@ 6
Cherry Plum, dr	45	@ 75	Cucumbers, doz	50	@ 1 00
Figs, Arizona, lb	70	@ —	Mushrooms	10	@ 30
			Egg Plant, lb	17½	@ 20

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7 @ —
Grass fed, extra	5½ @	Ewes	6½@—
First quality	5 @ —	Do Spring	8 @ —
Second quality	4½ @ —		
Third quality	4 @ —	HOGS.	
Bulls and thin Cows	3 @ —	Light, ₩ lb, cents	5 @ —
VEAL.		Heavy	4½@—
Range, heavy	5 @ —	Feeders	3½ @ —
Do light	6 @ —	Stock Hogs	3½ @ —
Dairy	6 @ —		

Grain and Wool Bags.

Calcutta, spot	7⅜@	7¾
Wool Bags	36@	38

Continued on next page.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor qualities sell less than the low quotations.

WEDNESDAY, June 1, 1892

BEANS AND PEAS			
Bayo, ctl.	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 25	@	2 70
Red	2 00	@	2 20
Pink	1 90	@	2 35
Small White	2 40	@	2 55
Large White	2 20	@	2 45
Lima	1 70	@	2 05
Fld Peas, blkeye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	19
Do Creamery rolls	—	@	19
Do do Giltedge	—	@	20
Eastern	—	@	—
CHEESE.			
Cal. choice mild	—	@	8
Do fair to good	7	@	—
Do glt edged	—	@	9
Young America	—	@	10
EGGS.			
Cal. ranch, doz.	19	@	—
Do do selected	—	@	24
Do store	16	@	—
Eastern	16	@	19
FEED			
Bran, ton	17 50	@	18 50
Feedmeal	26 00	@	29 00
Gr'd Barley	22 50	@	24 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	11 00	@	—
Do choice	—	@	14 50
Wheat and Oats	10 00	@	10 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN. ETC			
Barley, feed, ctl.	95	@	—
Do Choice	1 00	@	—
Do Brewing	1 02½	@	—
Do do Choice	1 07½	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 38	@	—
Yellow, large	1 35	@	—
Do small	1 37½	@	—
Oats, milling	1 47½	@	—
Feed, Choice	1 45	@	—
Do good	1 36½	@	—
Do fair	1 34½	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 30	@	—
Rye	1 31½	@	—
Wheat, milling,			
Gilt edged	1 45	@	—
Do Choice	1 42½	@	—
Do fair to good	1 41½	@	—
Shipping, cho'ce	1 41½	@	—
Do good	1 38½	@	—
Do fair	1 36½	@	—
Common	1 33½	@	—
Sonora	1 33½	@	1 40
HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 65	@	4 75
Do Country Mills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	14
ONIONS.			
New Reds	40	@	—
POTATOES.			
Early Rose, ctl.	50	@	75
Do do in boxes	50	@	1 00
Burbank Seedling	—	@	—
Do do Oregon	65	@	85
River Reds	40	@	60
Garnet Chilies	75	@	80
POULTRY.			
Hens, doz	6 00	@	8 50
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	4 00
Do large	5 00	@	6 50
Fryers	7 00	@	8 50
Ducks	5 00	@	7 00
Geese, pair	1 25	@	1 50
Goslings	1 25	@	1 75
Turkeys, Gob'r.	17	@	20
Turkeys, Hens	15	@	20
Manhattan Egg Food ₱ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	16	@	20
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'l.	15	@	19
Oregon Eastern.	12½	@	19
do valley	—	@	—
So'n Coast, def.	10	@	12
Nevada (S ate).	15	@	18
HONEY.			
White Comb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	—

FLORIST AND GARDENER.

Southern California Vegetables.

Some time ago, the Chamber of Commerce, acting on the suggestion of several of its members who were engaged in the business of raising winter vegetables for the Eastern market, addressed a letter to the Southern California Railroad Company asking for information as to the time when the various lines of produce would be most in demand and how they could be most advantageously shipped. The answer received, which was a digest of much information obtained through the Eastern agents of the company from dealers in vegetables, is considered of sufficient value to offer to the newspapers of Southern California for publication, in order that the growers of winter vegetables may proceed with more intelligence and also that others may be induced to go into a line of work which may at some future time contribute largely to the prosperity of this section.

The suggestions offered by the railway company read as follows:

The trade in winter vegetables commences between December 15th and January 1st and lasts until about April 30th. This does not include potatoes, of which we shall speak later. Hitherto, it has been supplied largely from the Bermuda Islands, but latterly this supply has been supplanted by shipments from Cuba. If the Southern California producers will arrange to have their crops so planted that they may be brought to market early in the period above stated, there is no doubt that they can be disposed of profitably against the imported crop, which is longer in transportation and subjected to additional exposure, transfers and handling. By means of the through fast freight refrigerator service now provided to shippers from the Pacific Coast, these products can be placed in the markets of our large Eastern cities in almost as fresh a condition as when packed.

The following points may be judiciously considered by both growers and packers. Judgment must be used in the selection of the character of the seed, a lack of which, as has been explained in the past, is a sufficient reason why Southern California products have been unable to compete with the Southern supply.

Southern California green peas in Chicago, April 22, 1892, sold for 25 cents per crate. The crate was of the best material, similar to the crate used in packing peas from the South, but the peas were dead, tasteless and void of the squeaky sound that the Southern pea has when pinched, which in the same market could be found for comparison. The reason is stated to be that the Southern California pea was a common variety, not selected, instead of a sweet table pea which is in demand, and is the variety supplied from the South. The same point will apply to other vegetables.

Again, it is claimed that a full car-load of green vegetables, all of one variety, will spoil in from five to six days, even though they do not heat. In order to avoid this, the car should be made up of mixed shipments—beans, peas, tomatoes, cauliflower, etc. The package preferred by the commission men is one-third, one-half and bushel crates, as are now in use here.

Cauliflower and cabbage should be packed two and one-half to three dozen to the crate. It should be borne in mind that none of the larger Western cities, not even Chicago, are able to dispose of an entire carload shipment of any single vegetable to advantage, hence the recommendation for mixed carloads.

The Southern California potato crop is next in order. The demand is reported to be favorable for growers and packers in this section as regards both quality and prices, and as the business is already moving, the suggestion is presented that shippers exercise care in selecting and in shipping the various sizes and varieties separately. Good marketable potatoes only should be packed.

It is stated on good authority that last season Southern California was driven from the market by Southern competition at least three weeks earlier than would have been the case had proper attention been paid to these points. Care should also be taken that potatoes are not shipped wet.

It should not be overlooked that you are shipping to an educated market, and that strictly first-class articles will invariably command their value and result in satisfactory returns.

These features are presented simply for information and with a view to improve the reputation of Southern California productions and the prices secured to our growers by their introduction and disposition in Eastern hands to an extent that will establish them as standard, in order that they may take the lead over all other competitive producing sections.

A Cheap Fence.

There was a time when it could be said that the fences in America had cost more than all other improvements combined. That time, however, is past. As the timberless regions of the country have become settled, and the land put under cultivation, a constantly growing demand for a cheaper, more lasting and less cumbersome style of fencing has sprung up. To meet this demand ingenious men have devised almost numberless plans, and while many of them, for cheapness and saving of labor in construction, are long strides in advance of the methods of our grandfathers, there are very few that seem to fill all the requirements of a perfect fence. Among these the one that is rapidly gaining favor with farmers, orchardists and stock-growers wherever it has been used is a combination of pickets and wire known as the *Eureka Fence*. In this fence, the pickets, which may be of any reasonable length, width or thickness, are so tightly woven or twisted between double strands of heavy galvanized wire as to be absolutely immovable. Special machinery is required for its manufacture by which the wire strands are given three turns between each picket. The pickets being of the best material obtainable, the result is that a fence practically indestructible is rapidly turned out, at a price, quality and durability considered, below that of any other and within the reach of all The machine being adjustable, any number of double-wire cables may be used, and the pickets so spaced as to be rabbit proof or simply stock proof, as the case demands. The California Fence Manufacturing Company, of which H. T. Renton is General Superintendent, is the sole manufacturer of Eureka Fence, and is composed of well known business men in good commercial standing in this city. Farmers and ranchmen generally who have new land to enclose or old fencing to renew will do well to write for particulars, etc. The company's works and offices are at 570 and 572 Brannan street, San Francisco. Address H. T. Renton, Superintendent.

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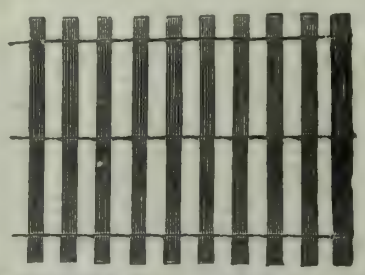
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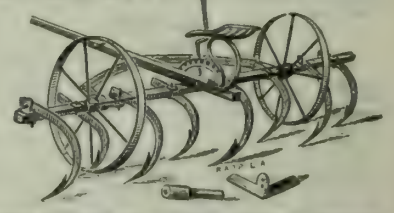
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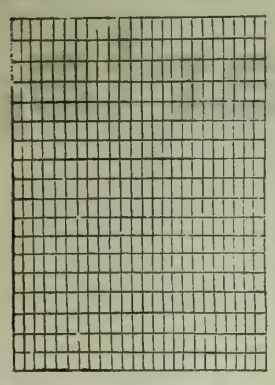
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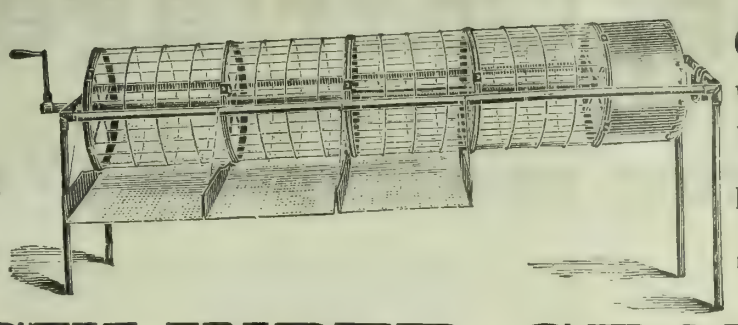
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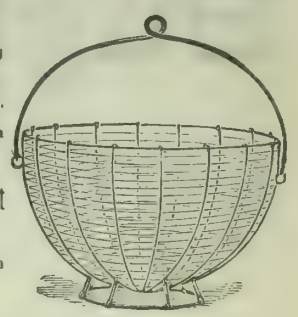


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Agricultural Fairs.

State Fairs.

State.	Place and Sec'y.	Date.
Oregon,	Salem, J. T. Gregg	Sept. 12-17
California,	Sacramento, Edwin F. Smith	Sept. 5-17
Washington,	Spokane	Sept. 19-24
Nevada,	Reno, C. H. Stoddard	
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

No.	Place and Sec'y.	Date.
1	Oakland	Aug. 8-13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Macleay	
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23-27
9	Rohnerville	
10	Yreka	
11	Sierraville, Fred Blinman	Oct, 3-7
12	Ukiah, R. E. Donohoe	
13	Marysville, G. R. Eckart	Aug. 28-Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield, J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	Grass Valley, I. J. Rolfe	
18	Independence, C. W. Craig	Sept. 27-30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30-Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21-24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	Sept. 27-30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	
33	Hollister	Oct. 3-7
34	Susanville, C. E. Emerson	Sept. 3-7
35	Merced	
36	Vallejo	Aug. ..
37	Lompoc, W. I. Nichols	Sept. 27-30
	Glenn Co. Willows, W. V. Freeman	Aug. 9-13

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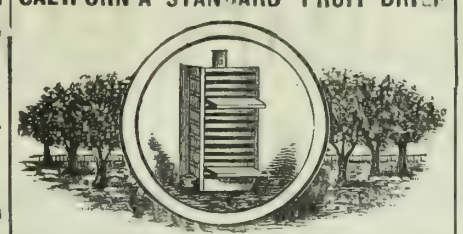
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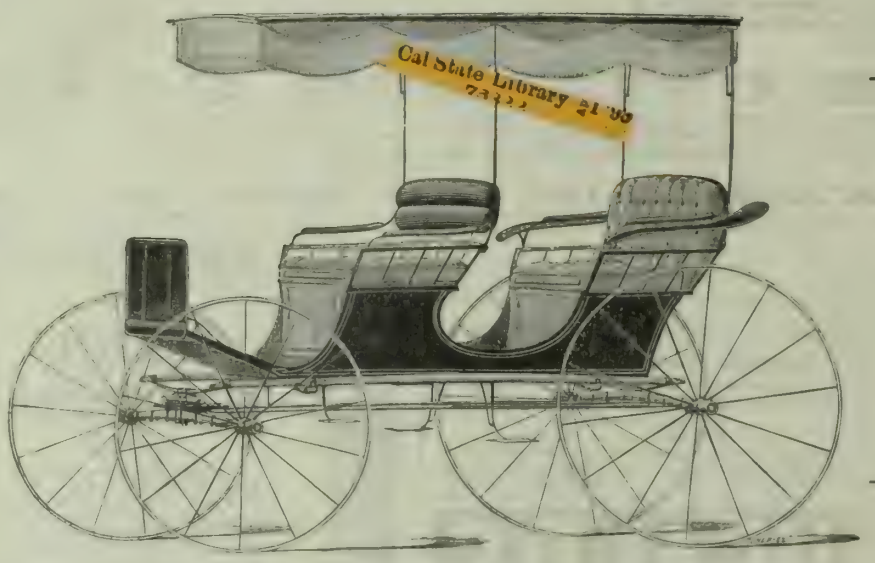
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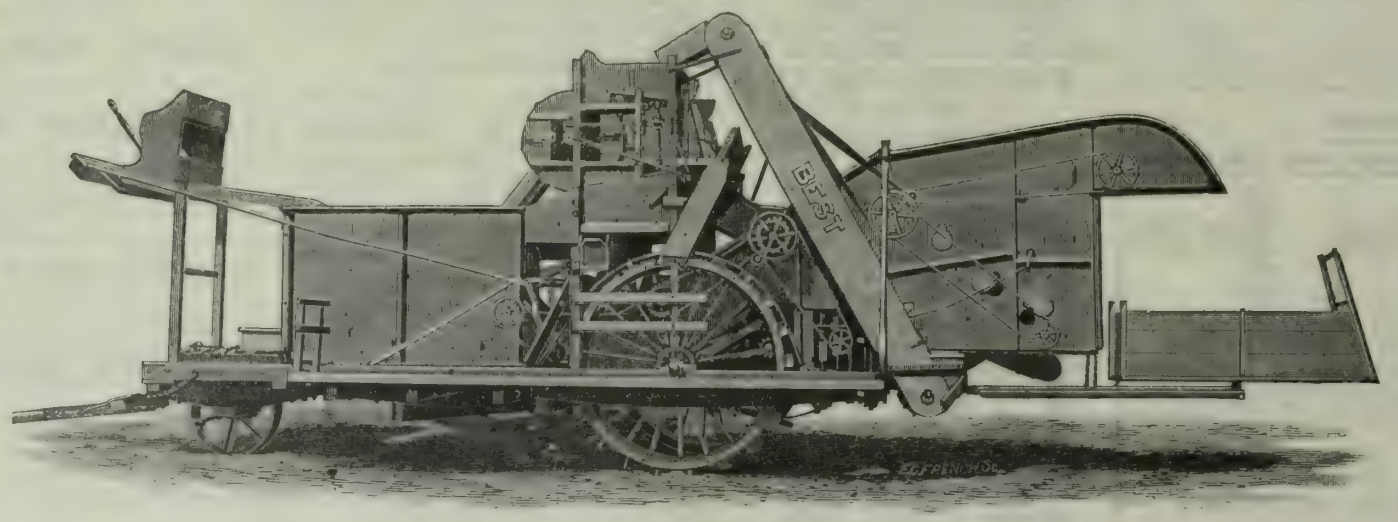
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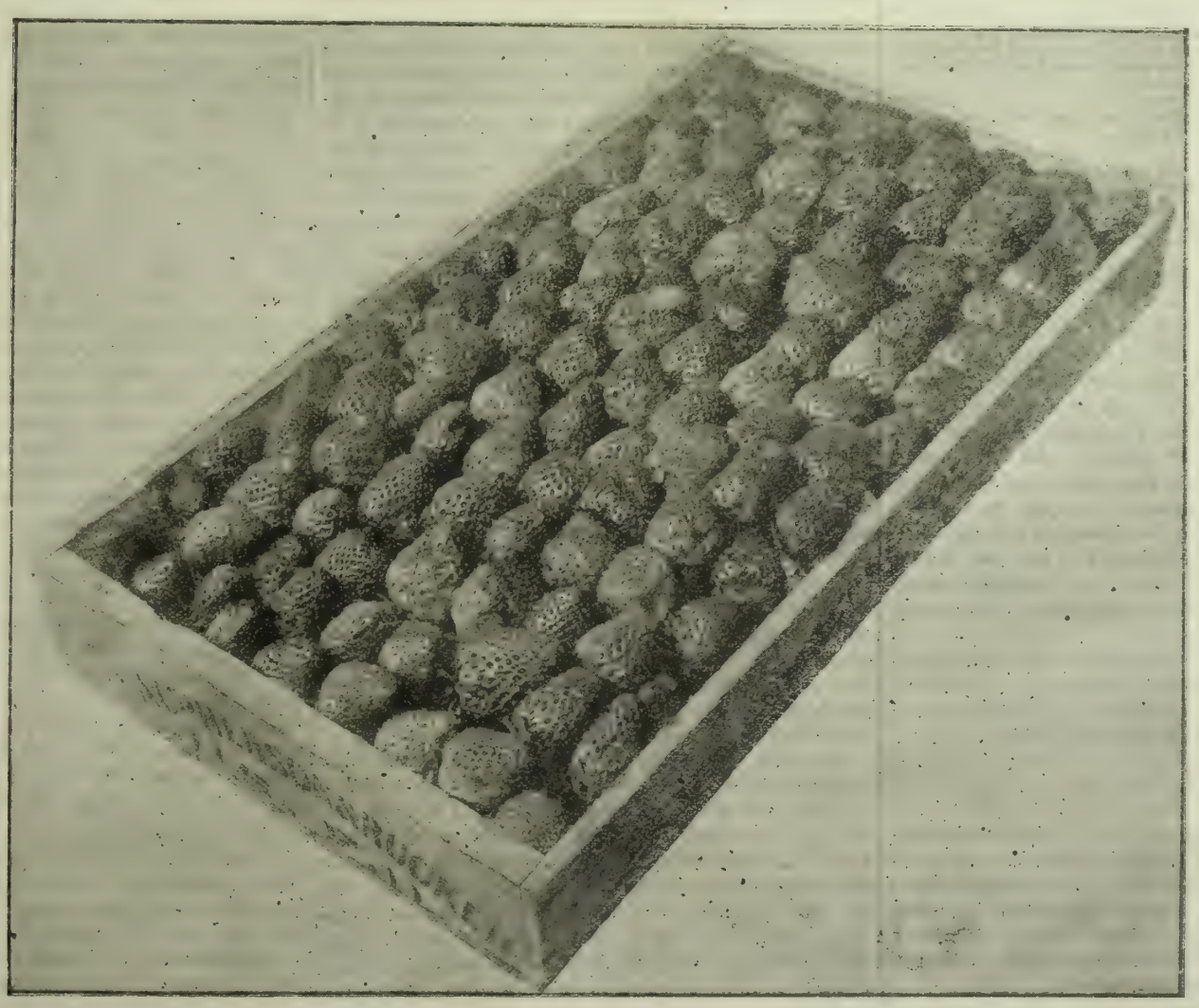
PACIFIC RURAL PRESS

Vol. XLIII. No. 24. SAN FRANCISCO, SATURDAY, JUNE 11, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

California Strawberries.

As pertinent to an issue largely given to the growth of small fruits, we present on this page an engraving which is characteristic of California small-fruit production, even if it is not particularly artistic or esthetic. We must claim, however, that it will appeal irresistibly to the popular taste and this is an essential to art success, even if it is not the highest art attribute.

We believe the "tray" or "drawer" system of marketing berries is of California origin. If not, it is certainly local in its development. The engraving shows the fruit properly "faced" in the manner acceptable in this market. The drawer is 15½ inches long, with end pieces 8¼ by 1¾ inches. These drawers are brought to market in chests made of wide boards, with holes bored for ventilation, or in crates made of slats, with openings between them. These chests have one of the long sides made of a hinged door, which lifts and discloses the drawers resting upon cleats on which they are moved back and forth, as the name indicates. There are five drawers one above the other, and the chest is made long enough to accommodate 10, 15 or 20 of these drawers, with suitable partitions to carry the cleats upon which they rest. The original full-size chest was made to hold 100 pounds of fruit, and had 20 drawers, each holding five pounds of fruit. The shrinkage in the size of all kinds of fruit packages, butter rolls, etc., which we have never seen attributed to this dry climate, has brought down the contents of the drawer to four pounds and the chests had to be contracted accordingly. These drawers are used for strawberries, blackberries, and, by putting small baskets in each drawer, raspberries are also brought to market in them. Similar chests and drawers, the drawers in some cases twice as deep, are used for currants, and were formerly popular for cherries; now, however, cherries come mostly in single boxes.



THE PARRY STRAWBERRY AS GROWN FOR THE SAN FRANCISCO MARKET.

The berry shown in the engraving is rather a new one in our markets, though the plants were first introduced several years ago. It is the Parry, and was first illustrated and described in the RURAL of August 16, 1884. It originated with the late Wm. Parry of New Jersey, and is a seedling of the Jersey Queen. It first attracted Mr. Parry's attention by surviving an unprecedented heat and drouth which destroyed almost every other variety in Mr. Parry's experimental plots. The Parry is prolific, a strong, robust grower, with large, vigorous, clean foliage. The berries are quite uniformly large, obtuse conic, bright glossy scarlet, firm and of best quality, with little core and ripening evenly; the blossoms are perfect. The variety had an unexampled career as a prize taker at Eastern fruit shows.

The fruit shown in the engraving was grown by Charles Ingleson of Alviso, Santa Clara county—the small-fruit region which was at one time nearly the sole supply district of the San Francisco market, and is still eminent in that regard. Mr. Ingleson has about two acres of the Parry in bearing, and another acre of young plants, and proposes to increase his area of this variety. It is sometimes called the "pineapple" strawberry, but that name should be dropped, for there is another and an inferior variety known as pineapple at the East.

The San Francisco merchants whose names appear upon the tray inform us that the Parry is now in great demand in this city. It is the handsomest of all varieties, and has a gloss almost as though the fruit had been varnished. The engraving gives intimation of this glossy finish upon the fruit. We understand that the Parry has also been grown to some extent at Watsonville. We should like to hear what other growers have done with it. Mr. Ingleson's Parrys ripen with the Sharpless, but hold longer, but the plants are still yielding a fair quantity though his first crop of Sharpless is all gone.

GRAPES DROPPING.—Unusual concern is felt among Fresno vineyardists on account of the falling off of grapes, due to the cold weather which has prevailed the past week.

Our Small Fruit Letters.

We give much space in this issue to what we consider the best and most useful of the letters submitted in competition for the prize awards offered by the RURAL. These letters will commend themselves to all readers by their comprehensiveness combined with brevity and point. They are really remarkable among newspaper contributions for presenting valuable facts and practical details, without circumlocution. They seize upon and throw out clearly, the methods of work which yield best results, and are, therefore, perfectly adapted to the needs of those needing instruction in this important line of work. It is true, that they do not represent all localities, nor all the successful practices which are in vogue in this State and yet they are very broad geographically, and their influence will be to draw out other communications which will fill up the gaps in treatment which some may notice.

We cannot too highly commend the general considerations advanced in the letter of L. U. McCann, the well-known small fruit propagator of Santa Cruz. They will save us a column of editorial writing and we submit them with especial approval. Unfortunately they do not come within the requirements of our prize competition, for they do not give practical instruction in details of cultivation, but they will do much good and enhance the general esteem in which the writer is held.

We award the prizes for the June competition as follows:

First prize, $10, to E. H. Schaeffle of Murphys, Calaveras county.

Second prize, $5, to S. I. Holsinger of Sacramento.

Third prize, one year's subscription to RURAL PRESS to S. P. Snow of Santa Barbara.

We make the last award to Mr. Snow because of the clearness and fullness with which he has written on a difficult problem, viz: the growth of small fruits on high, dry land. Many will be benefited by his experience. The letters not included in the awards will be duly appreciated by our readers. Each is excellent, and the writers will be cordially thanked by thousands who will be helped by the suggestions made.

NEW LANDS FOR ENTRY.—In a few days the Register of the U. S. Land Office will have prepared a letter of instructions under which settlers may take up lands in the forfeited railroad grant in San Benito and Monterey Cos.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

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Half inch (1 square	1.00	2.50	6.50	22.00
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Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 11, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Horse Forks—Byron Jackson.
Trees, Plants, Seeds and Bulbs—Sherwood Hall Nursery Co.
Imperial Peach—I. H. Thomas & Son, Visalia.
Durham Bulls—Rolin P. Saxe
Bowens Academy—T. S. Bowens, Berkeley.

See Advertising Columns.

The Week.

The RURAL has a decided fruity flavor this week. In addition to the broadside of information on small fruits, there are investigation into the composition of California green and dried fruits as prosecuted at the State University. There are also interesting statements about the commercial aspects of the fruit industry. All these matters are of pressing importance to thousands of our readers just at this season. In later issues of the year there will be similarly full reviews of the various animal industries and products. We propose to go through all the lines of California agriculture in the thorough and practical manner which is winning the RURAL continually wider support and appreciation.

Storm and flood are still bringing bereavement and desolation to many homes here and there on the Atlantic side of the Rockies. The Pacific is still true to its great name; tranquility and prosperity rest upon its borders.

Coming Contests.

We do not refer to the great "isshoos" of the presidential campaign which promises to be the warmest the country has ever seen, but to the contest in the contribution of useful information which is now brighter and closer than ever in the columns of the RURAL PRESS. We hope correspondents are already preparing for the July and August subjects, which will be as follows:

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST. — FRUIT-DRYING AND RAISIN-CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine-evaporating each and every kind of fruit; packing and marketing of products.

These subjects can be most satisfactorily treated by scores of our regular readers. It is not intended that they shall be oratorical, statistical boomical, but plain descriptions of how to do things and the results of different practices and appliances. We have plenty of the glorification of these industries, now we want the practical hints which will be helpful to all. On these subjects, perhaps more than others, it will be better to write from personal experience even though only a few points are covered by each writer. We would like to draw so fine a net that not a useful fact in the possession of any one shall escape. However, write as you see fit. The competition is open to all, and each can choose his own line of treatment.

Slandering our Fruit Product.

ATLANTA, GA., June 3:—The National Association of Nurserymen in session here to-day, passed resolutions virtually instituting a boycott against California fruits. The resolutions cite the California quarantine on Eastern nurserymen's stock, and the association resolves that in case this is not raised, to exert all its influence to get stricter inspection laws passed by the Legislature of the Middle and Eastern States.

This seems to be the action which was threatened by certain Eastern nurserymen last winter and which was freely commented upon in the RURAL at the time. We regret such action, not because fair-minded Eastern nurserymen are to be feared in their use of such action, but because the few narrow-minded and unscrupulous among them will resort to every contrivance of falsehood and slander to gratify their malice.

California has nothing to fear from inspection of her product; in fact such inspection, if honorably conducted, would probably result in benefit to the industry by punishing any evil or carelessness which may now exist and rewarding the producer who ships only a first class and carefully prepared product. The ultimate result of such a course would be the general elevation of the entire product, and this would extend our Eastern market and insure better profits.

The trouble is, however, that evil-minded men will work under the guise of the public welfare and gratify base propensities by the dissemination of falsehood. But even this can only be temporary in its effects, for we have too high a regard for Eastern nurserymen, with whom, as a class, Californians have maintained cordial relations ever since the first improved fruit tree was planted in this State, to think that they will allow base ones of their own class to malign our fruit growers. They will clearly see that the restrictions against importation of trees lie against that which is dangerous and diseased, and no honorable man cares to deal in such trees nor to approve the methods of those who do. Nor will they countenance the promulgation of lies such as are reported to be distributed in circular form throughout the United States warning consumers against California dried fruit, alleging that it is picked and packed by diseased Chinese, and that sulphur is used and makes the fruit poisonous. The fact is that a very small portion of the fruit product is now handled by Chinese at all, and each year their numbers are decreasing, and white men, women and children are the main reliance in all our packing establishments. Intelligent people who come here can see this, and we do not fear that malicious lies will long avail in this age of fact-flying.

As for the use of sulphur, the urging of that point against California fruit is simply ridiculous. There is no place in the universe where sulphur is so freely used, unless it be in Hades, as it is in the Eastern evaporating concerns. In fact, California learned the sulphur method from Eastern evaporators, and our use of it in the open air it far more innocent than the bleaching in the close chambers of their drying machines which yields their fancy dried apples and pears. Our Eastern friends who propose to mix sulphur in their malice will soon find themselves jammed in a corner by their own neighbors and customers. We need apprehend little harm from this phase of the sulphur question. If the agitation causes fruit driers everywhere to use less sulphur and teaches people generally to buy fruit in natural colors, no producers will be more pleased than Californians.

But we are perhaps arguing at a length which the subject does not justify. California fruit is its own justification and vindication. People who see it and taste it will not long be deceived by malicious slanders upon its fair name. All that we need to do is to keep right on extending the distribution of our product at the East. Do everything possible to bring it before every eye and upon every palate. This will be the best possible way to bring into contempt the men who, in the blindness of ignorance and malice, think that they can serve some private interest by maligning their relatives and friends upon this coast and, by putting forth puny efforts, harass the progress of the industry by which they secure comfort and prosperity.

California Wheat Crop in 1891.

The San Francisco Produce Exchange has issued its regular semiannual statement of grain and brans held in this State. According to this statement (given in detail in another department), the stocks held this year on June 1st show quite an increase over the stocks held on June 1, 1891. That of wheat (flour reduced to wheat) shows an increase of 23,582 tons. While the stock of wheat shows the above increase, yet the exports for the year ending May 31, 1892, show a falling off in comparison with the corresponding months ending with a like date in 1891. Taking the stocks held and the aggregate exports during the season, and the wheat crop of 1890–91 and that of 1891–92 were about the same in quantity, but the grade in the latter season averaged slightly better.

Accepting the Produce Exchange's statement of the stock of wheat in this State on June 1, 1892, as approximately correct, then the crop in 1891 was 1,184,229 tons. This estimate is formed on the following:

Exports, 12 months, to s	816,879	
Consumption	2 3,500	
Seeding 3 500,000 acres	175,000	
Stock on June 1, 1892	128.085	
		1,368,414
Deduct:		
Stock June 1, 1891	99,503	
Imports from Oregon	84,682	
		184,185
		1,184,229

The above exports do not include the shipments made direct from San Diego to Europe; neither do they include the shipments to Alaska and Arizona. It is claimed that if we include the above shipments the crop of 1891 could, with perfect safety, be placed at fully 1,200,000 tons, but in the absence of reliable data of the shipments to Arizona and Alaska and from San Diego to Europe, we do not feel justified in including them in the crop estimate.

Small Fruits Commercially Considered.

The cultivation of berries in this State has not made the progress the importance of the industry demands. Possibly this is due to the limited market for the fresh fruit and the necessity of finding distant markets for the fruit when canned. Operating against profitable market for canned berries, there are three factors: First, the high cost when canned; second, high freight, owing to the long haul; third, competition in the distant distributive markets with the canned berries grown near by, which are bought cheaper, canned cheaper, and can be marketed at a much lower rate of freight, owing to the short distance from distributive centers. Confined to this coast, the markets are soon supplied, and consequently canners' requirements are usually light, particularly for strawberries, raspberries and gooseberries. With blackberries, it appears to be different, for there is a wider field, for the canned product can be profitably placed at many distant distributive points, provided the raw materials do not cost too high.

For two years, the prices of berries, outside of blackberries, have averaged too high for canners' general use, and also for a free consumption by the public. The higher prices were brought about by unseasonable weather in the spring months, and lessened acreage devoted to the industry. Low prices for two or three years preceding 1890 caused many persons to give up the industry. Strawberries selling below $5 a chest will not return a profit to the grower, neither will currants and blackberries selling at less than $4 a chest. In June, 1889, the range of prices for berries in this market was as follows per chest: Strawberries, $2 to $9; raspberries, $6 to $9; and currants, $2 to $4. Gooseberries sold at from about one cent to five cents a pound. In June, 1891, gooseberries ranged from two to six cents a pound, strawberries from $8 to $15 a chest, or about the same as they sell at now; raspberries and currants sold at the same prices they do now. The shortage in the crop in 1891, and again in this year, can be more readily seen when it is stated that, during the busy season, the receipts of strawberries in 1889 averaged from 500 to 700 chests a day, in 1891 they averaged 400 to 500 chests a day, and in this year not much more than from 250 to 400 chests a day. Currants and gooseberries fell off fully as much, although the receipts of currants would not have shown so large a falling off were it not for the largest growers combining only to send just enough to market to meet the demand and not break prices. Any surplus is allowed to rot at home.

The favorite strawberry in our market is the Longworth, which, when properly gathered, packed and sent to market, sells at an average of nearly 50 per cent more than do the Sharpless, but then it is claimed that, at even this difference in prices, the profit to growers on each kind is about the same. The fruit lasts much longer and gives much better satisfaction when packed while dry, ripe and firm; when damp and any ways soft mold soon sets in. Currants should be picked when red and firm, for when too ripe they do not give such good results. Canners do not use currants at over three dollars per chest, and even then buy sparingly. Apple juice is used as an adulterant or substitute, and it is cheap. Oregon Improved gooseberries are growing in favor, and bid fair to meet with freer sales than common and English combined. The Lawton blackberry is about the only kind sold in this market. Dealers say it gives the best satisfaction when marketed at the time the fruit is black and firm and not soft. When swelling or soft, the fruit soon molds and becomes unsalable. A large dealer in this city says that there is a blackberry cultivated near Stockton which is superior in all respects and for all purposes to the Lawton, but cuttings are hard to get, for those cultivating it do not wish to have it generally introduced.

IN a full return of the vintage of Spain last year, the total yield of wine is estimated at 540,000,000 gallons.

The State Press.

Sonoma *Republican*: "A more thorough, general road system needs to be adopted. It devolves upon the Legislature. Nevertheless, Sonoma, by seniority and standing first in say, might start the ball in motion and pave the better way."

Grass Valley *Telegraph*: "Does California want a great influx of the people who live in less favored climes? If all such people come, what is to become of the rapid increase of population here that comes of births? Is there any more of California than is needed by those who are already Californians, and who are raising more Californians?"

Cloverdale *Reveille*: "The fact that 560,000 immigrants landed on our shores during last year, and that almost one-half of this enormous number had no occupation or special skill for earning a living, is an object-lesson in the necessity of regulating and restricting immigration that should not escape notice. * * * * We are not alarmists, but we do think that the time has come when this Government should call a halt to immigration."

Sacramento *Bee*: "The experience of the past fortnight upon the Sacramento river has plainly demonstrated that the stream cannot be confined between its banks during periods of high water, and that it is folly to attempt to try and so confine it. The only salvation for the river and for the country to which it is tributary lies in a system of waterways, by which the Sacramento can be rid of its superfluous water during those seasons. There seems to be absolutely no other redemption for our river."

Sacramento *Record-Union*: "A market town approached by bad roads is practically walled in; rural communities burdened with bad roads are unduly and disastrously taxed. If we assume that in Sacramento county there are 100 miles of dirt roads that augment the cost of transportation of people and products so much as 30 per cent, compared to the speed, time and lessened output of motive power attaching to good, hard roads, we have a loss to the people of this county of not less than $100,000 a year, exclusive of the wear and tear upon vehicles and horses.

San Jose *Herald*: "Let the people in all parts of the State send complaints to the Railroad Commissioner representing their district, and demand prompt consideration and relief. Then let the Railroad Commissioners themselves see to it that there is no more jugglery, delay and evasion on any pretext. They may not be able to meet the mystifications and sophistries of the representatives of the railroad company very successfully, but each and every one of them knows enough to understand that railroad extortion and oppression is choking the life out of the industries of the State, and that they are the men who should devise and apply a remedy."

Woodland *Democrat*: "The official record furnished by the Government at Washington of immigration to the United States in 1891 puts the number of foreigners far greater than stated in the memorial. As classified, there were, of Germans, 113,554; English, 53,600; Irish, 55,706; Italians, 76,055; Swedes, 30,880; Scotch, 12,557; Norwegians, 12,568; Danes, 10,659; Swiss, 6811; French, 6766; Europe (not classified), 158,829, making a total of 543,985. Here, then, is a lesson for study, and when one considers it carefully, it is not to be wondered at that prominent American citizens like Elihu Root, Horace Porter, J. M. Drexel and Cornelius Bliss ask the Senate to take action. At this rate of immigration it will only be a few years when this country will cease to be an English-speaking nation."

Amador County *Record*: "Is it a fact that California's World's Fair Commissioners are frittering away their opportunities by quarrels among themselves to such an extent that the chief national managers are completely disgusted with the whole California outfit, and no longer take any pains to hide their utter contempt for a lot of men who are daily bringing disgrace upon their State and people by unseemly bickering and squabbles that would be a disgrace even to a lot of San Francisco Barbary Coast politicians? Was it not bad enough to lose the Horticulture Fair Commissioner by the scandalous course of certain men backed up and supported by the mad antics of a metropolitan press unworthy to represent a progressive people? Is there no way by which the people can clip the wings of these newspaper vultures that fatten on the slaughter of every public enterprise proposed for the general good?"

An Off Year for Fruit in Illinois.

CARBONDALE, ILL., May 23, 1892.

TO THE EDITOR:—I enclose three slips from our town paper, the *Republican Free Press*, to show the fruit condition here.

"The strawberry crop here is almost a failure this season. The picking will only last a few days, and that will end this years' crop.

"T. W. Thompson says his strawberry crop will average 20 per cent this season. He expects the balance of the 80 per cent next season.

"We learn the fruit crop here this season will be generally short. This is called the off year for fruit."

S. H. FRENCH.

AN ISSUE ON FREIGHTS AND FARES.—R. O. Shively, of San Jose, has filed a complaint setting forth that railroad fares and freights are higher than in other portions of the country, and expressing the opinion that freight rates ought to be reduced 25 per cent and fares 10 per cent. The Commission decided to notify the railway company to file an answer to Shively's complaint within 15 days.

Mr. Cannon Reviewed.

Mr. Doyle In Reply to His Letter Printed Last Week.

MENLO PARK, June 6, 1892.

TO THE EDITOR:—The canal question is too important to California to suffer it to be belittled by personalities. I shall therefore make short work of Mr. Cannon's attack on me in the RURAL of May 28th. It is but a repetition of the old device of a "red herring drawn across the scent to distract the hounds." Mr. Cannon was treated with great courtesy by the State Convention, and listened to with attention until he concluded. The convention, however, did not agree with him in opinion; in fact, I believe he had but two supporters. If the members, after cordially inviting him to share their counsels, could not differ from him without incurring his displeasure and being called names, it is rather a hard case. The call of the convention invited representatives from all the counties friendly to the construction of the canal. Though not coming within its terms, Mr. Cannon was promptly admitted to membership from respect for the parties he claimed to represent. It was, however, soon evident that he was there with no purpose friendly to the canal, for his first act was to propose the admission of another "delegate at large," who had no sort of credentials, but a kind of roving commission to appear at any place on behalf of one of the numerous labor organizations—real or pretended—which of late disturb nearly all public assemblies under pretense of advancing the interests of the laboring classes. As there had been scattered, on the chairs and tables, a printed statement of this person's peculiar scheme for building the canal with a special sort of irredeemable paper money, to be made legal tender and receivable for canal tolls, it was really a stretch of courtesy for the convention to admit him at all; but to gratify Mr. Cannon it was done, and he, too, spoke his piece. The effort to distract attention was too transparent to even appear plausible, and I believe no answer was made to either Mr. Cannon or his colleague.

As to the assertion that I represented then, or at any time, the Canal Company, and his classing me among the "plug hat, kid glove gentry, who produce nothing," they merely illustrate their author's recklessness of the truth or falsehood of what he says—a quality usually regarded as more characteristic of a scolding old woman than of the head of a body of men organized for serious purposes. It cost me in wages to raise my crop last year $8500, and I must have farmed to as little purpose as Mr. Cannon orated in the convention, if I failed to produce *something*. Persons interested may inquire whether Mr. Cannon spent as much wages or produced as much as I, and follow the comparison back ten years. I have no fears of the result of the examination. I represented in that convention no person or body, but the supervisors of my own county who sent me there. In 1883, after Mr. Cleveland, the President of my party, burked the canal treaty with Nicaragua, I denounced his action in a public interview, and refused to support him for reelection on that ground. What had Mr. Cannon then to say on the subject? What public evidence did he give of indignation at the proceeding? Was his desire for the construction of the canal by our Goverment, or at all, ever made public or imparted to any one before it became possible to obstruct it by pretended friendliness to the object, but preference for a better mode of accomplishing it? Did any one ever hear from him a word favoring the canal until the "red herring" device became desirable? I will not imitate Mr. Cannon's recklessness by asserting that, in opposing the pending measure, he is representing the railroad ring that molds the opinions of public men and dominates political parties in this State, for I know not what his motives may be; but I can safely say (and defy contradiction) that if he were representing that body, he could not more effectively forward their views than by his present course. His parrot-like repetition of a catalogue of their past transgressions will not screen him from suspicion. That may well be a disguise to make his aid more effective. I fear the bulk of sufferers from railroad oppression will not be so charitable as I am, and will class Mr. Cannon according to his public acts, not his professions, however loud. The fact that he is chosen president of the Farmers' Alliance affords no guarantee of his honesty. A member of the Senate or Assembly, a Congressman, a Supervisor, a Railroad Commissioner, is chosen to represent the people, but how often do they betray their trust? They are the sort of subjects whom the railroad people find worth buying, and they buy them accordingly. When such people are found on the side of the Ring, whether directly opposing a measure of relief or urging unfriendly amendments to it, the public draws an inference as to their motives. Mr. Cannon's advocacy of the railroad people's views may be sincere, but I regard it as unfortunate that he should find himself arrayed on the same side of an important public question with men whose acts he himself characterizes as so wanting in common morality. When such an unhappy coincidence of opinion occurs, a little reflection should teach him the prudence of self-restraint in attacking the motives of his opponents, lest they be tempted to retort by pointing out the rascally society in which he finds himself. Here every scurvy railroad politician in the State is on the same side with him. As to his representing 100,000 or 10,000,000 people, that fact adds no weight to his opinions, however much it may enhance his importance. Doubtless an Assemblyman is more important than a Supervisor; a Congressman than a member of Assembly, and a United States Senator than all three combined. At what point between the dignity of the President and that of a plow boy the chief of the Farmers' Alliance comes in, I don't know, nor whether it depends at all on the exact number of "wealth producers" he assumes to represent. I should suppose his rank a little lower than a United States Senator's, and that Mr. Cannon will have to yield precedence to Mr. Stanford, who represents the whole State, and by legal authority, too. As the latter's opinions on this particular question will hardly pass current as those of his constituents, so neither will Mr. Cannon's. The two gentlemen are, however, so cordially of one mind on this canal question, that it is to be hoped no difference as to the relative weight of their opinions will be suffered to mar their friendly relations.

To return to the question itself. The substance of Mr. Cannon's contention is for taking the defunct Nicaragua Convention out of the pigeonhole Mr. Cleveland consigned it to more than seven years ago, and reviving it by consent of Nicaragua; repealing the present company's act of incorporation, acquiring or confiscating their charter from the Central American States and the work they have already done, and building the canal by our Government for its own account. The farmers who compose Mr. Cannon's constituents will not, I hope, fail to see the advantages of this plan, and especially how very practicable and, indeed, how easy all this is. It will only be necessary to elect a President and two houses of Congress who are of one mind with Mr. Cannon, and who, besides passing the appropriations required, will promptly make the necessary treaty arrangements with Great Britain on the one side and and Nicaragua and Costa Rica on the other—which, if Mr. Cannon will undertake the negotiation, can doubtless be speedily effected, for Lord Salisbury represents the agricultural interest in England and will doubtless place the British fleet at his disposal, and what power can resist the British fleet and the American Cannon? Then the only thing left will be to acquire the rights of the present company, which, to a party flushed with such splendid success in politics and diplomacy as the Cannon party will then be, can present no serious difficulty. The Maritime Company's rights can probably be bought by a moderate issue of that valuable paper money invented by Mr. Cannon's late colleague in the Convention, and all will then be lovely. It is a notable scheme, and one for which I have no doubt we could secure the approval of even Mr. Huntington! There is only one objection to it, viz.: The danger that the canal might not be completed in time for Mr. Cannon and myself to sail through it. We are both somewhat advanced in years, and I fear that if he were to die before it was finished, there would be no one left who could complete *it on that plan*. It is not every one who can carry a Presidential election, secure a majority in both houses of Congress, and outwit three foreign Governments all at once.

Now, as I have so frankly acknowledged the merits of Mr. Cannon's plan, will he not kindly look a little more leniently on the demerits of mine? With annual elections, and the right to vote 70 per cent of the stock of the company, we are not very likely to have the control permanently wrested from us. It keeps within the lines of our treaty with Great Britain, for a control that we share with two other nations is not *exclusive*. Meantime, during the long period that our option to buy the bulk of the stock lasts, we have all the chances in our favor that some opportunity will occur to secure the consent of that power to a modification of the Clayton-Bulwer treaty, allowing us to own and control the work; and when that is done, the United States can, if they see fit, buy up the remaining shares of stock and throw open the canal to the commerce of the world at merely nominal tolls, or even free. Meantime, it will have been built, and we shall have the benefit of it in our own day, and at the lowest rate of tolls, because built with money secured at the lowest rate of interest. It will be built, too, with American capital, and that means a good deal more than at first sight appears, for those who furnish the money will control the canal. They will practically determine its nationality, and give direction to its policy. If built with American money, the work will be engineered and directed by Americans. The lumber, machinery, provisions, tools and materials used will be of American production. The supplies consumed will be furnished from New York, New Orleans and San Francisco, and transported in American bottoms. The emigrants drawn into the country by the great work will be American. In a word, all the incidental benefits of the work will belong to our own country, while if built with English money, they will go to England. The difference between the expenditure of eighty or a hundred million dollars among our own people or its expenditure abroad is no slight one, and it will depend entirely on whose money builds the work. There is but one body that represents the people of the whole United States, and can ensure the building of the canal with American money, and that is our own Congress. The arguments of Mr. Cannon, Mr. Kinney, etc., assume that the Canal Co. are asking aid from Congress. That is an entire mistake. They realize fully that we—I mean the people and the Government of the United States—need them more than they need us. There will be but one canal across the Isthmus, and it will be at Nicaragua. That company holds the key of the situation in their charter for building the work. They have plenty time to do it in, and any man who doubts that within a brief period the surplus capital of Europe can spare a hundred millions, or double that sum, for such a work, must have paid but little attention to financial questions. England having more spare capital than any other country, the chances are ten to one that, if built by private subscription, it will be done with English capital. Let Mr. Cannon imagine the consequences of permitting that canal to be built with English money, and unless he is incapable of blushing, his cheeks must tingle with shame for participation in such a result. Its terminal ports will then be protected by the navy of Great Britain, and the management and police of the canal be in English hands. What would be the fate of the magnificent islands lying in the great lake which occupies the summit level of the country? Obviously, if the people who have direction of the building and management of the work are Englishmen, those who furnish the supplies, and who direct, execute and manage the work—the engineers, machinists, mechanics, stevedores, navvies, longshoremen, as well as the storekeepers, hotel-keepers and other emigrant population pouring into the country—will also be English, and the islands will be occupied by a great English dockyard, English hospitals and other public structures, differing from a great English naval station like Malta only in name. A great naval power, once in possession of the islands and lake of Nicaragua, will hold permanent control of the canal, and can never be dislodged from it. What a proud reflection to any American that he is doing his best to install a foreign Government in that position in preference to his own country! Mr. Cannon may be content with such distinction, but few will envy him. I think most plain people will agree with me that it deeply concerns the United States that our navy have secure transit through that great central channel between the oceans, and that to insure it against possible obstruction, all the surroundings of the canal should be American. The engineers who build it, the permanent staff who operate it, the population that congregates round its termini and lines its banks, must be American, so that if there is to be any naval station in the lake, it, too, may be American. Great Britain has the canal at Suez. She now owns the majority of that company's stock, and has seized and garrisoned the country. By the foolish parsimony of the French administration of the day (1882), she was enabled to shake loose from the "dual control," and has ever since administered the Egyptian Government, nominally for the Khedive, but practically as a British crown colony. On the next partition of the "sick man's" estate, her permanent occupation of that country will probably receive formal European sanction. With the advantages of the possession of Suez, she needs but the firm foothold on the American isthmus that the control of the Nicaragua canal would give her to hold the maritime commerce of the world in her absolute grasp! Is it possible that Americans can be found who, from wounded pride, offended dignity or baser motives, can look with complacency on such a prospect, or consciously contribute to its realization?

JOHN T. DOYLE.

ENCOURAGEMENT.—It is interesting to note in this small-fruit discussion, as in the hay discussion, how close is the agreement in practice among different growers. This will give the beginner who consults these letters the greater confidence in the suggestions which he receives. It is plain that small fruits can be produced in gratifying amount and quality by any one who will master the few principles upon which successful practice rests, and possess himself of the essentials in soil and wathr. Fortunately these are not difficult nor scarce, but to neglect them is to court disappointment and failure.

FRUIT MARKETING.

Cooperation at Campbell.

CAMPBELL, June 4, 1892.

TO THE EDITOR:—The fruit growers at Campbell, Santa Clara county, have formed a cooperative fruit-drying association, and expect to be able to do business the present season. The organization has chosen for its name "Campbell Fruit Union," and its object is to dry, can, preserve and otherwise cure fruit for the market. The capital stock of the association is $100,000, divided into ten shares of the par value of $25 each. On the evening of the 1st of June, the stockholders met and elected R. P. McGlincy, F. M. Righter, Gilmore T. Duncan, O. Haberdier and S. G. Rodeck, all orchardists, as directors. Subsequently the directors met and elected R. P. McGlincy, president; F. M. Righter, vice-president; S. G. Rodeck, secretary, and the First National Bank of San Jose, treasurer.

The association has had two large drying plants, located at Campbell, offered them by the owners who desire to retire from business, but the plants are rather more expensive than the association needs, and it is quite likely that ground will be purchased and such buildings as may be needed, erected. The association contemplates erecting a warehouse and packing-house along the railroad track. With a good warehouse in which to store the fruit, the association will not need expensive buildings or machinery. The stockholders who have thus far subscribed for stock, represent about 400 acres of fruit, and with an ordinary average yield, this will give the association about as much fruit as it will care to handle. The articles of incorporation have been filed with the secretary of State, and a charter is expected within a day or two. A meeting to adopt by-laws will be held on the 18th of June.

This is a step in the right direction, and no doubt other sections will follow with cooperative associations, as the growers feel that under the old way of doing business, they were not receiving as much for their labor as they felt they were entitled to. Then with the dried fruit exchange recently organized at San Jose, they feel that if they can hold together, they will better their condition very much. There is no reason why fruit growers should not ally themselves together, as have the dairymen of the States east of the Rocky Mountains.

There seems to be very little doubt of the success of both organizations, and Col. McGlincy has done a great deal to bring them about, having had much experience with the widely-known butter and cheese exchange of Elgin, Illinois, of which he was secretary for ten or eleven years, and having seen the benefits which accrued to the dairymen, he believed that the fruit growers could obtain the same, or greater benefits.

The PRESS, too, has done much to help the matter along and the growers appreciate the assistance it has rendered them, and hope to have its good offices in the future. Other communities desiring to organize similar institutions can get information from the officers of the Campbell association. Let the work of organizing go on.

FRUIT GROWER.

A New York Dealer's Views.

Four years ago 1,000,000 pounds of California fruit were sold in New York. Last year 7,000,000 pounds found purchasers here, and this year E. L. Goodsell, the fruit auctioneer, who has large fruit interests in California, and who has just returned from a four months' stay on the Pacific Coast, says that the amount of fruit sent to New York to be sold will be fully 20,000,000 pounds. The fruit producers of California now have the benefit of the fastest freight transportation in the world, says Mr. Goodsell, as at this time it is possible to run through solid trainloads of California fruit from Sacramento to New York in seven days. The Fruit Transportation Company succeeded in establishing this fast freight service this spring, and from this time on, fruits from the Pacific Coast will be shipped to the East in less time than was dreamed of a few years ago.

Mr. Goodsell collected much valuable information about the fruit industry during the months he was in the Golden State, and he has figures that show that the fruit production of California amounts to $35,000,000 more than the production of gold, $15,000,000 being the amount of the gold output, while the fruits amount to $50,000,000 annually. Here is what Mr. Goodsell says about California and the fruit industry:

"Land in 1849, that was used only to dig gold out of, is now growing wheat and fruit that each year sells for $100,000,000, the value of each product being equally divided. Besides this, Spain, France and Turkey formerly supplied America with the 110,000,000 pounds of raisins and prunes that are annually consumed. These fruits are now grown so extensively in the Golden State, and are so popular by reason of their superiority of flavor and quality, that the foreign products are nearly driven out of the market. This is illustrated by the fact that where California produced and shipped, in 1891, 27,000,000 pounds of prunes and 52,000,000 pounds of raisins, there were only imported 9,000,000 pounds of prunes and 18,000,000 pounds of raisins, as against the previous year's importation of 61,000,000 pounds of prunes and 44,000,000 pounds of raisins, showing a joint falling off of 78,000,000 pounds of both kinds of fruits in one year. It is safe to say in three years the production in California will be enough to supply America and preclude importations altogether.

"A comprehensive view of the greatness of the 'tree-fruit' industry can be had from the statement that there are nearly 14,000,000 trees planted in California, all of the varieties named. When these are all in bearing, fully one billion pounds of fruit will have to be marketed.

"Last year 14 days was the average time in transit, and the reducing of the time to seven days makes the probability of fruit landing here in perfect condition unquestioned. In this event $500,000 can be saved to the growers yearly from what has been realized in the past. It is significant, too, that in California any fruit produced anywhere can be grown in its perfection on the Pacific Coast, and that not one-third of the available fruit land is now under cultivation. Therefore, when we read that in 1891 there were shipped out of the State 352,000,000 pounds of fruit of various kinds, 12,000,000 gallons of wine and brandy, and 1,500,000 boxes of oranges, there is not only material for consumption, but also for reflection as to where it will go in the future. Active minds are taking up the question, and England has been made an outlet possible for green fruit already by placing refrigerating boxes on board fast steamers, an experiment that has been recently tried with considerable success. Dried fruits are already favorably known and disposed of there. The process of shipping fruit in a green state has necessarily been reduced to a science in order to get it here in marketable shape. Picked from the tree, it is packed in neat boxes, often each fruit wrapped in paper and loaded into a refrigerator-car built exclusively for the business. Trains of 15 of these cars are made up at Sacramento and hurled over the mountains and plains to Chicago and thence to Jersey City.

"The successful cultivation of the olive has attracted the attention of English capitalists to California, who have recently bought out some of the best ranches. Nearly 900,000 gallons of olive oil are used in the United States yearly. California is now only producing one-tenth of this quantity, but will in a few years be able to compete for public favor, and unquestionably will drive the imported article from the market in a short time. There are now 7,000,000 olive trees, including young and bearing orchards.—N. Y. Tribune.

THE STABLE.

The Value of Imported Blood.

"The proof of the pudding is the eating thereof," said some philosopher many years ago. It is a true saying, but pudding is not the subject we intend to discuss at present, but horse. The thoroughbred stallions brought over to America from England, France and Australia have been wonderfully successful in producing fleet and game racehorses, but, as well as we admit they have done, when imported mares have been mated with native American stallions the produce has, in almost every instance, made its mark on the turf, says the *Breeder and Sportsman*. Take our wonderful performers of the past ten years as a sample of what can be done, and when one looks into the matter he is at once astonished and delighted. A change of climate and a sharp outcross works wonders, truly. If English, French and Australian horses can accomplish so much when mated with native American mares, and imported mares perform such wonders when stinted to American horses, does it not stand to reason that the English, French and Australian racehorses could be improved by taking a number of American stallions and mares into their countries? We implicitly believe it would result satisfactorily, but the Englishman and the Australian, as a rule, believe that there is no such thing possible as improving their race of thoroughbred horses. Americans are less prejudiced than their brothers across the sea on this question, hence we are improving every day our breed of racehorses. According to a number of thoroughly posted English writers, thoroughbred horses of Great Britain are not as good to-day in point of stamina as they were 25 years ago. Ours are deteriorating in this respect, too, through inbreeding and failure in most instances to get a good outcross. By importing thoroughbred stallions and mares from foreign countries, we get the desired outcross, and the English and French people, by securing American horses and matrons, could also get a valuable cross.

Among the real good American race horses from imported mares that we might mention are Kingston, His Highness and La Tosco, the champions of last season in the two and three-year old and aged divisions; Laggard and Sluggard, from imp. Dawdle; Racine and Fairy, from imp. Fairy Rose; Flambeau, from imp. Flirt; Rinfax and Nomad, from imp. Amelia; Getaway, from imp. Cutaway; Ormonde and Mulatto, from imp. Patilla; Nero, from imp. Queen Bess; Rhono and Rosebud, from imp. Rosetta; Raindrop and Tearless, from imp. Teardrop; Catalpa, Mabel Glenn and Dungarven, from imp. Calphurnia, and numberless others. We have given the imported mares in the Palo Alto Stud because it brings the matter close to to our homes, and any one can take up a catalogue and see how the imported mares produce two winners to one native mare in a majority of cases. It is not because better blood flows in their veins or that they were better race mares, for this cannot be claimed for them, but they simply make a sharp outcross, and that is what is needed in this country. Potent as was the blood of the great Lexington, there is such a thing as getting a surfeit of it, and we should cast prejudice to the winds and endeavor to get a good outcross once in a while, whether the blood that we need comes from Kamskatka or Madagascar. If our bigoted English, Australian and French friends would only cast off the cloak of prejudice and give us a little reciprocity in the horse line, all parties would be benefited thereby and a profitable trade between the countries established as well. We are getting our eyes open to the value of an outcross, and trust our brethren over the ocean may come to a realization of its worth in the work of breeding good race horses.—Live-stock Record.

TAPEWORMS IN OLEO.—Col. Robert M. Littler of Chicago, secretary of the National Butter, Cheese and Egg Association, said some time ago: Anybody who says that butterine is healthful and wholesome either does not know what he is talking about, or else lies. Why are there so many tapeworms and so many cases of Bright's disease since butterine came into use? The embryo tapeworm exists very freely in leaf lard. This lard must be cooked if you want to destroy the animalculæ. It is not cooked; it is only warmed in the manufactories of butterine. I can show anyone by the use of the microscope, the animalculæ. When a hog has them bad it is called measly. No matter how carefully it may be prepared, butterine contains acids that are not to be found in butter. There is a very easy way of proving this. Put calomel into butterine and you have corrosive sublimate. The Lord only knows how many people have been mysteriously poisoned by taking a dose of calomel after they have eaten butterine.—Anti-Oleo News.

Weather and Crop Bulletin for Week Ending June 6, 1892.

SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The past week has been cloudy, retarding heading, but beneficial to growing crops. *Bardsdale*—Weather clear with foggy mornings; acreage of corn large; prospects unusually good.

Los Angeles County.—Lancaster—Haying has commenced; the yield is light, but prospects of high prices encourage the ranchmen. *Rodeo de los Aguas Ranch.*—The barley harvest has begun and the crop will be large in the valley. Sugar beets are growing finely. *The Palms*—Foggy weather continues and is rather injurious to haymaking. Heading has commenced and the prospect is for a fair grain crop. *Los Angeles City*—The weather was somewhat warmer this week, favorable for ripening fruit. Highest temperature, 88°; lowest, 48°; .02 inch of rain fell. *Duarte*—The past week has been cool and cloudy with some fog, which was slightly injurious to the hay crop. Fruit looks well. Highest temperature, 90°; lowest, 53°; rainfall, .12 inch.

San Bernardino County.—Ontario—The past week has been cloudy, except two days; unfavorable to grapes, but as yet no signs of damage appear. *Chino*—Hay is nearly all in the stack and was a satisfactory yield. Fruit crop is showing up well.

Orange County—Santa Ana—The barley yield will be about two-thirds of last year's crop. Hay crop abundant. The fruit yield will be large. Warm weather is forcing corn, which promises well.

San Diego County.—Winchester—The weather has been favorable for haying; the crop is light. Grain is filling well, but will be short.

World's Fair Committees.

Mr. I. De Turk, who presided at the recent Viticultural Convention, as reported in the RURAL of May 28th, has appointed the following committees to work with the Viticultural Commission in assisting Mr. W. H. McNeil in collecting and preparing a suitable viticultural display at Chicago:

Wines (dry and sweet)—Arpad Haraszthy of San Francisco; E. C. Bichowsky of San Gabriel; F. Beringer of St. Helena; C. P. Howes of Santa Clara; Geo. H. Eggers of Fresno; C. Schilling of San Francisco and A. G. Chauche of Livermore.

Brandies—George West of Stockton; H. W. McIntyre of Vina and Herman Bendel of Natoma.

Raisins—T. C. White of Fresno; A. B. Butler of Fresno and S. W. Ferguson of Bakersfield.

Table Grapes—John Muir of Martinez and R. G. Stephens of Sacramento.

Grapes and Grape Vines—Leonard Coates of Napa; H. W. Crabb of Oakville and A. Brigden of Lamanda Park.

Machinery, Utensils and Distilleries—J. L. Heald of Crockett and H. Sanders of San Francisco.

Cooperage—David Woerner and F. Korbel of San Francisco.

Literature and Statistics—C. J. Wetmore and Winfield Scott of San Francisco.

A meeting of this committee has been called for Tuesday the 14th inst., at 11 A. M.

OLEOMARGARINE LAW VALID.—The Supreme Court of Massachusetts has handed down a decision in several cases involving the validity of the oleomargarine law of 1891. The decision of the court is in favor of the constitutionality of the law. The cases were The Commonwealth *vs.* Huntley *et al.* and Commonwealth *vs.* Plumley. In the first case, the defendants were convicted of making a sale of oleomargarine at retail not in the original unbroken packages in which it was brought into the State. In the second case, the sale was of oleomargarine in the original package. The court in its opinion reviews the case of Leisy *vs* Hardin, the original package case decided by the Supreme Court of the United States. Accepting that decision without discussion as settling the law for whatever it covers, the court said that the question had to be considered whether it extended so far as to cut off the power of the Legislature to forbid the manufacture and sale of oleomargarine which is made in imitation of yellow butter, where such oleomargarine has been imported from another State. The only question, therefore, was that arising under the provision giving to Congress power to regulate commerce among the several States. The court held that there was a palpable distinction between the cases before it and that of Leisy *vs.* Hardin, and that it was at liberty to decide upon the validity of the statute involved in those cases according to its own opinion. In its judgment, the enactment of the statute was a valid exercise of the police power which remains in the several States, and was not in violation of the constitutional provision giving to Congress the power to regulate commerce among the Several States.

Sierra Madre Forest Reservation.

At the Farmers' Institute at Pomona, on motion of Abbott Kinney of Lamanda Park, the following resolution was adopted:

Resolved, That the Farmers' Institute of Los Angeles county heartily endorses the action of the federal government in establishing the Sierra Madre forest reservation.

Resolved, That this preliminary action for the preservation of our irrigation and domestic water supply is of the greatest importance to the agricultural interests of Los Angeles, Ventura and parts of San Bernardino counties, and should be followed by action similar to that found effective in preserving from fire and other injuries the Yellowstone and Yosemite reservations.

SMALL FRUIT GROWING.

Our Prize Letter Contest for the Month of June.

PRACTICAL INFORMATION ABOUT ALL KINDS OF BERRIES.

WHICH ARE THE BEST AND HOW BEST TO GROW THEM.

An Exceedingly Valuable Review, Embodying the Experience of Practical People Who Have Done and Are Doing the Things They Write About—All Processes From Selection of Soil to Marketing Fully Dealt With.

MURPHYS, Calaveras Co., May 28.

TO THE EDTOR:—It is a difficult thing to condense the subject of small fruits to the space that can be allowed the matter in the usual edition of the RURAL, as an entire issue would be required to give all the information concerning a single berry, but as the RURAL aims to be practical rather than exhaustive it will be possible to give a brief practical description of the different varieties of berries and their culture to which I shall endeavor to restrict my article.

STRAWBERRIES.

SOIL AND SITUATION.—I have found strawberries of equal size on adobe, red clay and black loam soils. The berries grown on the adobe and clay soils required less water for irrigation as the clay and adobe hold moisture longer. The water on the loose loamy soils drained away from the surface faster and the loamy beds could be picked on the same day that the berries were irrigated, while the clay and adobe, if thoroughly soaked, would mire you down at any time within 24 hours after irrigating.

The plants on the clay and adobe have but very little foliage, throwing their entire energies into the production of the berries. The loamy soil grows a plant with luxuriant foliage, and while the berries are not as great in quantity per acre, they are seldom if ever sunburnt. It is possible to set the plants much closer on clay and adobe than on loam, because the clay and adobe soil produces a plant with so few leaves, and the stems are so short that the plants can be set very closely. As a rule, the rich loamy soil is in the cold, frosty, but wet bottoms, while the clay is generally found on the higher elevations, and is, therefore, earlier on acconnt of the soil being warmer and the location comparatively free from frosts.

The grower will plant on the land that he owns, but if he can choose his site, I would prefer a sloping hillside facing the southeast, with a clay soil for all varieties of small fruit. Next to the clay hillsides, I would take the rich, loamy bottoms, but would expect to have a late, and in consequence, low-priced crop.

PREPARATION OF SOIL.—The soils of California will grow any of the small fruits profitably, without a fertilizer; in fact many berry growers contend that the fertilizer is an injury in that it forces the plants to grow a large amount of foliage at the expense of the berry crop. In this there is a basis of fact, but where the quantity of water for irrigation is limited, a heavy manuring will prove very profitable. If the plants can be kept wet from the time of blossoming until the last berry is picked, the greatest results will be obtained, and very litlte, if any fertilizer will be required on the average soil.

With a limited quantity of water, I find it the most profitable to cover the ground six inches deep with stable manure. This is spaded under, and some early crop, like peas, planted; when this crop has matured and the ground made clean, the soil is spaded or plowed, and harrowed until perfectly mellow—then, in July or August, the plants are set out and faithfully cultivated *every ten days*.

Thus cultivated, the plants will have attained their full growth and be covered with crowns, distancing by far, the plants set out in the early spring and irregularly cultivated, and produce a few small berries.

Spring planting has the advantage that any Chinaman can make the plants grow then. Midsummer planting gives you the use of the ground for an early crop, the first season, and admits of a second or late crop after the berries are are done fruiting, which is a big advantage on heavily fertilized soil, in high-pressure gardening on limited and high-priced lands.

VARIETIES.—I have grown a long list of strawberries, but have found nothing that will excel, in profit, the "Monarch of the West," though some growers prefer the Longworth. Mr. S. L. Watkins of Grizzly Flats, El Dorado county, claims to have discovered a California strawberry, which he calls the Honey strawberry, that will grow in any situation, yield enormously and excel any other berry in its sweetness and flavor; but I have not ested it.

Having selected your variety, strike out the furrows six inches deep and two feet apart. If in the spring, the whole field can be furrowed at once and the plants set all day long. Place the plants eighteen inches apart in the rows, spread out the roots, draw the plant up and gather the soil around the roots *under* the leaves. The top of the plant should be an inch above the soil. When the row is set, start back over it, stepping squarely and solidly on each plant, to thoroughly firm the soil.

If the plants are to be set out in July or August, the ground should first be thoroughly irrigated, then plowed and made mellow, and but one furrow run at a time to check evaporation. If possible, the planting should be done in the evening, and if the patch is small it will pay to shade the plants. The soil should not be allowed to get dry at any time during the summer, but a situation that remains wet throughout the winter should be avoided.

In the neighborhood of Florin, Sacramento county, strawberry culture is the leading industry. Here a windmill irrigates each five acres. The plants are set in rows, between every two rows is the path for the picker, while on each side is a ditch with dams to hold the ditches level full, and these ditches are full of water from the time the berries blossom until the last berry is picked. The main requirement in successful strawberry culture, is an abundance of water, "first, last and (excepting winter) all the time."

Throughout the first season see that all runners are pinched off, that all the strength of the plant may be thrown into the forming of crowns.

MARKETING.—As a rule, strawberries are picked direct into the baskets or trays they are sold with, and the bottoms of which are said to come nearer the top each season. The picker carries a long shallow box with a handle and in this six or eight of the boxes rest. Some growers prefer to repack all of their berries so as to face the box with the choicest berries, which are packed over the face of the box sold. This method may do for immediate sale, but where the berry has to be shipped East it will be found that they will carry better, keep nicer, and command better prices, if the berry calyx and short pieces of the stem are allowed to remain, and the berries thrown loosely into the box, as picked; care being exercised that the pickers gather no unripe, overripe or defective berries.

BLACKBERRIES.

The same soil and situation required for strawberries will be found best for the blackberry—with a clay soil preferred. The plants should be set out in the fall, and if the ground can be heavily manured, the plants can be set not less than four feet apart each way. Many prefer to plant in rows when on poor soil, but as the blackberry throws out its roots for eight to twelve feet, it is best to enrich the soil (you can hardly make it too rich) and set the plants four to six feet apart. If the patch is to be cultivated with the horse, measure the width of your cultivator and allow 18 inches more each way for the plants, and arrange to cultivate each way, by leaving room at the fence for the horse to turn.

Many growers get along without stakes, by low-heading, but where cedar stakes can be had, I prefer a stake that rises six feet above the soil, one to each plant. Cultivate thoroughly, and when your plants are five feet tall, pinch off the top. This will send out laterals from each bud. As soon as these are eight inches long pinch off the tips, and they will throw out sublaterals, thus forming a compact bush, with short arms and well shaded. Such a plant will not break down, and its berries, being shaded, do not sunburn, and it also grows its berries within easy reach. The usual plan of allowing the bush to grow like a bean pole, and then cut off all of the top and the greater part of the long arms, and thus leaving only the main stem and butts of branches, with all of the fruit buds cut away is akin to the fruit grower who yearly cuts away all the limbs bearing fruit spurs and leaves the trunk and barren branches. The second season the old wood should be cut away, as soon as it is done bearing, and the new growth tied up to the stakes.

VARIETIES.—A berry that is a proved success in one section may prove a dismal failure in another. This is specially true of the Crandall or Texas Hybrid, which bears enormously in one section and will grow nothing but bushes in another. The Crandall is very generally preferred on account of its earliness, which makes all the difference between profit and loss. The berries ripen a full week before the majority of the varieties, and continues to bear until Christmas. The bush being an evergreen, its only fault is its excess of wicked thorns. Where the Crandall fails, the Erie or Wilson Jr. will be found to bear early and produce big crops. The old Lawton is a fine berry, and for a large yield of fine berries nothing can excell the Kittatinny, though not very early.

Nothing need be said of picking, save that a ripe berry "that shines like a nigger's heel," is ripe and delicious; while one with a red tinge or dull lustre, will set your teeth on edge for a day, and in consequence only ripe berries should be picked, as the best blackberries are not fit to eat if picked before they are ripe.

DEWBERRIES.

This is the coming blackberry of the State. In its home it selects a white sand soil, and hence stands our extreme summer heat and is not sensitive to cold.

VARIETIES.—At present "The Lucretia" is preferred. The berry is as large as the blackberry, very fine in its flavor, and can scarcely be told from its brother, the bush blackberry. The dewberry is trailing in its habit and will cover an area of 20 feet. To cultivate the berry it is necessary to train it on a trellis. To get the best results, set your plants in the fall, place them two feet apart and give the ground a heavy mulch of manure. Set your rows from N. W. to S. E., that the sun may get in between the trellises during the day. Drive a post at each end of the row with intermediate stakes for supports. Have the stakes fully six feet high and stretch a wire about every 18 inches. Train the vines, as they grow, over the wires, and the next season your trellis will be a mass of bloom long before your blackberries have shown any buds, and you will have an immense yield of delicious berries *three weeks before the blackberries are ripe*, which means "big money" to those that get their bushes in bearing next year.

CURRANTS.

The currant delights in a rich soil and repays a liberal dressing of manure and an abundance of water. In the hot plains it will be found necessary to grow the bushes where they can have the partial shade of the orchard trees. The bushes should be set six feet apart, or three feet, and every other bush dug out when they fill the ground.

VARIETIES.—"The Cherry" is the leading currant. If heavily manured, the ground kept moist and mellow by cultivation, it will not belie its name, but will produce great clusters of berries as large as the average cherry. The White Grape currant is a heavy bearer. The berries are not as large as the Cherry, but the berry is much sweeter. Fay's Prolific is a favorite in some sections. The berries are large, sweeter than the Cherry, red in color and very prolific. The Black Naples is the old black currant that grew in the corner of your father's garden lot and emitted a perfume as peculiar as that of Wm. Goat. This currant's only value was that it was black. It is slow to bear and a very shy bearer, though a strong grower. The Crandall currant is a black currant that in color and flavor resembles the Black Naples, but, unlike it, is a very heavy bearer and makes delightful jams. The bush grows very strong and the variety is called a "Tree Currant;" in consequence, the bloom is unique and very pretty, while the plant is not affected by scale or other insect pest. Currants are picked "stem and all," and in cool situations will produce enormously.

PESTS.—The currant has special enemies. There is a borer which eats his way into the pith, and then travels up and down the stem. The only way to exterminate it is to cut off and burn all branches as soon as you notice their wilting. There is another root borer that girdles the bush below the ground as nicely as the gopher girdles the English walnut tree. This root borer is very difficult to reach. By removing the ground all around the butt of the bush, rounding up the ground so as to form a basin, and then filling this basin with scalding hot water, you can get the most of them. Removing the dirt and covering the butt with fresh wood ashes seems to work very well and adds to the fertility of the soil. The San Jose scale is particularly fond of the Cherry, White Grape and Black Naples currants. The usual washes will keep it in subjection, but they should be applied after the leaves have fallen, and again before the buds swell, as any of the sulphur and lime washes will kill the berry blossoms as certainly as these washes will kill a cherry tree after its buds have swelled.

GOOSEBERRIES.

The gooseberry, like the currant, does best in a partial shade; if too dense a shade, the bush bears lightly and the berries mildew badly; if in too hot a situation the berries cook in the sun. They should be planted with plenty of room to grow or every other plant cut out after the second year. On rich soil six feet apart will prove none too far. To prevent mildew and procure large berries, thin out the bush each fall.

VARIETIES.—"The Industry" gooseberry is, without doubt, the best berry to grow. Its freedom from mildew, vigorous growth, and immense yield of very large berries make it superior to the English varieties with their determination to mildew. Next to the Industry in size is the "Houghton Seedling," a nonmildewing variety, of good size and a good bearer. The old "Mountain Seedling" does well anywhere, but the berries are very small. A better variety is "The Oregon," which, while not a large berry, is a heavy yielder and free from mildew. The wild California gooseberries excel crab apples for jelly and are fast coming to the front for that purpose. The common wild gooseberry is as full of sharp points as a porcupine and not very large, but there is a variety growing in the high altitudes that is larger than the English gooseberries and free from thorns.

RASPBERRIES.

I have sandwiched all the small fruits between the two best; viz.: the strawberry and raspberry. The raspberry gives me the best results on a soil that is heavily manured in the fall and plowed in the spring. With your soil thoroughly pulverized, strike out the ground with furrows eight to ten inches deep, having them cross at every four feet. If you are not crowded for land make it six and you will realize on it in larger berries and more of them. Raspberries can be grown, if headed very low, without stakes, but I prefer a five-foot stake to tie the bush to. Cultivate and irrigate so as to keep the ground free from weeds and mellow. When the plant is two feet high pinch off the tip. As soon as the laterals are a foot long pinch them in turn. The following season cut out the old wood, as soon as the berries are done bearing; tie up the new wood, and leave all the wood on, save the extreme tip. It is a common and suicidal policy to let the bush grow at its own sweet will throughout the season, thus forming all its fruit buds on the long spindling branches, and then cut all these fruit bud branches off at trimming time, and leave the bare and almost barren stalk.

VARIETIES.—Of the red varieties, the Barter raspberry is more largely grown in the State than any other variety, and is very satisfactory, being red in color, large in size, fine in flavor, a big bearer and firm for shipping. The Cuthbert and other varieties have their admirers, and are all good berries. The black raspberries do not adapt themselves to our climate. While they grow and bear, there is no money in them. The Gregg, Souhegan, New Rochelle and Tyler are usually grown. I have also the old "Thimble berry," that we stole out of the farmers' fence corners and strung on timothy grass when we were barefooted boys, and it does as well (in the shade) here as there. The "Yellow Canada," that does so well in the East, is a delusion and a snare here. There, they are very large, juicy and delicious; here, they are about the size of and as palatable as a shirt button. It may be that in Oregon, or in our higher altitudes, it would do as well as East. The Caroline and Brinkle's Orange do better, but I find the new "Golden Queen" to excel them all. The bush is a very strong grower; so far not affected by pests. Every

bud sends out a branch that hangs full of berries, so that when grown sufficiently far enough apart, the bush is a mass of golden yellow berries from the ground to the ends of the tips. The berries, however, while very enticing in their mellow tint of yellow, are not as deliciously fragrant and luscious as the red varieties.

MARKETING.—The raspberry is very delicate, and every picker should first be thoroughly taught how to *roll* the berry off of its stem and to never squeeze and pull it. Once off, the berries are laid, not thrown, into small, flat baskets, holding one pint each. The berries should be picked by sun-up, and shipped or sold as speedily as possible.

Where there is a vineyard in connection with the berry patch, the large surplus leaves of the Isabella grape will be found an excellent lining for all berry boxes. If the berries have to go over a rough road, make a cushion one-half inch deep of rye or wheat straw, cut the length of the box, cover with paper, and set the small berry boxes on this.

PESTS.—The raspberry and blackberry have a common enemy in the rose scale or white scale (*Diaspis rosæ*), which is very difficult to kill on the raspberry. The washes used for the San Jose scale will hold it in check, and should be applied after the leaves fall and again before the buds start. If all of the old stumps are cleared away, so that the wash can get in and down around the base of the plants, good results will follow. Unfortunately, the foliage is too dense to spray in midsummer, and you always burn your berry brushes.

SUCCESS.

To be successful, there must be close attention to all the details. While the foregoing remarks may seem to cover the field, there remains *one* condition without which berry culture will not pay. We all irrigate while the bushes bear. Once they have ceased to bear, we show our ingratitude by turning the water on to some fall crop and let the berries scorch. Now, the fruit buds of the strawberry (its crowns), raspberry, blackberry, gooseberry and currant are formed in autumn, and not only on "small," but "big" fruits as well. If you would have every bud bear berries, continue irrigating all of the small fruits until the winter's rains moisten the ground. In that is the great secret of successful berry culture.

Small fruit growers have been the sport of the paragrapher for all time, and have to some extent merited it; but with the large yield and big profits possible in small fruit culture, there is no need of boxing berries, as a Quaker acquaintance did sweet potatoes. Noticing my quizzical look, he explained: "Thee sees I put a half bushel of good potatoes in the bottom, then a half bushel of poor ones in the middle, and top off with another half bushel of good ones, so that no matter how smart thee is, nor which end thee opens, they are bound to be good."

E. H. SCHAEFFLE.

SMALL FRUITS IN THE SACRAMENTO REGION.

SACRAMENTO, May 30, 1892.

TO THE EDITOR:—One of the most profitable branches of horticulture in California is berry-gardening. Each year the industry assumes greater importance as improved varieties are propagated or imported, and growers become more skilled in cultivating, picking and marketing.

A few years ago, shipping berries was an experiment, but now hundreds of carloads, especially of strawberries, find a ready and remunerative market North and East. It is well-known that it takes experience to successfully conduct a fruit ranch, and the same is true of berry-growing. If possible, more care and a knowledge of every phase of the business, from the act of placing the plantlet in the earth to harvesting the fruit, is required than in any other horticultural pursuit. To make a decided financial success, the gardener must be familiar with every detail of the business, though an amateur, who is willing to learn and will not be discouraged by reverses, should not hesitate to embark in such an enterprise, as there is a living in it for the experimenter, provided he has good land and proper facilities to irrigate and market his berries.

As to the profits, I can only speak from experience and observation in the Sacramento valley. Here a good strawberry garden will yield from $800 to $2000 per acre. Erskin Greer, chairman of the Board of Supervisors, has one field of seven-eighths of an acre from which he sold last year $1340 worth of berries. The Davis Brothers near Florin have frequently sold from $1000 to $2000 worth of berries from a single acre.

STRAWBERRIES.

VARIETIES.—The variety to be adopted depends very much on the locality. Two varieties have been successfully grown in this valley, the *Triumph de Grand* and the Jessie. Many other varieties have been experimented with, but the two mentioned are now looked upon as standards. The former is an excellent shipper and has carried well as far East as New York and Chicago. The berry was placed in the Eastern markets this year at the rate of a carload per day, and in not a single instance was it reported as arriving in bad order. For an all-around berry, I think it has no equal.

The Jessie is a much larger fruit, more attractive, but fit only for the local market.

SOILS AND CULTIVATION.—High, red clay, clay with enough sand and well-rotted manure to thoroughly subdue the earth and make it loose and yielding to cultivation, is the best for strawberries. It produces a berry having firmness, rich flavor, fair size and excellent color.

Too much care cannot be exercised in preparing the ground for planting. The plowing should be deep and the earth thoroughly enriched. Careful preparation should be made for irrigation. I prefer beds four or five feet wide and the irrigating ditch between them should be flat and shallow. The strawberry does not throw its roots deep, hence the water must be kept near the surface. By exercising care in this matter much water is saved, as deep irrigation is entirely unnecessary.

PLANTING AND TREATMENT.—I prefer to plant early in the winter after the first rains have thoroughly saturated the soil. I set my line of plants eight or ten inches from the edge of the bed and 12 inches apart. If plants are no object and I am in a hurry for a crop, I plant two rows on either side, leaving a path two feet in width in the center. In the spring, sift over the vines well-decomposed straw or stable manure to the depth of half an inch. Cultivate thoroughly and a fair crop will be the result.

After the fruit is harvested, runners may be allowed to fasten in the limit desired for each row, and the succeeding year-old vines showing a lack of vitality may be removed. This may be kept up until the vines form a sod, and, having lost their vitality, must be entirely removed.

Care should always be exercised in preventing too thick a growth, and this can only be prevented by constant pruning. Each winter a thick coat of manure well pulverized should be thrown on the berries, after which a light harrow may be run over them with advantage. The picking path should be thoroughly cultivated at least two or three times a year. The soil should be kept loose.

MARKETING.—I make it a rule never to market an inferior berry. It is best to order the pickers to carefully pluck green and ripe fruit which is or promises to be unmarketable, and throw it in the ditch. This rule rigidly, adhered to, will pay in the end by establishing a reputation. Better not pick berries if poor. A few boxes of small half ripe or overripe berries placed on the market will do the grower more damage than he can estimate.

If only choice fruit is grown, the farmer will soon solve the question of markets. First-class berries will make their own market. Consumers east and west are looking for the best, and, if growers would pay more attention to quality than quantity, they would make more money, and would never be annoyed by haggling over the price with the dealer or shipper.

BLACKBERRIES.

The blackberry is even more profitable than the strawberry, and will grow on a wider range of soil. It, too, must be well supplied with water, and too much cannot be said about enriching and cultivating the ground. The rows should be from eight to twelve feet apart; I prefer ten feet. Between the rows, vegetables may be grown without injury to the vines, but, where constant gardening is kept up, more manure should be used about the roots of the vines, and a mulching with rotted straw should be added two or three times a year.

The vines should be pruned low, in order to get fine, large, luscious berries, and for convenience in picking. Never allow a vine to grow so tall that a picker must reach for the fruit. The only variety which I would recommend in this valley is the Lawton. The rules already given for picking and marketing strawberries apply also to the blackberry, and I may properly add that only fresh, new boxes of a style acceptable to the trade should be used. I never allow a stem or leaf to go to the market.

The berries should be well-graded as to ripeness. If for immediate consumption in the local market, they should be ripe, having no red berries to mar the appearance of the basket. If for shipping, picking should be carried on so as to secure medium ripe berries.

RASPBERRIES.

Raspberries are also grown successfully here, but my experience has been limited. However, they are easily pruned and cultivated, and, while somewhat of a shy bearer, are a reasonably sure crop. They will not take so much water as the blackberry and strawberry, but require a like treatment in other respects. They appear to thrive well on thin soil having a hardpan near the surface. The red Barter raspberry is the only one successfully grown here.

CURRANTS.

Currants, where they can be grown, prove a valuable adjunct to the berry garden and always find a ready sale. The fruit does not thrive in the valley, but near the coast and in the mountains it reaches perfection. Owing to the prescribed districts in which it grows, it has for years commanded a good price. As a jelly fruit it has no equal. For this purpose the common red current is the best, it having more body and making a superior jelly to its more attractive sister, the cherry currant. These two varieties are the only ones that can be recommended.

Planting, pruning and other details I must leave for those having more experience than myself.

Small fruit culture is attendant with endless labor, but, withal, if well conducted, is both pleasant and profitable, and each year the field for the industry is widening.

S. I. HOLSINGER.

SMALL FRUITS—GENERAL CONSIDERATIONS.

SANTA CRUZ, May 30, 1892.

TO THE EDITOR:—There are certain grave and potent reasons why small fruit-growing must always commend itself to all those who are fortunate enough to possess *suitable locations for such culture.*

1st. Because no other fruits that can be grown yield *so quickly* a generous return for all the time, labor and cash expended upon them, or contribute so largely in so short a time to the every-day comfort, health and pleasure of the grower's family, as do the whole berry list: strawberries, raspberries, blackberries, currants, gooseberries and all, each, in its turn, adding a new zest to the daily fare throughout the whole summer season, and filling the bill (no pun intended) of human needs at this time as nothing else could do.

2d. Very few in all the long list of horticultural products return *so large* an interest, acre per acre, upon the amount invested, if all conditions are favorable.

3d. The cost of a plantation of small fruits is so little compared with the amount required to start one in almost every other branch of horticulture, that this, in itself, is often a matter of grave consideration to a man whose ready cash is pretty well used up after having bought his land, built house and barns and gotten team and tools to run things with, to say nothing of cost of clearing and getting the land ready for future crops, nor the price of trees to put upon it, which must be planted and cultivated for four or five years at least before one can hope for any returns for all the labor bestowed upon them.

4th. In proper locations (that is, near centers of thickly settled districts), and with proper management, no other crops can be harvested so cheaply, since, from the very nature of the crop to be gathered, there is but little *heavy* work required. Deftness and delicacy of touch being more important requirements than strength in a berry picker, it follows naturally that women and children make the best pickers, and they can be hired in this capacity for the season at far less than the wages of an ordinary working man. Indeed, where a man has a large family of his own, every child can help in this work without any overtaxing of its strength, and thereby lend its aid in lightening the burden of its parents.

5th. The heaviest part of the berry-harvest comes in the midsummer during the school vacation, when there is an abundant supply of boys and girls who are only too glad to be able to earn something for themselves by picking in the berry fields.

6th. The returns in small fruit growing are *so immediate*. With proper cultivation and an intelligent selection of those varieties best adapted to one's soil, the plants set out with the first rain in the fall, will yield a fair crop the next spring, and with very little extra expense of any sort, outside of ordinary care and cultivation, will continually increase in their yield for years, as the plantations are extended from yearly increase of plants by "runners," "suckers," etc.

7th. The outlay for boxes, chests or other shipping crates is a gradual one—not demanded all at once, but little by little as the patch is extended and the crop increases.

8th. Under a liberal system of intelligent manuring, which shall prevent any exhaustion of the soil, the berries can be grown both profitably and successfully between the trees in young orchards, where one is limited for space, and by their profits pay all the expenses of the orchard cultivation until the trees themselves come into bearing and require the whole strength of the ground.

So one might go on stating the many advantages which the culture of small fruits offers to those who have the ability to fill the conditions first stated—that is, *to those possessing locations suitable for the successful growing of small fruits.*

In other branches of horticulture there are recorded successes of all sorts of fruits in all sorts of climates, soils and conditions upon hilltops and in valleys, with irrigation and without irrigation, with pruning and without pruning, with spraying and without it, showing the infinite diversity under which profitable crops may be grown when the unfavorable conditions imposed by nature are supplemented by the keen wit of the intelligent horticulturist.

In small fruit growing it is different. The conditions of success are *few*, but they are imperative. As some writer upon this subject has tersely stated it, "The first requirement is water. The second is WATER! The third is WATER!!

This is especially true of California. Without water and enough of it for continued irrigation throughout our long dry season, one had better devote his energies from the very first to some other crop. *Small fruits are not the things for him to grow.*

Granted plenty of water, then the next condition is *nearness* to a steady market for his crop—one that is within three or four hours' travel by rail. Berry-growing is "touch and go" work! Each mile of the road or hours delay between producer and consumer tells heavily upon the quality of the fruit and the price it will bring in the market. Akin to this in importance is a home location in a populous district, from which a good supply of pickers can always be obtained at short notice when the rush of the crop comer on in midsummer. But *first* and last, and most important of all, is the planting of proper *varieties* of berries, such as shall meet every demand of both shipper and consumer—strawberries, for instance, that are red as blood to the very heart, firm and good travelers, not pithy, or with big white cores, but melting subacid, sweet and aromatic. Not *too* large, but perfect and regular in form and size, attractive to the eye and delicious to the taste (such berries as "Jessie," "Cloud," "Hoffman," etc.). In all other varieties, selecting upon the same principle the very best sorts of raspberries, blackberries, etc., that can be found, giving them the highest cultivation that they will take, and that preparation for the market that shall enhance the value of the fruit to the highest notch. Make easy work for one's salesman, a fat pocket for oneself, and give satisfaction to all concerned.

It would make a book to enter into all the minutia of cultivation, special pruning, etc., required for each plant of this class—varieties which one's experience had pronounced best for one's own locality, and so on, etc., but I fear I have already overreached the limit of space allowed, and hope these hints may be helpful to some of your readers.

L. U. MCCANN.

STRAWBERRY CULTURE.

SACRAMENTO, May 31, 1891.

TO THE EDITOR:—At least one year before the strawberry plants are to be set out, the preparation for their culture should begin by spreading upon the ground a good coat of well-rotted stable manure, or by the use of commercial fertilizers. The ground should then be planted to some other crop in order to work out the weeds and, if stable manure is used, to rid it of the white grubs which might otherwise injure the strawberry plants. In irrigating districts the ground must be well-leveled before setting out the

plants, and in all sections the ground should be plowed deeply and the soil finely pulverized.

If the ditches are six and the rows three feet apart, the cultivating can be done with a horse, thus saving time and expense. The ditches may be made either before or after setting out the plants. If they are made before setting out, I think the results more satisfactory, as the ditches serve to drain the beds if the weather is very wet and are ready for use when needed.

PLANTING. — When the ground is ready, a wire is stretched from end to end of the row as each row is set out, as a guide in making the row straight. Marks are made in the wire, or strings tied on, 12 or 15 inches apart to show the distance between the plants.

The plants should be runners from young plants, not those from an old worn-out patch. The plants should have their old leaves stripped off that they may not draw upon the vitality of the root, and in very warm weather the plants should be carried around in a pail of water. If the roots are very long, they should be cut off to a length of from four to six inches. A hole is made with a dibble and the plant, with its roots straight and spread out in a fan shape, is inserted, and the earth pushed firmly around it, taking care to leave the crown just even with the surface, neither above nor below.

CULTIVATION.—After the plants have had time to become settled in their new position, two weeks or more after planting, they should be well hoed, and from that time until they are plowed up and the ground put to other use the soil must always be kept loose, either by hoeing, cultivating or moisture; the weeds must be kept out and the runners picked off.

MARKETING.—The stage at which the berries are ready for picking depends upon the market, a shipping house requiring green berries while the local market needs them nearly ripe, but in either case, when the berries are ready for picking, the pickers must be instructed to pick with the hulls on, to throw away all bad ones, to give good full measure and to have the top layer no better than the bottom one.

I have heard of strawberries having too much water, but have never seen one that was injured that way if the berry itself did not touch the water. Water, and plenty of it, seems to be one of the most important helps in strawberry culture.

E. E. EASTON.

SMALL FRUIT GROWING IN SAN DIEGO COUNTY.

ESCONDIDO, May 30th.

TO THE EDITOR:—As to strawberries, experience and observation indicate that the "Wilson" is the best-adapted to any and all localities, but the beginner can experiment with one or more other varieties, and perhaps find a good one for his locality. Select a smooth, nearly level or gradually sloping piece of land, of any kind of soil that is available, except adobe, sandy loam preferable; manure heavily, plow deep, irrigate thoroughly, unless the soil is well wet by rain. Set mostly "Wilson" plants, about 12 inches apart in the row, rows three feet apart; keep well cultivated and irrigated (if necessary use a hoe in the rows) till fruit begins to form, then mulch thoroughly with old straw or any available material. Keep the soil damp, irrigate if necessary, but keep it damp. Pick the berries early in the morning while they are cool, and directly into the boxes in which they are to be sold. After a crop has been gathered, the soil may be allowed to get partially dry, and all that can of the mulch cultivated in; then thoroughly wet down. Plow up the patch after the third or fourth crop, and reset with home-grown, selected plants, that you know are first-class in every respect, and thus increase the productiveness of your patch.

RASPBERRIES AND BLACKBERRIES.

Varieties of raspberries that do well at high elevations sometimes do not succeed in the warm valleys, so the best rule is to notice what kinds do best in the vicinity or in similar localities, and select two or more varieties of Reds, and also Black-caps, and, after trying them, keep those that do best. Of blackberries, the Kittatinny and Crandall are best; but other varieties can be tried on a small scale, and perhaps something valuable for the locality may be found. The above two varieties seem to be good everywhere. Land may be more sloping than for strawberries, but must be well fertilized, plowed deep, and so arranged that water can be run between the rows at a moderate grade; good natural or artificial drainage is necessary. Set the plants in rows six to eight feet apart, and three feet apart in the row, and allow suckers to fill in the spaces so as to have a continuous row. Cultivate shallow, or so as to avoid injuring the roots; irrigate plentifully till fruit begins to form, then, if the ground can be well mulched, cultivation may be dispensed with; but keep on irrigating and the berries will be larger and more juicy. Pick into the boxes for market, and do not leave berries that are intended for market on the bushes till they get too soft; those for home use are best thoroughly ripened. Old vines may be cut out after the berry season is over, and the new vines shortened into three or three and a half feet in height. After getting started in the business, grow your own plants from the best vines in your patch.

CURRANTS AND GOOSEBERRIES.

These fruits do not seem to do well in the warm valleys, but on the mountains, or where there is some cold weather, they are a success. They will stand more neglect than other small fruits, but pay only when well taken care of; they succeed best where irrigation is not necessary, but will not do well on a dry, shallow soil. Set them in good, deep soil, but not too rich in vegetable matter, or they will run to bushes, with little fruit. Set them in rows each way, six to eight feet apart, as circumstances admit. They do extra well in nooks and corners around buildings, where they are partially shaded; prune out all wood too old to bear, keep the bush in an upright form, allow no weeds, and keep the surface cultivated and mellow. Fruit for home use is best thoroughly ripened; for market, it must be picked while the bunches hold together, and before the berries mash easily.

The requisites in growing most small fruits are, a good soil, thorough cultivation, and plenty of water, naturally or artificially. With these, a beginner can soon master the business, and when a plantation is once established, an income is assured.

H. W. WARD.

HILLSIDE BLACKBERRIES WITHOUT IRRIGATION.

SANTA BARBARA, May 20.

TO THE EDITOR:—I will give you some of my experience in raising blackberries during the past 12 or 15 years, although my success, or want of success should, perhaps, operate rather to deter, than to stimulate. Had I not several elements in my favor, as the most suitable ground, it being rich side hill facing sharply to the north, retaining moisture late in the season; several boys to whom I could give profitable employment, nearness to market, being only a mile from State street, Santa Barbara, and moreover, a kind friend who gave me the plants, free of charge (he was plowing them up, as being unprofitable to him), I should have made—not a failure perhaps, but no money.

I had, perhaps, one and a half acres, but in part of it I had apple trees and a few cherry, pear, peach trees, Blackcap and Brinkle's orange, raspberries, gooseberries and currants. The blackberries enroached upon everything but the gooseberries.

The varieties I grew were Lawton and Kittatinny. The Lawton is a large, roundish berry, very tart; too tart to eat out of hand, unless dead ripe. The Kittatinny is a largish, long, very sweet berry, not quite so showy as the Lawton. I could perceive no difference in average productiveness.

The rows are about eight feet apart, canes one to two to a foot; too steep to cultivate both ways. Depending upon the rains, I sometimes plowed as early as December; after one plowing, the cultivator and hoe did the rest, going over them three or four times during the season. When the canes were five or six feet high, I cut them back to four or five feet, keeping well trimmed between the rows, to facilitate the pickers. For this purpose, I use a piece of a broken scythe fastened to a handle, and can work rapidly. The hoeing also is quickly done; pulling the dirt down the steep hill among the canes, thus covering most of the weeds. When done bearing in the fall, I cut off the old canes at the roots with a long-handled trimming shears, pitch them out with a pitchfork, carry them to the lower side of the patch and burn them.

Picking commences about the 10th of June and continues till October or November. I get the town boys and girls to assist us in this, paying them one to two cents a box of nearly a pound. They usually do very well at this, picking sometimes as many as 100 boxes apiece, a day, with little or no supervision. Occasionally one or two of them will get a little frisky or a trifle lazy and put leaves, or stones or apples in the bottom of the box, and cover carefully with nice large berries and collect pay as if all right; but, considering they were town boys, I seldom had any cause of complaint. Sometimes whole families would come with teams and picnic dinners and stay all day, and have a jolly good time of it. Such usually pick for themselves, paying me about four cents a box. I gave all free permission to eat not only all the berries they wanted, but peaches, nectarines, apricots, apples, plums, cherry-plums, etc., and this may doubtless be the reason that they gave us so little trouble and did so little damage, and required no overseeing. True, they would not stick to their rows very well, or pick very clean, and I doubtless lost somewhat in this way; but the added comfort and increased pleasure much more than counterbalanced this little loss.

MARKETING.—Great care is necessary in handling this fruit. It should be picked in the boxes in which it is to be sold, sticks and leaves carefully excluded, handled carefully to not bruise and marketed in 12, or at most, 24 hours after picking, or the berries will begin to mold. When taken but a mile in a spring wagon, they sometimes settle so as to require refilling.

In picking, we use light-handled trays, just big enough to slip in nine or twelve boxes. Great care is required to keep out dust in marketing. We sell some to dealers, some we peddle over town, in which case people tell us that our berries are not so large and fine looking as those that are irrigated, but are sweeter, and they prefer ours. We often buy boxes that have been used, when thus engaged, paying 30 to 50 cents a hundred. If not weather-beaten, they answer about as well as new ones, which cost over a dollar a hundred. While peddling, we often trust small sums and scarcely ever fail to collect without trouble.

We have boxes just the right width and length to suit the berry boxes, two, three or four stories high, with loose boards to slip in between the different stories, as we pack in the berries carefully covered to exclude all dust, and hasten to get them sold quick as may be. Every hour of delay detracts from their fresh appearance.

COST AND PROFIT.—I will extract somewhat from my daybook. It is not very accurate; thus in the item of expense, we sometimes sold berries for boxes; these cases were not put down in the column of expense. What our own family picked also was not put down. The berries used in the family and for canning, are not mentioned. In 1881 we sold 5474 boxes for $354.02. In 1882 we sold 4189 boxes for $300.60. In 1883 we sold 2685 boxes for $200.15. In 1884 we sold 8091 boxes for $504.25. In 1885 we sold 3276 boxes for $201.10; cost $12 75. In 1886 we sold 3466 boxes for $265; cost $26.05. In 1887 we sold 3432 boxes for $220.50; cost $9.80. In 1888 we sold 3338 boxes for $234 48; cost $30.28. In 1889 we sold 6548 boxes for $338.69; cost $125.98. In 1890 we sold 5702 boxes for $275.89. "Cost," means money paid pickers outside from my family, and for boxes. Some years we bought nearly all our boxes for berries; this is not taken into account at all, nor is it when people picked and took pay in berries; nor is it when berries were given away—sometimes in considerable quantities. The time spent by my family, self, wife, and one to three or four boys, it is impossible to estimate, even approximately; it might amount to an average of one person six months each year, possibly considerably more than that.

The berries must be very ripe, and if left a little too long, they decay, mold or drop off. We lost considerable in this way, especially when, as sometimes happened, there was a glut in the market or a scarcity of pickers just at the nick of time.

OTHER SMALL FRUITS.

Blackcap raspberries are fine, but being among the blackberries they were run out in three or four years. So also, to some extent, the Brinkle's orange. According to my experience, the latter is too soft to market profitably. They soon look wilted and settle in the box. I have a kind of wild blackberry, or perhaps it is dewberry, that ripens early, has a sort of gamy flavor, so to speak, that sold readily, but it is not sufficiently productive to be profitable. My apple, peach and pear trees amid the blackberries, bore well, but many of the apple trees died. due perhaps, more to the scale than to the enroachments of the blackberries. My cherries grow thriftily, but bear little, but such is the case with all cherry trees near Santa Barbara. Currents bear but little, and half of them are dead.

My gooseberries hold their own among the blackberries and bear moderately well every season. They are very rampant, and want a deal of trimming and thinning out. Variety unknown.

My blackberries, as will be seen, bear much more some seasons than others, and this does not seem to be owing entirely to wet or dry seasons, either. I think the roots lie by, partially, some years, to put forth renewed vigor in succeeding years. Last year I was in this—Ventura Co.—and my blackberries did poorly, and probably not altogether from neglect, either. This year my sons are tending them, and they write that some of them are dead, but those that are alive are doing well, and will produce a good crop.

I have not raised strawberries much, in this State, on account of hens. What little I have raised, fencing out the hens with laths stuck in the ground, have well paid for the trouble, in family comfort, for of course I have not raised them for market. Having no means of irrigation, the vines have died every summer, so I have to reset when the fall rains come. But they are so delicious when fresh picked, and are so easily raised, that this little trouble is easily forgotten. I raised a few on my place at Sespe last year, but the roots all died last fall for want of water.

S. P. SNOW.

SMALL FRUIT GROWING IN WISCONSIN.

ARKANSAW, WISCONSIN, May 31, 1892.

TO THE EDITOR:—Beginning with strawberries as the first of small fruit, I would say, first, get the very best kind adapted to the locality you wish them for. As the best all-round varieties, I think I may safely say Wilson's Albany comes first. It is the most popular strawberry in cultivation and too well known to need description. Next comes Crescent Seedling. This is a pistillate or imperfect flowered variety, and must have perfect-flowered plants set among them or they will produce imperfect fruit. Such a plant every 15 or 20 feet will do. The Sharpless is a splendid berry, of large size, very vigorous and productive, of the finest quality. With these three varieties, one has early, medium and late berries, thus making the season last much longer than when one variety is used.

Prepare the land by heavy manuring, deep plowing and making it mellow and fine so that the roots can run freely, thereby insuring your plants from heat and frost. Set the plants as early in the spring as the ground can be prepared. When planting, do not let the roots become dry. Carry them about in a pan with just enough water to cover the roots. If the foliage becomes wet, it often causes the crowns to rot. Be careful to have the crowns even with or a little above the surface of the ground. For field culture, plant in rows four feet apart and the plants one foot apart in the row, making your work lighter by using horse and cultivator. For the garden they may be planted closer if the hoeing and weeding is done by hand. Keep clean, and pick off all blossoms the first season. In dry seasons, I have found it very beneficial to irrigate.

Add one pound of crude ammonia to a barrel of water. I use a kerosene barrel. When dissolved, stir well and apply to plants every evening while in bloom if dry weather continues. Here, we hire them picked for two cents a box, using the paper boxes holding a pound each. We pick through the day and market them in the morning, as this is the most satisfactory to all concerned. I find that it is better to renew the bed every second year, and then I am sure of a crop from one or both.

RASPBERRIES

For field culture should be planted in rows five feet apart, with plants three or four feet apart in the row. The Cuthbert is one of the best late red varieties, large, firm and of superior quality. It is also very productive. Of the yellow raspberries, the Golden Queen is a great beauty, of large size, productiveness and high quality. It is very hardy, and a favorite for home use or near market. It is light amber in color. The Gregg is also a favorite. It is very large, and it is really wonderful how many berries may be picked from a single stem. This is a very hardy variety also.

Horse and cultivator are used in the field, and every spring each bunch is cut back until not more than six canes are left. The berries are larger and the vines more thrifty. I leave this until spring, as some might die out through the winter, and if there are not about six good strong canes the crop of berries will be light.

Continued on page 550.

THE HOME CIRCLE.

The Voice of the People.

By JAMES E. CLARK.

Swing inward, O gates of the future,
Swing outward ye doors of the past,
For the soul of the people is moving
And rising from slumber at last;
The black forms of night are retreating,
The white peaks have signaled the day,
And Freedom her long roll is beating,
And calling her sons to the fray.

And woe to the rule that has plundered
And trod down the wounded and slain,
While the wars of the old time have thundered
And men poured their life-tide in vain;
The day of its triumph is ending,
The evening draws near with its doom;
And the star of its strength is descending
To sleep in dishonor and gloom.

Though the tall trees are crowned on the highlands
With the first gold of rainbow and sun,
While far in the distance below them
The rivers in dark shadows run,
They must fall, and the workman shall burn them
Where the lands and the low waters meet,
And the steeds of the New Time shall spurn them
With the soles of their swift-flying feet.

Swing inward, O gates till the morning
Shall paint the brown mountains in gold;
Till the life and the love of the New Time
Shall conquer the hate of the O'd.
Let the face and the hand of the Master
No longer be hidden from view,
Nor the lands He prepared for the many
Be trampled and robbed by the few.

The soil tells the same fruitful story,
The seasons their bounties display,
And the flowers lift their faces in glory
To catch the warm kisses of day,
While our fellows are treated as cattle
That are muzzled when treading the corn,
And millions sink down in life's battle
With a curse for the day they were born.

Must the sea plead in vain that the river
May return to its mother for rest?
And the Earth beg the rain clouds to give her
Of dews that are drawn from her breast?
Lo! The answer comes back in a mutter
From domes where the quick lightnings glow,
And from heights where the mad waters utter
Their warning to dwellers below.

And woe to the robbers who gather
In fields where they never have sown,
Who have stolen the jewels from labor
And builded to Mammon a throne;
For the snow-king asleep at the fountains
Shall wake in the Summer's hot breath
And descend in his rage from the mountains,
Bearing terror, destruction and death.

And the throne of their god shall be crumbled,
And the scepter be swept from his hand,
And the heart of the haughty be humbled,
And a servant be chief in the land;
And the truth and the power united
Shall rise from the graves of the true
And the wrongs of the O'd Time be righted
In the might and the light of the New.

For the Lord of the harvest hath said it—
Whose lips never uttered a lie—
And his prophets and poets have read it
In symbols of earth and of sky,
That to him who hath reveled in plunder
Till the angel of conscience is dumb,
The shock of the earthquake and thunder
And tempest and torrent shall come.

Swing inward, O gates of the future!
Swing outward ye doors of the past!
A giant is waking from slumber
And rending his fetters at last;
From the dust where his proud tyrants found him
Unhonored and scorned and betrayed,
He shall rise with the sunlight around him
And rule in the realm he has made.

What's in the Frying-Pan?

OR

Mattie, a Camper's Cook.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

"Going camping, you say?" and Miss Hetty, with a thoughtful air, turned the sprinkler of her hose from a bed of mignonette to the row of "Blanche Ferry" and "Eckford" sweet peas which reached clear across her garden.

Mattie watched the drops as they fell. From the "Princess of Wales" near, so dainty in mauve and white, to the "Indigo King" beyond, royal in purple and blue; from the two "Princes," superb in bronze, orange and pink, to the "Queen of England," large and stately in pure white; and the lesser dignitaries, with the glorified painted ladies scattered in between, all seemed to face her, lifting their brilliant standards and spreading their delicate wings to catch the sparkling shower. The grateful fragrance of their breath was all about her.

"Yes," she said, a trifle wearily. "We are going camping, and right away, too. Doctor Allen advised it, and a very good chance has come."

"What are you so solemn about? It will certainly be good for Tom. Really, Mattie, I confess I felt a little anxious when I first saw him after I came back; he looked so hollow-eyed."

"He just would go back to the store too soon after that attack of the grip. And you know what a cold winter we have had, and then the late rains, and the store is so draughty, and Mr. Bowers—O, I shall always just hate him! He pooh-poohed the idea of a fire in the store." Mattie was very near tears.

"There, there," said Miss Hetty, soothingly, "Tom has a splendid constitution, and he will be all right with rest and care."

"But that's just it," cried Mattie. "I am so anxious about him and so fearful I can't care for him as I ought. He has to be watched, he's that careless about wrapping up. He's always 'banked,' as he says, on his good constitution, and it's made him reckless. But that's not the hardest; it's the *cooking* for him, he's that finicky and fussy since he was sick. I never knew him to have a poor appetite before; but doctor says I must feed him well. Now think of that! There's a tiny, pocket edition of a two-burner gasoline stove down there, I hear. What can I do on that? I'm not used to gasoline stove cooking, anyhow. And Tom's already beginning to worry about the expense, and losing more time after what he's lost already, and he says I must be careful, O, so careful about expenditures. I just feel between two fires."

While Mattie was speaking, Miss Hetty had turned the faucet and coiled up her hose. She now came and put her arms around Mattie.

"My dear," she said "these are the times when one realizes what it is to be born a woman. The everlasting balancing and conquering of circumstances on a scale so small and yet so imperative wears patience, temper, nerves; but like air and sunshine, the results are taken for granted."

"Never conspicuous except for their absence," flashed Mattie, "and then it is never this or that done right, or always thus and so, wrong."

Miss Hetty looked at Mattie with a comical air. "Well, you have struck 'the he of it' this time. I perceive Tom has really been sick. I'm so sorry I was away."

"So am I. Why couldn't I have gone camping when you did?"

"Then who would take care of our places? I'm going to take good care of yours, mind you. You've been just too good about mine, and Tom not well, too."

"O, I was glad to do it, and it was a distraction evenings, when Tom was better, to come and help me spray."

"Come in and sit down; can't you leave Tom a little longer?"

"Yes, Jack West is there cheering him up. It's his tent and lot he's asked Tom to 'hold down' for him. I told Tom I was going to advise with you. He was pleased and said: 'Suck her dry, Mattie. Doctor says I'm going to get the appetite of an ostrich down there, but not the stomach of one yet awhile. So you must take good care of me.' So easy, isn't it, to be economical and careful of a convalescent stomach, and on a miserable little gasoline stove? Suppose I might run a Delmonico restaurant, off hand, I'm so smart."

Miss Hetty laughed. "Well, come in" she said cheerily. "There, lie right down on the lounge. Now, then, are there any fixtures with your stove?"

"Fixtures! O yes-a little oven, I believe, separate. That's down there. I'll have to take a frying-pan, I suppose, some bacon, and make lots of cake and pies and cookies before I start—O, dear."

Miss Hetty suddenly bounced into her kitchen, then out again, dangling before Mattie's astonished eyes three triangular-shaped tins, with handles. The handles were on the hypothenuse, which was convex; opposite the handle the tin came to a right-angled point. Then each had a cover, and held about two quarts, and could be placed so as to form a circle—handles on the outside. Miss Hetty placed them so.

Mattie stared. Then, excitedly, "Why, they are to put over a burner—three git over one"—

"That's it; three things cooking at once. I've cooked meals for from six to a dozen people, many a time, on one of these same little camping stoves. Several courses, too. You can keep things warm in your oven when you are not baking in it, and on top when you are. And it makes a good heater cool nights—such as you will have at the coast—heats up a tent quick.

"Fishing is reported good down there. Tell me about cooking fish. Tom can't live on boiled things, and I'm afraid I'll kill him if I cook in a frying-pan—frying is called so unhealthy."

"There's frying and frying," said Miss Hetty. It all depends on the cook and the know how. I like frying-pans, and plenty of them. But I'll tell you what not to do. It's the way I saw fish cooked down to the coast, though. The fish is dressed, and mangled in the dressing; then flung into water to stand till convenient to take it out. When the gasoline stove is lighted, before it is hot, the spider is put on, and cold grease into the cold spider, the dripping fish flung on top, and then it is covered up and left to sozzle at its leisure till it gets ready to scorch and burn, warning the nose of the negligent cook that *that* fish is ready to turn. Then it is flopped over, carelessly, tumbling to pieces, most likely, seasoned—if remembered—then left to scorch or sozzle some more. When done, it's ready to fling back into the ocean to feed and *poison* the little fishes."

It was Mattie's turn to laugh now. "I know the kind of people you mean," she cried, "those one never likes to camp near; they are so untidy, and who even don't like to camp after themselves."

"Yes. But there are more people than that who do not know the first thing how to use a frying-pan. Frying with such means *sozzling* in grease, and grease all out of proportion to what's in the frying-pan. Every day sort of people, who have to count their pennies, can't always afford that royal sort of frying—immersing the fish, or whatever it is, in the hot fat. Besides, at the coast it takes many dishes—utensils. Give me frying-pans, plenty of them, at the coast. I can cook anything in them."

"Ah!" gasped Mattie.

"The French have a term—*saute*—for the kind of frying that *should* be done in a frying-pan. When they *sautez* a thing, the fat is right hot, and, for some things, very little of it. Frying doesn't need to be unhealthy—*isn't*, rightly done. Besides, using frying-pans doesn't necessarily mean to fry in them."

"Oh!" gasped Mattie.

"I *broil* in one of mine. Did'nt you ever?"

"No. How?"

"Oh, it answers nicely—specially convenient on a gasoline stove. Wipe your pan dry, put over the blaze and let it get *real* hot. Lay your steak in the hot, dry pan and cover instantly. When the raw flesh touches the heated pan of course it seethes and adheres to it, but in a few seconds becomes loose and juicy. Turn every half minute, keep as much as possible under cover, and pan as hot as at first. Will be done in two or three minutes, a nice brown on the outside and juicy inside. If steak is tough, mangle it. Treat in seasoning just as you do broiled steak, only you can season with the pepper, salt and bit of butter right in the pan, cover and let stand to season through, where it is kept warm. A teaspoonful or so of strong coffee added helps make a nice gravy, very palatable to some. I've cooked steak this way time and again for invalids when I couldn't get a chance at a broiling fire, and they couldn't tell the difference."

"That lets me out," said Mattie, delightedly, "for I was just racked with worry how to give Tom a bit of broiled steak now and then."

"The steak has all the healthful, beefy flavor so desirable, that one loses in stewed meats. You can do the same way with mutton chops, only cook longer to prevent their being too rare. To make a dainty, nourishing gravy, add a little milk thickened with a pinch of flour, into which, when off the fire and partly cool, stir the yolk of an egg, well beaten. By the way, have you frying-pans enough?"

"I've three. A long-handled sheet-iron one, one of granite ware, shaped like it, and a short-handled, deep, cast-iron one."

"Good," said Miss Hetty. "You can cook anything in these, from broiling a steak to concocting and cooking the most elaborate of chowders.

[*To be continued*]

TO MAKE A HOME OUT OF A HOUSEHOLD.—The Delsarte principle of outward expression influencing, if not determining, the inward feeling is often illustrated in personal experience. For instance: If there come a dreary day at home, when one feels out of touch and of tune with the world; when rooms have perhaps relapsed into a state of disorder, or even chaos, and no one knows where to begin to restore them; when one's own toilette is without freshness, and both one's self and one's environment are verging on shabbiness, or have even passed the line; when the children, too, are, or may be, out of sorts—their spirits undoubtedly affected by the general atmosphere of gloom or disorder—then try the Delsarte principle.

Clear away the debris and disorder; make the rooms clean, pretty, attractive. Then go, O fair mistress of the *menage*, and don your prettiest gown (not necessarily your best or costliest one—not your ball gown, if you have one, nor yet your dinner costume or street gown; but some pretty, dainty, inexpensive affair of lace and ribbons, that will brighten your spirits unconsciously). Open the piano, and, as the Germans would say, sing a *kleines lied* (little song), or read a charming story or poem aloud to the little ones—and, all in all, the spirit of peace and harmony and sweetness and radiant happiness shall return.

The recipe is infallible. Try it.

Chosen.

"When I want you, I will let you know," she had said three years ago, when he told her all, and went away. He went because he knew it was his only hope in the years of waiting which were before him.

He had come to love her as boys love; and he had come to believe in his passion, because it never left him, and because there seemed such endless suffering in it. He often wondered whether the pain, the agony of suspense and jealousy, the brief moments of bliss, were not more than half the dearness of his passion. Every memory of childhood, boyhood and early manhood was full of her, and when he went over his past life Ethel was there from first to last, in a relationship which was almost taken for granted. After he finished college, he spent a year at home. Now, as he remembered that year, he thought it held more agony than any other of his whole life. The endless comings and goings, the dissatisfaction, the misery. It was Ethel's first year "out," and he thought, ironically, how entirely it had thrown him "out." He remembered so well the night he first made up his mind to go back to his books, and try to console himself and wait for the time he knew must come, else why was he born—the time when Ethel should give him her hand and say—but it made him dizzy to think of that time.

The night he decided, Ethel had run in for a moment on her way to the theatre, to show the old people her pretty new gown. She was brilliant, dazzling, her face all rosy with excitement, her eyes dancing. He followed her into the hall on her way to the carriage. "Ethel, how long will this last?" he said to her. "How long am I to wait?"

She looked up in his face with a pretty little frown. "Wait, wait, wait! You're always talking about waiting. I wish you wouldn't wait," she cried.

"I will go away then," he replied. "I can't stay here and waste my life on nothing. I have something to do and I must learn to do it."

"I'm glad to hear it," she replied. "I'll send for you, Errick, dear, when I want you, and soon, too!" and she stepped into the carriage and waved to him as it drove away into the darkness. Her face always smiled at him out of the darkness, and seemed symbolic of the light in darkness she had always been to him. Could it be only three years ago. It seemed like three centuries. She had never written to him, because, "she didn't like writing letters." Some one once said in his presence that a woman always liked writing letters to the man she loved; and he felt how little that man knew.

In his mind, Ethel's superiority to other women was an acknowledged fact, which her difference from them in this respect only proved.

Meanwhile there was growing in his life another interest, whose depth and significance he could scarcely realize. When he left his home, it was only the first dawn o purpose, which comes into a man's life side by side with his first great emotion, which had actuated him. Now the intoxicating cup of success had been held up to his lips but long enough for the first pungent aroma to reach him. At these times there would come such delight and happiness in his work that it seemed as if he must write to Ethel—to Ethel, who was to glorify the work and be his inspiration. His name would be a name worth having, one he would be proud to offer her. But he never wrote, thinking he would bide his time and tell her all in that one moment of reunion to which he looked forward with such passionate anticipation.

At length one night he had a dream, which in his prosaic moments he would have said was as wild as any of the Arabian Nights. Two women came to him, one with Ethel's face, the other a glorious creature with shadowy, lossened hair, tall, commanding, with deep, true eyes all alihgt with a strange, serious meaning. The face he did not know, but the personality seemed to bring back a memory of something intangible which he had known for a long time. As he looked at them, they faded from his view and he cried out to them to stay, but only

Ethel stayed, for it was her name he called. The other form passed away, and he awoke, saying, "Only Ethel," to himself with dull dissatisfaction. For many days the fancy hung over him as a foreshadowing of the truth. He could remember nothing but the beautiful stranger with the serious, meaningful eyes, which seemed to reflect his own destiny. On the other hand, Ethel represented every ideal of tenderness and peace, inspiration and passion, and he could comprehend no love apart from her. The earnestness of his life was in his own inner knowledge of the destiny before him, which Ethel was to crown. His dream seemed a mirror held before him, in which he recognized his own moral condition. He could not but perceive that his dependence on the merest shadow was driving out of his reach the certainty of his future success.

Perhaps Ethel had become the Vittoria Colonna, the inspiring creature he dreamed of. The doubt made him decide to see this maiden of his dreams, this Vittoria, this Beatrice, and show her the whole of the new life, the beautiful dawning future which she was to glorify.

* * * * * * *

And now in a moment he knows he will stand face to face with his beautiful dream, will clasp her hand, will feel the touch which he has longed for with such passionate yearning. He feels that he knew long ago how it would be. She would grow and grow, and as her capacity for sympathy developed, her nature would advance and expand. He could picture just how she would enter the room. How he would hear her sweet, composed voice, and the serious, expressive eyes would meet his, and he would realize all his anticipation in that one moment of—

"Why, how do you do, Errick!" the lively voice came through the doorway before Ethel herself, and very soon she was holding out her hand with smiling welcome in her face. He looked at her for a moment silently. Was this Ethel, his ideal, his dream? Had she not grown smaller? Was she not less smiling than this pretty little woman standing before him? He had forgotten that the Ethel of his dream was small, too, and only the beautiful ideal creature was in his memory. Did he expect to see the other tall, commanding being with the strange, serious eyes? Perhaps!

"How much older you look, Errick, in these three years! What have you been doing with yourself?" she said.

"Doing? Nothing! Thinking of you!" he replied, absently.

"Nonsense; but you don't ask me what I have been doing. Don't I look older?"

"I hardly know. You seem changed in a way!"

"Yes, changed," she replied, "I hope I am not so silly as I once was. I have settled down. I suppose all girls must sooner or later."

"What do you call settling down?" he asked.

"Oh, not going out so much, and keeping house and taking an interest in poor people. In fact, trying to do a little good," she replied, sweetly.

"How domestic and how sweet," he thought as he walked down the street. "A dear little wife for a dear little man!"—Harvard Advocate.

Miss Nelson's Victory.

At the Inter-State Oratorical Contest held at Minneapolis, Minn., on May 5, Miss E. Jean Nelson, of De Pauw University, Greencastle, Ind., won first honors, with the theme, "Industrial Freedom." Miss Nelson, a tall, slender young woman of 19, is a member of the junior class at De Pauw, and a resident of Greencastle. She is the first of her sex to win honors in an Inter-State contest, and has achieved this distinction by first winning against the best oratorical talent in her own University, then against five young men from as many colleges at the State contest, and lastly against nine young men from as many States.

The news reached Greencastle at 2:20 A. M., Friday, May 6. The college boys were watching for returns, and soon aroused the sleeping town with their bonfire, blowing horns, ringing bells and booming cannon. In the morning a mass meeting was held, with speeches by the faculty and students. A message came from President John, who is at the General Conference at Omaha, which said: "Tell the boys to make a noise. Congratulations." The boys obeyed with a vim. They marched through the streets, headed by the college band, singing and yelling. Preparations were made for a great parade on the following Monday. Washington street was agleam with yellow bunting, the college color, and the decorations were greater than in any presidential campaign. Miss Nelson's picture was everywhere. The parade had to be given up on account of rain, but another mass meeting was held in the afternoon. When Miss Nelson appeared she was greeted with all the enthusiasm and applause of which a thousand Western students are capable. The young men were as proud of her as if she were one of themselves, instead of their sister student. At night she was given a reception at Ladies' hall.

The honor paid Miss Nelson by her fellow students illustrates the generous spirit of comradeship which characterizes the system of coeducation in its best estate. It may be expressed epigrammatically as: "Not less chivalry, but more justice." De Pauw University is one of the leading institutions in the midwest. It maintains high standards, and numbers many able men and women among its alumni. It is coeducational in all its courses, both undergraduate and postgraduate, and for some years it has had one or more women on its faculty. This is the fourth Inter-State oratorical victory for De Pauw.—Woman's Column.

YOUNG FOLKS' COLUMN.

Capturing a Desperado.

Twenty-five years ago, certain parts of western Wisconsin were infested with horse thieves. Their operations were so systematic and covered so large a region that detection was extremely difficult.

For a few years, indeed, they had things much their own way; but at last the farmers, goaded to action by the failure of the authorities to cope with the thieves, organized themselves into vigilance committees.

These committees were not lawless bodies of lynchers, but were societies incorporated under the laws of the State, to protect their members against larceny and to recover stolen property.

The active work of these vigilance committees was done by "the riders," usually five in number, one of whom was captain. When more help was needed, the riders might call to their assistance as many members as the case seemed to demand.

Among the scores of hardened men who at that time alternately worked and loafed along the Mississippi River was one named Jim Corsen. Though nothing criminal had been proved against him, his practices and associations gave color to the suspicion that he would not hesitate to steal whatever property he could safely make off with. In his habits he was reckless, dissolute and defiant.

In one particular he differed from most of his lawless associates. Instead of constantly loafing about the river, whether there was work to be had or not, he would occasionally go back a few miles into the country, hire out to some farmer, and work for a week or two.

One of the men for whom he had worked several times was William Dexter, a good-natured, easy-going old farmer who lived ten miles from the river. Corsen had worked so well for Dexter that the old farmer had begun to feel confidence in him.

"Corsen ain't so big a rascal as some folks would like to make out," he said to one of his neighbors, who had suggested that it was not wise to have such a fellow about.

Like most of his neighbors at that time, Dexter allowed his cattle to roam at will during the day, and at night shut them in a yard near the house.

On going out to milk his cows one morning, he found the bars down and all the cattle gone.

"What! what!" he exclaimed, rubbing his eyes, "I must'a' left them bars down last night!"

He went to look for his cattle, and found the herd at midday, but a yoke of fat oxen which he had been intending to drive to market in a few days, was missing.

Corsen was not at the time at work for Dexter, and no suspicion fell upon him.

Dexter was a member of the vigilance committee. He notified at once the proper officers of the society, and Blackman, their captain, was sent for. He was a keen, courageous young farmer, tall and smooth-faced.

At dark the riders reported to him for duty. Dexter joined them.

"The thief," said Blackman, "has either taken the oxen to the city and sold them, or he has hidden them on the island. It is more likely that he went to town with them; nowadays they want the money as soon as they can get it."

A night ride of twenty-five miles brought them to the city. There were in the place at that time a dozen or more cattle dealers, including butchers. Each of them was visited and closely questioned, but without any practical result. Not one of them reported having seen the stolen oxen.

"We will look 'em up," said Blackman.

He knew that nearly every butcher had a pasture of some sort, as near to the city as possible, where he kept the beef cattle he had on hand. He knew that some of the dealers were dishonest, and occasionally received stolen property.

As quietly as possible the riders began the search, going from one pasture to another. Just at nightfall, in a pasture which belonged to a German butcher, they found the missing oxen. Dexter identified them, took his property and started them into the city.

So much was accomplished; but it was now necessary to find the thief.

When the German butcher was confronted with the oxen, he rolled his eyes in evident distress. However, he was not disposed to give up the cattle.

"I haf bought dose oxen ten days pefore," he declared, doggedly.

"See here, my friend," said Blackmau, "it will do you no good to lie about this business. They are fully identified. You bought them yesterday morning. Now, sir, you answer our questions, tell us the truth, remember! or we'll have you in jail in less than half an hour."

"Py Shorge!" whined the man. "Ven I haf known dot dose oxen vas stoled, I puys dem not."

"We understand that. But tell us what sort of man it was you bought them of."

Thoroughly terrified and convinced that Blackman could find out whatever he desired, the butcher told the whole story.

"I dells you true," he said. "Dot man vas a young fellar, short und t'ick, mit black hair und eyes, und a grooked nose."

"Corsen!" the men exclaimed.

Further questioning served to strengthen the impression that the thief was Corsen. To find and arrest him was the next thing to be done.

It was found that he generally stayed with a young man of his acquaintance at a cabin thirty miles down the river from the city. An old woman, an aunt of Corsen's crony, kept house for them.

The cabin stood at the foot of one of the the high, rock-crested Mississippi bluffs, and within a stone's throw of the river-bank.

Anticipating trouble in making the arrest, Blackman called out a few more men on his way down the river. There was another all-night ride, wearying alike to men and horses. At the end of it, Blackman's party, increased to a dozen men, dismounted and tied their horses a short distance from the cabin.

It was morning, but the sun had not yet risen. A gray mist hung over the valley, shutting out distant objects. The cabin itself was seen indistinctly, and showed no signs of any stir within.

The men surrounded it, and Blackman advanced to the door and knocked. There was no response, but sounds of moving about were heard within.

"Open the door," Blackman demanded.

Still there was no reply. Just as Blackman called for an axe that stood near, thinking to break in the door, it was opened by the old woman.

Blackman asked first for Corsen's crony.

"He's gone down the river. He went away a week ago," said the old woman.

"Where is Jim Corsen?"

"He's gone, too."

Blackman entered the cabin. The woman, frightened, went out. Blackman noticed this movement.

It seemed absurd to think that any man would try to hide in so small a room. Two beds occupied nearly all of the space.

Blackman stepped into the center of the room, motioning to his followers to keep outside. In the ceiling of boards above his head, so low as to be within easy reach, was a square hole. But this aperture was closed, and the cover, when Blackman tried to push it aside, resisted his best efforts.

Again he called for the axe, and again he found its use unnecessary, for the board was shoved swiftly to one side, and Blackman suddenly found himself looking into the muzle of a cocked revolver held within two feet of his face.

It was Corsen who held the revolver. He glared down at Blackman.

"Move a hand, and you're a dead man," he cried.

"Very well, sir; I'm here," said Blackman.

He gazed unflinchingly at the revolver and into the eyes of the desperate man behind it.

"What are you here *for?*" said Corsen.

"To arrest you."

"For what?"

"For stealing Dexter's cattle."

Corsen uttered an oath. "I aint a thief, and I won't be arrested?" he said.

"You are one against a dozen," said Blackman.

"What of that? I'll shoot the first man that makes a move."

"All right. Shoot me, and you'll still be taken in the end."

"Never! There ain't men enough in this county to take me alive."

"You might as well understand," said Blackman, speaking slowly, "that you will be taken; if not alive, then dead. You need not expect my men to come in here, one at a time, for you to shoot down at your leisure. Instead of that, they will set fire to the house and you will be roasted out only to be shot down like a dog."

"But what about you?" cried Corsen, with a triumphant gleam in his eyes. "I'll shoot you dead if they undertake that!"

"You will do as you please about that," replied Blackman.

To see him, one would have thought it was a matter of small consequence.

"But the men will capture you just the same, and in that case they might not treat you well. I can't say what they would do."

Corson could easily guess what would be done. In imagination he saw himself dangling from a limb of the nearest tree. The vision caused him to waver.

"What will you do with me if I surrender?" he asked.

Deliver you up to the officers of the law."

"Will you swear it?"

"No. My word is good enough. I assure you that there will be neither hanging nor shooting done if you surrender."

"But you've got to swear it!"

"I shall not swear it!"

"I'll shoot you if you don't."

"Fire away!"

Corson hesitated. Blackman, looking him steadily in the eye, saw that the time had come to take advantage of his hesitation.

"Turn that revolver the other end to, and give it to me!" he said. At the same time he held out his hand to receive it.

For two minutes the men glared at each other, and neither spoke a word. Then Corson slowly turned the revolver and gave it up.

"Now come down!" said Blackman, instantly covering him with the weapon.

The fellow obeyed with alacrity. Thirty seconds later he was wearing a pair of handcuffs, and after that gave his captors no more trouble.

He was immediately taken to the county seat and lodged in jail. At his trial he was clearly identified by the German butcher. He was convicted and sentenced to 12 years imprisonment at hard labor at Waupun.—Youth's Companion.

—Scene—Lawyer's office. Enter little girl, sobbing bitterly.

Lawyer—"Why, little one, what's wrong?"

Little girl—"Are you Mr. Blank, the lawyer?"

Lawyer—"Yes. What is it you want?"

Little girl—"I want—(sob)—I want—a divorce from my pa and ma.

—Life as it is.—"What is Mamie doing?" "She is a saleslady." "Does she earn much?" "Hardly enough to keep soul and body together, but her sister helps her a little." "What does her sister do?" She's a servant girl."

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

Small Fruit Growing in Wisconsin.

Continued from page 547.

BLACKBERRIES

Are a delightful fruit and should be more generally grown; moreover there is not a cleaner, nicer fruit to handle than the blackberry. The Wilson Junior is a descendant of the Wilson's Early and promises to outdo its parent in yield, quality and size of fruit. The Erie is another good new blackberry and very hardy and productive. The culture is the same as for raspberries, and both are much easier picked than the strawberry. We find good pickers here for a penny a box or 75 cents a day.

CURRANTS

Are very easily propagated by cuttings, but fruit is obtained sooner if a larger root is set out. I set them four feet apart and three feet apart in the row. Trim out all the old or scrubby stems or branches every spring. A good mulch of fine chip manure applied in the fall is an excellent thing for currants, but I like straw better for other small fruits and find it beneficial in keeping down weeds; it also helps to retain moisture. There are so many good kinds that it is difficult to choose. Fay's New Prolific, White Grape, and Cherry are all of the best, and there is the Black Champion for those who like the black variety.

GOOSEBERRIES.

In setting out your fruit do not forget the gooseberries. They are very hardy and productive if set where they can have a partial shade. I find that they do well among the plum trees, which serve a double purpose, *i. e.*, as shade for bushes and shade for the pickers. They make delicious preserves or jam and are unrivaled for jelly, having a delightful flavor peculiar to themselves. The culture is the same as for currants. If these directions are carried out, the careful housewife will have an abundance of fruit for her table and an array in her pantry that will turn her less fortunate neighbor green with envy.

I have never been troubled with insects of any kind on strawberries; for the others use the Bordeaux mixture, or any other good mixture, if troubled with mildew or rot. Spray early; as soon as fruit begins to set I have found an emulsion of soap and kerosene very good. Spray often as necessary and use a good machine. Eternal vigilance is the rule and not the exception for the fruit grower, and as nothing can be attained without labor, do not make up your mind to have a soft snap of it, but give your attention to this, the same as in any other branch of farming.

M. H. A.

SOME FRUIT NOTES.

LAMANDA PARK, LOS ANGELES CO., June 2, 1892.

TO THE EDITOR:—Our season has been somewhat exceptional, and I desire to make a few notes in reference to same, with the hope that others may do likewise, for, as we are differently located and surrounded, one may discover a fact or operation of nature that another may not.

April was almost without rain, and during that month our peaches and nectarines, with some pears and French prunes, were in bloom. We never have had such a dry time for the trees to bloom in the ten years I have been here. The peaches and nectarine trees never were half so full of fruit, or requiring such heroic thinning, as this year. It seems as though every bloom made a peach, and some, not content, made three or four all grown together. I have closed my two (not very large) hands over an excessively prolific bunch the size of hickorynuts, and then counted 12 to 14 peaches.

One orchard of Bartlett pears bloomed early (first part of April), and set fruit well; another orchard, a few hundred yards away (also Bartletts), was in full bloom on the 1st of May, and on the 3d of May we had a three-inch rain, and all the Bartlett pears and French prunes then in bloom blighted to such an extent that there is not a dozen pears or prunes to the tree. Some of these trees bloomed on the north side early in April and set plenty of fruit, and these same trees were in full bloom on the south side when the rain came and blighted them; possibly washed out the pollen so it could not mix.

I have a neighbor who has 125 cherry trees. He is the only man here who has cherries planted in quantity. The trees are about nine years old, and about half of them are holding a full crop; *these* bloomed during April, while it was dry. The balance were in full bloom when the rain came, and they blighted.

Our Muir peaches hung the thickest, almost like beans in a bag; Foster's next. The latter doubled worse than any we have on the ranch (all freestones), and bunch along a limb like onions on a string. Some say thin them to six inches distance. I say "you read that out of a book," and further say there is no rule to go by but *good judgment.* I told my men who helped me thin, "when you come to two grown together, take them both off or leave them both on." We consider the location of the limb on the tree, size of limb, health of tree and size of tree as to how many it ought to carry, and cull out all the small ones and separate them as much as possible. Peaches seem to be larger now than we have ever seen them this time of year.

There are several methods of thinning. I had a neighbor who used to wear white shirts, who thinned his peaches by throwing stones up into the trees, and he always kept saying, "There's no money in fruit." He sold, and is in the real estate business. I can't say how much truth he deals out to his customers. I know another man who put a small boy at thinning peaches. The trees were breaking down, and when he went to see how he was getting along, he had taken all the fruit off. Another, who passes for a nurseryman, thrashed his off the trees this year with poles.

I use men and pick by hand. Last year and this, are the only years we have known when the Late Crawfords overbore.

In this locality, I find trees do best after they get some age. My trees, from the time they were six or seven years of age, have had a tendency to overbear. I prune a tree hard for three or four years after setting it out.

E. A. BONINE.

THE DAIRY.

The Milk Capacity.

The rapid increase in creameries and cheese factories in Western States is already perceptibly modifying the ideals of the beef breeders. Until the creamery came in, the main effort of the breeders of beef cattle was to develop the beef form and capacity, paying little heed to the milking qualities. Where the calves ran with the cows and the cows were dried off as soon as the calves were weaned, it was inevitable that the beef form and habits should be developed at the expense of the capacity to give large quantities of milk. Hence there has been a marked deterioration in the dairy qualities of the registered Shorthorns since their introduction in America, and they are in these respects, as a rule, inferior not only to the early Shorthorns, but to families of British Shorthorns that have been kept for dairy purposes. The loss of dairy qualities is still more marked in the Galloways which, we are told by British authorities, were originally good dairy cattle. The Aberdeen-Angus were bred in the same direction, but there are even yet families of these that show a marked tendency to milk production. Already in America, in so new a breed as the Red Polls, we have the tendency to a beef type as well as a milk type, and it would require but a few generations to develop the same difference in any of the breeds.

Whatever may be the advantages of a distinctly beef breed in the West and of distinctly dairy or special purpose breeds in the East, the farmers of the corn and grass States demand a cow that will be a first-class dairy cow and the dam of first-class beef steers. Our special purpose friends claim most vehemently that this is an impossibility, and, on thin soils, it undoubtedly is. It does not follow, however, that it is an impossibility in an environment that will produce first-class beef cattle, and, at the same time, in the hands of first-class dairymen.

As an instance, we call attention to the report of Mr. John Gould of Ohio, a noted authority on dairy matters, that he found, even in New Hampshire, a herd of registered Shorthorns that averaged the last year, 312 pounds of butter per cow, in addition to the family supply of butter and cream. Few special purpose herds ever do better than that, and we will wager, without any knowledge of the facts, that the steers from these cows gave a good account of themselves in the feed lots.

How then are we to develop the milking capacity in the breeds where it has been neglected? We answer, how was it ever developed in any breed? By milking and feeding, of course. This is the first step. So long as nothing more is demanded of a cow than milk to supply the wants of a calf for a few months, she will give no more, nor for a longer time than is necessary to supply them. When more is demanded she will gradually give more, and this demand will in time modify the form and type. The next step is the breeder's act of selecting the best milkers and coupling them wisely with sires that come from good milkers. In this way families and breeds are built up. The same practice that will form breeds will modify breeds in which the milking capacity has been allowed to become dormant or has been undeveloped to the point of profit in the dairy.

The time has now come when this must be done if cattle are to be kept on the ordinary quarter section farm at a profit. There are very few cows east of the Missouri that are good enough to pay for their keep with the chance of a calf. Farmers soon cease to keep that which will not give them a profit. The cow to pay for herself must give a good supply of milk as well a good calf. The trouble is that four-fifths of the cows that have been kept for calf-growing, when put into the dairy, will not pay for the extra labor of milking. What is needed now, is the development of the cow that will give not less than 200 pounds of butter per annum, as well as a calf and a good one at that. Butter will be a very low price and feed very high when this kind of a cow will not bring a good profit on the farm.

How can this kind of cow be produced? We answer: How have such cows ever been produced but by milking, feeding and breeding?

The first thing to do is to find out what the cows on the farm produce now in the way of butter-fat. This is the first step, and it cannot be taken intelligently except by testing the milk often enough to know its quality—its richness in butter-fat. Quantity is easily ascertained. The next step is to dispose of all cows that do not give a paying quantity of butter-fat. What that quantity is depends on the cost of the keep, and price of butter and the value of the calf. It will vary, of course, but whatever it may be, whether 100 pounds or 200, all that do not give that amount should be fattened and sold to the butcher. Then secure sires whose dams were heavy milkers, and grow the future cow of the heard from the heaviest milkers. If the keep of a cow for one year costs $20, and the calf is worth $10 in the fall, then the farmer, in addition to the cost of his keep, gets $10 for his profit and labor, provided the cow gives 100 pounds of butter-fat worth 20 cents per pound. If, however, she gives 150 pounds, he has double the profit; if 200 pounds, he has three times the profit. With ten 200-pound cows he has the same profit that he has with thirty 100-pounders and has the keep and labor of 20 cows to give to steers. The 200-pound cow is in time within the reach of any farmer who will breed and milk with that object in view, not by any means neglecting the feeding. The fact that cows of the so-called beef breeds have reached this amount shows that the combined beef and milk breeds is a possibility. This is what we must come to if we are to have profit on western farms through handling cattle. It will help on the good work at an amazing rate if the breeders of the beef breeds will invest in a milk tester and will milk their cows. There will be no trouble in selling bulls, if out of 100-pound cows. Nearly every farmer who writes us where he can get a bull wants one of a milking family. Bulls of the beef breeds, out of cows that give 200 pounds of butter per year, will go off like hot cakes on a cold morning.—The Homestead.

THE STOCK YARD.

The Trade in Fine Cattle.

A few years ago, while the prices for fine imported and thoroughbred cattle were up to the highest range that has ever been reached in this country, the writer had a lengthy conversation with the late J. M. Robinson on the subject, in which Mr. Robinson said it was only a question of time when the great bulk of the men then engaged in importing and dealing in fine cattle would break up in the business, and now it may be recorded in support of Mr. Robinson's prediction that the trade in and production of fine cattle has suffered one of the worst revulsions that has ever struck any branch of trade in our country. While we do not report any cases of bankruptcy in connection with the business, we are well satisfied that there are a good many men connected with the business that have suffered some embarrassment as a result of their determined perseverance in attempting to stem the tide. As a result of the efforts of these men to introduce to the fullest extent all the best breeds of cattle the world has ever known into the United States, we now have distributed all over the country in large numbers, imported or thoroughbred Shorthorns, Hereford, Polled-Angus, Galloway and Red-Polled cattle, representing the best beef breeds that have ever been known, while all the breeds of dairy cattle have received the same attention. We undoubtedly have enough of these cattle in the country to enable us to maintain and increase thoroughbreds in each of the breeds referred to, and we shall finally be able, with the pure stock distributed throughout the country, to grade up and run out the old scrub breeds that have so long stood in the way of successful cattle production in our country, and the men, through whose labors this condition has been brought about, richly deserve the lasting gratitude of the country.

Even now, after the long depression that has handicapped the fine cattle trade, it was fully demonstrated at the sale of Shorthorn cattle sold at Dexter Park by Col. Harris of Kansas, during the past month, that home thoroughbred cattle, well bred, young and in good order, can be produced at a very fair profit; but it has been demonstrated just as plainly at different public sales of fine cattle within the past two or three years, that it is no use to offer for sale what are now called plain bred cattle, in thin, poor condition, with a common dunghill look, with any expectation that they will bring anything more than about the prevailing prices current for common beef cattle.

We are just now led into this train of reflection by the advertisement of C. M. Culbertson, in which he announces his purpose to hold a dispersion sale of his entire herd of Hereford cattle, one of the best herds of the kind that has ever been worked up in this country; also by the statement of T. L. Miller in our office within a few days that he has lately sold 160 head out of his herd of Hereford cattle, and that he is determined to close out and disperse his whole herd. These two men have been among the foremost in the country in importing and breeding the best strains of Hereford stock that have ever existed anywhere.

C. M. Culbertson several years ago imported the noted Hereford bull Anxiety, which we think was the finest bovine animal we have ever seen of any herd. Within the past two or three years a decided change has come over the feeling of our fine cattle producers with regard to imported cattle, and, relatively speaking, buyers at a public sale will bid no more for them than for our own home thoroughbreds, and, as a matter of fact, there is now no reason why we cannot produce as good cattle in the United States as can be produced in Great Britain, as we have breeding animals of all the best breeds in the world in abundance.

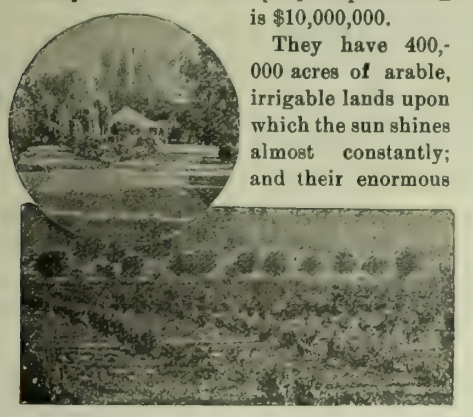
In support of the point we have here made, we may refer to the purchases of the Hon. John Dryden, Minister of Agriculture for the Province of Ontario, the purchase for export of a young bull and a heifer calf for account of Manuel Garcia Sedano of Mexico, and the purchase by Robert Bruce of Darlington, Eng., for ultimate export to Great Britain via Canada, of the eleven months heifer, Rowena by Craven Knight, from a Duke of Richmond dam.

These were from the Linwood herd of Shorthorn cattle sold at Dexter Park in April. The effect of the grading up of our old scrub breeds by the introduction of the fine cattle we have been receiving is daily seen in the cattle market at the stockyards. Grades of either the Shorthorn, Hereford, Polled-Angus or Galloway are now all the time on the top quality list in the market, and it is the grades of one or another of these cattle breeds that bring the top prices here. In one of the cattle markets a good-sized lot of Hereford yearling grades averaging 1000 pounds recently sold at $5 per 100 pounds, $50 per head, certainly no loss to the producer. This transaction shows plainly enough just what can be done in the production of cattle by using the right kind of stock and treating it right from first to last, and this is the only true course for any stock raiser to pursue with any kind of farm stock. The prices for all the best breeds of cattle are now so low that any common farmer can enter upon the work of grading up or out the old scrub stock.

We are satisfied that the work in this direction is going steadily forward in all portions of the country, and we are glad to note the fact that horses, hogs and sheep are getting a full share of attention and effort in the same way. A pretty large part of all the stock that now reaches the Chicago market shows plainly that it has had an effusion of good blood, and about all the stock of all kinds that sells at the highest prices is well graded up toward the best breeds that the world knows.—The Drovers' Journal.

FARMERS, FRUIT GROWERS, HOME SEEKERS!

THE members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.



They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

For further particulars address

KERN is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.



The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

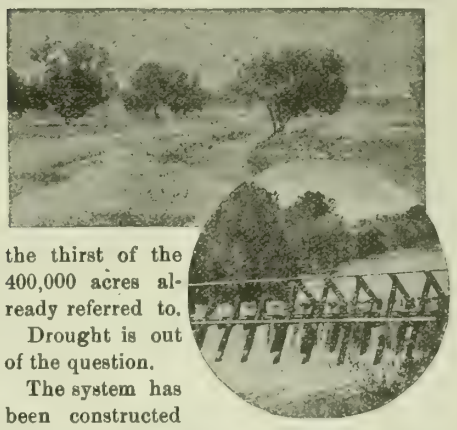
Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

THE advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.



Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY,

S. W. FERGUSSON, Agent,

BAKERSFIELD, · CALIFORNIA.

"THE DRESS REHEARSAL"

FOR THE

WORLD'S FAIR OF 1893

WILL BE HELD AT THE

CALIFORNIA STATE FAIR

OF 1892.

From September 5th to 17th.

California's Capabilities are Beyond Comparison. Let Not Apathy Prevent Their Being Exhibited.

The State has Appropriated Over $5000 for Premiums for Soil Productions.

REMEMBER THAT THE GREAT COLUMBIAN WORLD'S FAIR opens in May of next year. Hence, all agricultural exhibits must be collected this year.

The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

Do not overlook the chance of getting money to remunerate you, right here at home; it is to be given away at the State Fair of 1892. Come and get some of it.

Send for Premium Lists.

FREDERICK COX, President.
EDWIN F. SMITH, Secretary.

AGRICULTURAL SCIENCE.

Investigation of California Prunes, Apricots and Peaches.

University Experiment Station Bulletin No. 97.

The subjects discussed in this paper are summarily set forth in the following quotation from Bulletin 93 of this department:

"The purpose of this work is to show comprehensively the proximate and ash composition of the leading varieties of fruits as grown in the principal fruit regions; and inferentially, the influence exercised upon them by the prominent conditions of soil, climate, fertilizers, etc. The physical data (proportion of pits to flesh, etc.) are of interest from a commercial standpoint, as showing what is being purchased as to available and waste material, etc.

"The consumer, though usually considering fruit as a luxury, would derive much valuable knowledge from studying the fruits in their relative values as foods. The nourishing portions, shown especially by the nitrogenous and saccharine contents, vary greatly with the variety and conditions of growth. It is not, then, a matter of indifference to the consumer what fruit he uses, but an important question of domestic economy.

"The ash ingredients, together with the nitrogen contents of the standard varieties, are of high interest in connection with the vital question of soil exhaustion and fertilization. The soil ingredients extracted by an ordinary crop are a serious drain upon the supporting soil, and the lines of heaviest draft can only become known by the actual determination of the constituents withdrawn."

It will be observed that the majority of the fruits here reported are from the Santa Clara valley, from which they were most readily obtained. It of course intended to extend this work, hereafter, to *all* the fruits grown in California; notably, during the coming season, to all obtainable varieties of figs from the different regions; also, a more numerous representation of apricots, prunes and other plums. It is well known that these fruits differ materially in their qualities *e. g.* as between north and south California, and between the valley and the foothills. These investigations will not only aid in determining the best uses to which these several fruits may be put, but also in what direction and to what extent the soil ingredients taken from the soil by them require replacement. Raisins and table grapes, as well as cherries, pears, etc., will come in their turn in succeeding years. Meanwhile, producers interested in these questions are invited to communicate with the Station in regard to the examination of their fruits.

In the work here presented, as in that previously done on citrus fruits (Bulletin 93), Assistant Colby has been very efficiently assisted by Mr. Hubert P. Dyer, a graduate student in this department.

E. W. HILGARD.

Berkeley, May 31, 1892.

Description of Prunes, Apricots and Peaches Received.

PRUNES.

No. 1, Prune d'Agen, Mountain View—S. F. Leib grower; sample received Sept. 28, '91. Usual size, but more rounded than the other samples of the same variety, quite ripe; soft and very sweet.

No. 2, Prune d'Agen, Niles—Wm. Mortimer, grower; sample received Aug. 26, '91. Condition, good, fully ripe and very sweet.

Nos. 3 to 12, San Jose—John Rock grower. All of these samples, except No. 12 were received, on September 8, '91; No. 12, St. Catherine, came Oct. 3, '91, and represents a fully ripe sample; No. 11, St. Catherine, was rather green. Condition, excellent for all these samples; No. 3, French, No. 7, Hungarian, and No. 10, Datte d'Hongrie, being soft, rather juicy and sweet; No. 7, tasted quite tart; No. 4, Wangenheim; No. 5, Robe de Sergent; No. 6, Fellenberg; No. 8, Bulgarian, and No. 9, German, were firm-fleshed and much less sweet than the other members of the series.

APRICOTS.

Nos. 13 to 18, Niles—James Shinn, grower; samples received during August, 1891. No. 13, Hemskirk, Aug. 3, '91, was hard and unripe. The other varieties, No. 14, Hemskirk, No. 15, Blenheim, No. 16, Royal, No. 17 Peach, and No. 18, Moorpark were in good condition, fully ripe and quite sweet. No. 19, Pringle? Tulare, grown by B. F. Moore, was received June 30, '91, and has already been reported (Agr. Expt. Stat. Rept., 1890, page 115).

PEACHES.

No. 20, Orange Cling, and No. 21, Lemon Cling, samples received Sept. 25, '91, from L. C. McAfee, San Francisco. Condition only fair, as the fruit had been picked for some time. No. 20 was grown by H. M. Alexander, Anderson, Shasta Co.; No. 21 by General Bidwell, Chico.

The table (p. 4–5) shows the results of the analytical work for the season 1891; the first subdivision, A, gives the physical and general proximate analyses; the second, B, the results of the analysis of the ash. Lack of time prevented us from making as extended a work as was desirable upon the ash—that which has been accomplished indicates at least the general character of the ash composition.

The chief points shown by the table will be better understood by a brief discussion as to similarity or difference.

Proportion of Pits to Flesh.

Prunes.—The range in the percentages of pits is from 3.7, in Hungarian, No. 7, to 7.5 in Robe de Sergent, No. 5; 5.5 per cent representing the general average, thus leaving about 17 times as much flesh as pits. Thus the consumer finds that, on the whole, the prunes possess but little advantage over each other in regard to the proportion of pits to flesh.

Apricots.—Leaving out of consideration the Pringle, No. 19, on account of its small size and relatively slight importance, the variation of pit percentages is from 4.14 (Hemskirk, No. 13) to 6.7 (peach variety No. 17), a somewhat smaller difference than was found in the prunes, viz., 3.8 to 2.5 per cent. The average pit contents is 5.8 per cent, leaving about 16 times more flesh than pits. Here again, there is but a trifling advantage in choice so far as the proportion between flesh and pits is concerned.

For equal weights of prunes and apricots, whole fresh fruit, the consumer receives nearly the same amount of flesh or available matter; but the apricots being some three times larger than the prunes; we have, on the average, 7 apricots as against 21 prunes to the pound avoirdupois.

Peaches.—The limited results obtained prevent us from making any comparisons with the figures presented for apricots and prunes. The difference between the pits in the varieties examined is too small to be considered. Lemon Cling, No. 21, has some 33 times more flesh than pits; Orange Cling, No. 20, shows 25 times more flesh.

European analyses of these fruits report figures which do not differ materially from those furnished in the above table; the average pit percentages for prunes is 5.4, for apricots 5.3, and for peaches 6.1, the weights for whole fruits not being given in the analyses at hand.

Proportion of Juice to Flesh.

Prunes.—A glance at the figures in the table shows that the French prune, No. 3, has the largest proportion of free juice, namely, 87 per cent, nearly *seven-eights* of the flesh. No. 5, Robe de Sergent, falls but slightly below with 84 per cent, or *five-sixths* of the flesh. The driest flesh is that of No. 11, St. Catherine (unripe sample), about *one-half* of it being fiber; No. 12, a later and fully ripe sample of the same name, approaches closely the general average of 73 per cent, or nearly *three-fourths* the flesh. It is important to note that Hungarian, No. 7, while the largest fruit, has nearly ten per cent less juice than the average French prune, *i. e.*, 70 against 80 per cent.

Apricots.—The relation between juice and fiber in the flesh is quite constant, as none of the figures obtained differ more than five per cent from the general average (87.3 per cent), the juice amounting to about *seven-eights* of the flesh, Nos. 16, 17 and 18, respectively Royal, Peach and Moorpark varieties showing the highest proportion of juice (90 per cent), and Hemskirk, No. 13 (not fully ripe), the lowest (82.3 per cent).

The average flesh of the apricots, from this showing, is apparently more juicy than that of the prunes, in the ratio of 7 to 6.

Sugar Contents of the Juice, Flesh and Fruit.

The work undertaken this season (1891) did not comprehend the determination of the different sugars (dextrose, levulose, cane sugar, etc.), contained in prunes and apricots; the length of time necessary to complete such an investigation for each sample required us to limit the work to the determination of the most important point—the total sugars.

Prunes.—By far the highest sugar percentages are found in the ripe, soft and juicy French prunes of the various localities; the somewhat harder varieties, Wangenheim, Robe de Sergent, Fellenberg, Bulgarian, German and Datte de Hongrie yielding, on the average, six per cent less sugar. Although there is a difference of one month in the picking (Sept. 28th to Aug. 26th) of the French prunes from Mountain View and San Jose, yet, for the flesh and fruit, the sugar content is nearly identical, 18.6 per cent for flesh and 17.6 per cent for the entire fruit, fresh. St. Catherine, No. 12, with 22 per cent of sugar in its juice, compares well with the sugar percentage (average 22.6 per cent) in the juice of French prunes; referring these figures to the flesh and fruit, those for the St. Catherine are some 2.5 per cent less on the average. In connection with the St. Catherine, it is interesting to note the wide difference, fully 6.5 per cent, in the sugar found in No. 11 (not fully ripe) and No. 12 (fully ripe) picked over three weeks apart.

Among the other (or) firm-fleshed prunes, the widest difference in sugar percentages is 3.8; Datte de Honvrie, No. 10, showing 12.44 per cent and Wangenheim, No. 4, 8.80 per cent for the whole fruit. A sample of dried French prunes (No. 24) ready for consumption, from same crop as No. 1, Mountain View, and referred to that, yields 47.25 per cent of sugar. This latter figure is a little over four times larger than the general average of sugar in whole fruit of the fresh prunes.

Apricots.— Both the early (picked in June) and later varieties (picked in August), with the exception of the (not fully ripe) Hemskirk, No. 13, show a remarkably close resemblance to each other in regard to sugar contents; the Royal, No. 16, with 15.06 per cent, and Peach, No. 17, with 15.72, the highest in sugar, showing but about 2 per cent more than the general average, 13.34 per cent, for the juice. Taking the general averages of sugar in the juice of prunes and apricots (columns 22 and 23), we find that the prunes stand a trifle over 3 per cent the higher; for the flesh, and for the whole fruit, the difference is considerably less, viz., about one per cent. Apricots, then, according to these determinations, range much lower in sugar (six per cent) than the Prune d'Agen, the difference being nearly the same as already noted above for the harder prunes.

European reports of these fruits show that the *juice* of prunes, on the average, contains 6.15 per cent sugar, apricots 4.69 per cent (one case is reported of a small variety of apricots with 16.5 per cent sugar), and for peaches 4.48 per cent, these figures being from 2.5 to 3 times less than those herein presented for these fruits as grown in central California. There seems thus to be good cause for the preference they have so quickly attained in the market.

By reference to the small table following the relations to each other of the average *sugar* and *acid* contents of some California fruits will readily be seen. For convenience of comparison the acid is expressed in terms of sulphuric acid (SO_3).

	JUICE.	FLESH.	WHOLE FRUIT.
	Acid, per cent.	Sugar, Per Cent.	
Apricots from Niles	.63	13 34	11.56	10 76
Prunes from Niles, San Jose and Mt. View	.43	16 70	12.30	11 65
French prunes, do. do.	.25	22 60	18 33	16 91
Grapes from various localities	.50	24.00	23.00	20.70
Oranges from various localities	1.34	9 65	6.20	4.70
Peaches from Anderson, Shasta Co., and Chico	.24	17.00	13.40	12.50

Acid in the Juice.

Prunes.—The maximum, nearly one per cent, is at once seen in the Hungarian, No. 10; the minimum, .23 per cent, in the Prune d'Agen, No. 1; the average, .43 per cent, being almost twice the minimum.

Apricots.—While the acids differ from .50 per cent to .80 per cent, they do not show as great a diversity as the prunes in this respect. In both fruits it appears that low acids are combined with high sugars. European analyses, which report the acid in terms of Malic, when corrected for Sulphuric, give for prunes .51 per cent, apricots .70 per cent and peaches .55 per cent, which do not differ much, except for peaches, from those we report.

Nutritive Values—Nitrogen Contents.

The flesh-forming ingredients of any article of food being of great importance as regards its proper uses (see Bulletin 93 of the department, relating to oranges and lemons) it is of special interest to compare in this respect the prune and apricot to other fruits, and the different varieties of prunes and apricots amongst themselves. As heretofore set forth in Bulletin 93, the California orange with 1.20 per cent albuminoids, while lower in these ingredients than the Sicilian (albuminoids 1.73 per cent) was rated the *first* in this respect amongst our fruits. In so far as our later work bears in this direction we must accord to the apricot (edible portion alone) an equa place, albuminoids being 1.19 per cent; thel prune (.76 albuminoids) takes the *second* place, leaving the other fruits, grapes, bananas, apples and pears (from European data) to stand in the order now mentioned till we find opportunity to study them. The apricot *as a whole* (pits included) shows 1.43 per cent albuminoids, or .23 per cent more than the orange.

Among the *prunes* the highest percentages of albuminoids (.94) is found in the flesh of German, No. 9, and the ripe St. Catherine, No. 12, closely followed by that of the prune d'Agen with .86 per cent; the lowest of the series being the Robe de Sergent, No. 5 with only .52 per cent—about .2 per cent less than the average for the flesh of all the prunes, which is .76 per cent.

The flesh of the *apricots* shows even a greater difference in albuminoids than the flesh of the prunes, being quite one-half of one per cent; the maximum, 1.37 per cent albuminoids is seen in the Royal, No. 16 and the Moorpark, No. 18; the minimum, .84 per cent, in the peach variety, No. 17, ranges nearly with the highest albuminoid content in the prunes (.94 per cent).

Apricots grown in Europe average .49 per cent albuminoids, just about one-third as much as the Californian (1.37). European prunes (with .78 per cent albuminoids), however, are more nearly like the Californian (76 per cent) in this respect.

With this portion of our work we give below a summary of the *food constituents* of some of our *dried* (cured) commercial French prunes, dried apricots and grapes:

	French Prunes.	Apricots.	Grapes.	Apples.
	Dried.			
	Edible portion.		Black Malvasia. "Grape Food."*	(European.)
Water, per cent	25 20	32 44	34.83	33.00
Ash, per cent	1 50	1.38	1.16	1.40
Albuminoids (Crude Protein), per cent	2.70	3 27	2.94	1.70
Crude Fiber, per cent	.....	.....	3.70	8.30
Nitrogen — free Extract, per cent	29.67	31.81	2.17	21.60
Fat, per cent	.....	.....	.56	.....
Sugar, per cent	40.53	29.59	52.50	32.00
Free Acid, Calculated as Sulphuric (SO_3), per cent	.4	1.51	.85	2.00
Tannin, per cent	.....	.....	1.29	.....
Total	100.00	100.00	100.00	100.00

*Dried and ground by R. E. Wood, Rutherford, Napa Co., Cal.

The above results, while inadequate as a basis for general conclusions as to the relative food values of these fruits, nevertheless indicate plainly that the nutrients, notably the sugar and crude protein (albuminoids) differ very widely, *e. g.* the sugar in the grape food is 20 per cent more than that of either the apricot or apple, and 12 per cent more than that in the French prune. Again, the crude protein of the dried apricot is double that of the dried apple, and but one-half a per cent higher than that in the prune and grape. As to ash, we note but little difference.

Ash Composition and Nitrogen Contents.

Contrary to statements in our previous publications (Bulletins 88 and 93 of this department), in which, according to European data, the orange stands second (grapes being first), among fruits in the quantity of mineral matter withdrawn from the soil, we find that, weight for weight, the apricot has the *second* place; and that the prune and the orange have about an equal right to the *third* place, thus again bringing plainly before us the fact that we cannot safely use European results, as heretofore, as a basis of comparison for our fruits.

Upon the basis of the preceding table of this publication and those given in Bulletin 93, we have prepared the following tabular view of the amounts, in pounds, of soil ingredients extracted by the different fruit crops, that will have to be replaced by fertilization:

FRUITS.	Total Ash lbs.	Potash lbs.	Phos acid lbs.	Nitrogen lbs.
GRAPES.				
European.				
In each 1000 lbs	8.8	5.00	1.52	1.70
APRICOTS.				
European.				
In each 1000 lbs	4 90	.....	.....	86
Crop of 30,000 lbs	147.00	.....	.....	25.80
California.				
In each 1000 lbs	5.16	2 16	71	2.29
Crop of 30,000 lbs	154 80	84 98	21.38	68 70
PRUNES.				
European.				
In each 1000 lbs	6.3	3.78	.95	1 22
Crop of 30,000 lbs	189.00	111 90	28.53	36 60
California.				
In each 1000 lbs	4.03	2 653	.53	1 48
Crop of 30,000 lbs	120.90	79.70	15.95	44 40
ORANGES.				
European.				
In each 1000 lbs	6.67	2.78	.67	2.69
Crop of 20,000 lbs	121.40	55.60	13.40	53 80
California.				
In each 1000 lbs	4.32	2 11	.53	1.83
Crop of 20,000 lbs	86.40	42.20	10.60	36.60

ANALYSES OF CALIFORNIA PRUNES, APRICOTS AND PEACHES, CROP OF 1891.

A. — PROXIMATE ANALYSES.

	PRUNES.												APRICOTS.							PEACHES		AVERAGES. Prunes.	AVERAGES. Apricots.	DRIED PRUNES.
Name of variety	Prune d'Agen.	Prune d'Agen.	French.	Wangenheim.	Robe de Sergent.	Fellenberg.	Hungarian.	Bulgarian.	German	Datte d'Hongrie.	St. Catharine.	St. Catharine.	Hemskirk.	Hemskirk.	Blenheim.	Royal.	Peach.	Moorpark.	Pringle?	Orange Cling	Lemon Cling			Prune d'Agen.
Number	1.	2.	3	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Place of production	Mountain View.	Niles.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose	San Jose.	San Jose.	San Jose.	Niles.	Niles.	Niles	Niles.	Niles.	Niles.	Tulare.	Anderson.	Chico			Mountain View.
Sender or grower	S. F. Leib	Wm. Mortimer.	John Rock.	John Rock.	John Rock.	John Rock.	John Rock.	John Rock,	John Rock.	John Rock.	John Rock.	John Rock.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	B. F. Moore.	H. M. Alexander	Gen'l Bidwell.			S. F. Leib
Date of receipt and analysis	Sept. 28, 1891.	Aug. 26, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Oct 3, 1891.	Sept. 8, 1891.	Oct. 3, 1891.	Aug 3, 1891.	Aug 14, 1891.	Aug. 3, 1891.	Aug. 7, 1891.	Aug. 14, 1891.	Aug. 19, 1891.	June 6, 1891.	Sept. 25, '91	Sept. 25, '91			1891.
PHYSICAL ANALYSIS.																								
Average weight, in grams.†	23.5	22.9	20 8	19.5	20.0	26.0	80.5	25.6	25.5	21.6	20.2	18.5	89 3	63.0	81.0	46.8	57.5	59.2	24.8	153.5	215.5	27.1	66.1	10 0
Number per pound	20.4	20.8	23.0	24.6	24.0	18 5	6 0	18.8	18.9	22 2	23.7	26.0	5.1	7.1	5.6	9.6	7.8	7.6	18.0	3.1	2.2	20.5	7.3	48.0
Flesh, per cent	94.5	94.9	94.24	95.0	92.5	94.1	96.3	93.8	95.3	94.0	93.1	94.8	95.86	93 98	94.75	93.40	93.30	94.0	90.90	93.9	93.7	94.55	94.2	90.0
Pits, per cent	5 5	5.10	5.76	5.0	7.5	5.90	3.7	6.2	4.7	6.0	4.9	5.2	4.14	6.02	5.25	6.60	6.70	6.0	9.10	6.1	6.3	5.45	5.8	10.0
FLESH.																								
Juice, pressed, per cent	72 6	81.2	86.8	69.0	83.8	76.4	70.0	64.0	71.5	81.7	53.0	60.4	82.3	85.8	85 3	90.3	90.0	90.0	.....	79.1	76.2	73.3	87.3	.....
Pulp, pressed, per cent	27.4	18.8	13.2	31.0	16.2	23.6	30.0	36.0	28.5	18.3	47.0	30 6	17.7	14.2	14.7	9.7	10.0	10.0	.....	20.9	23.8	25.7	12 7	.....
JUICE.																								
Total sugar by copper (inversion), per cent	25.6	20.50	21.73	13.45	14.00	12.05	14.04	13.81	12.60	16.50	14.32	22.00	9.01	13.43	13.43	15.06	15.72	13.58	13 50	20.0	14.00	16 70	13.34	.....
Acid, in terms of sulphuric (SO_3), per cent	.23	.24	.28	.52	.48	.59	.95	.50	.53	.38	.34	.28	.....	.84	.....	.46	.58	.64	.....	.17	.32	.45	.63	.62
SUGAR.																								47.25
In fresh flesh, per cent	18 52	16.60	18.87	9.26	11.78	9.20	11.20	8.37	9.05	13.36	8.63	15.21	7.0	11.54	11.61	13.56	13.84	12.10	.....	16.00	10.80	12.30	11.76	.....
In fresh fruit, per cent	17.50	15.60	17.64	8.80	9.89	8.67	10.72	7.92	8.43	12.44	8.10	14.34	6.8	10 70	11.03	12.30	12.50	11.30	.....	15.00	10.00	11.65	10.76	.....
NITROGEN.																								
In whole fresh fruit, per cent	.178	.145	.168	.140	.134	.139	.122	.121	.168	.133	.144	.185	.....	.199	.242	.258	.186	.259	.....	.....	.....	.148	.229	.....
In fresh flesh, per cent	.148	.142	.124	.109	.083	.117	.114	.118	.150	.104	.116	.150	.....	.168	.210	.217	.133	.224	.....	.....	.....	.122	.190	.....
In fresh pits, per cent	.785	.641	.766	.583	.753	.499	.326	.514	.512	.560	.751	.866	.....	.784	.880	.840	1.050	.805	.....	.....	.....	.628	.871	.....
Albuminoids in whole fresh fruit (equivalent to nitrogen), per cent	1.112	.906	1.050	.870	.837	.879	.762	.756	1.050	.842	.90.	1.156	.....	1 243	1.513	1.610	1.150	1.619	.....	.....	.....	.928	1.427	3.00
ASH (Pure).																								1.65
In whole fresh fruit, per cent	.613	.395	.442	.376	.361	350	.392	.410	.370	.330	.362	.44	.....	.530	.555	.550	.454	.494	.....	.62	.44	.403	.516	.....
In fresh flesh, per cent	.600	.387	.434	.365	.347	.344	.385	.40.	.36	.320	.349	.431	.....	.512	.540	.542	.440	.484	.....	.....	.....	.395	.504	.....
In fresh pits, per cent	.666	.519	.582	.629	.627	.434	.416	.491	.434	.405	.593	.526	.....	.893	.850	.681	.733	.612	.....	.....	.....	526	.703	.....
GENERAL PROXIMATE ANALYSIS.																								
Water, per cent	75.96	79.650	77.00	79.74	82.50	85.69	85.50	82.72	83.00	81.40	83.30	78.78	.....	84.77	84.600	85.11	85.50	85.90	.....	78.50	86.50	81.29	85.57	28.00
Organic matter, per cent	23.43	19.955	22.56	19.88	17.14	13.96	14.11	16.87	16.63	18.27	16.34	20.78	.....	14.70	14.845	14.34	14.05	13.61	.....	20.88	13.06	18 31	13.91	70.35
Ash, per cent	.61	.395	.44	.38	.36	.35	.39	.41	.37	.33	.36	.44	....	.53)	.555	.55	.45	.49	.....	.62	.44	.40	.52	1.65
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	.....	100.00	100.00	100.00	100.00	100.00	.....	100.00	100.00	100.00	100.00	100.00

† 30 grams are equivalent to 1 ounce.

B. — ANALYSIS OF THE ASH.

FRUIT.	Place of Production.	Percentage of Pure Ash.	Composition of the Pure Ash. Potash.	Soda.	Lime.	Magnesia.	Peroxide of Iron.	Br Oxide of Manganese.	Phosphoric Acid.	Sulphuric Acid.	Silica.	Chlorine.	Total.	Less excess of Oxygen, due to Chlorine.	Total.
FRENCH PRUNES.	San Jose.														
Whole fruit		.442	65.92	3.18	3.24	6.16	.85	.31	13.19	2.37	4.56	.19	99.97	.05	99.92
Flesh		.434	69.50	3.07	3.01	5.33	.83	.17	11.56	2 13	4.30	.20	100.10	.05	100.05
Pits		.582	24.01	4.53	6.04	16.26	1.14	1.90	32.98	5.40	7.88	.22	100.16	.05	100.11
ROYAL APRICOTS.	Niles.														
Whole fruit		.550	54.88	10.57	3 52	3 85	1.71	.21	13.86	2.95	7 85	.60	100.00	.15	99.85
Flesh		.542	58.59	11 20	3.24	3.31	.77	.09	11.20	2.75	8.31	.58	100.04	.14	99.90
Pits		.681	10.95	3.45	6.75	11.58	12.39	1.65	43.76	5.38	2.58	1.65	100.14	.40	99.74

California *prunes* thus appear to draw much less upon all the mineral ingredients which have to be replaced by fertilization than the European; the latter, however, draw much more lightly than the former upon nitrogen. *Apricots* both of California and European growth stand, in total amount, about equal as to mineral ingredients withdrawn; as to nitrogen, the California fruit draws 2.5 as much, showing the very material difference in the relative proportions of the vital soil ingredients among themselves.

Potash.—In the ashes of prunes and apricots, as in the orange, potash is seen to be the leading ingredient (at least one-half the ash), ranging somewhat higher in the former two fruits. In its distribution as between pits and flesh, the greatest difference is shown by the European prune; for apricots we have no foreign data. Although potash constitutes so large a portion of the ash of these fruits, its replenishment to the soil will be delayed long beyond the addition of other fertilizing ingredients, because most California soils are naturally so well stocked with it that available potash for the current demand will, in many cases be adequately supplied for many years.

Phosphoric Acid is not so heavily drawn upon, nor do our fruits in any case, so far, quite reach the same demand upon the soil in this respect as the European. Its distribution between pits and flesh, also, is not quite so variable as that of potash. Since our soils usually contain a limited supply of phosphoric acid, the prune and apricot as well as the orange orchards will require *phosphatic* fertilizers first, when any are used.

Nitrogen.—The apricot here leads in its demand upon the soil in this substance, closely following the European orange. Averaging the nitrogen withdrawn by the prune and apricot, we obtain a figure but slightly greater than that for the orange; emphasizing for those fruits the same necessity of early replacement of nitrogen, and partly for the same reason; viz., that California soils are usually not rich in their natural supply of this substance.

Of the other ash ingredients, it will be seen that *lime* is quite constant, although much less in amount (for prunes) than European standards show. Especially is this difference seen in the comparison of the ash analyses of the flesh and pits. In the orange ash the lime content far exceeds that of either the prune or apricot; accordingly, as our soils generally contain plenty of lime, even for oranges, we would rarely expect to fertilize with a view to its replacement. *Soda* is seen to be much higher here than in European analyses of the ash of the prune; this is probably explained by the fact that California soils, like those of other arid regions, contain much more soda than the European.

GEO. E. COLBY.

ANNOUNCEMENT.

The Board of Regents of the University has granted Director Hilgard a leave of absence for one year from June 15, 1892, and has appointed E. J. Wickson Acting-Director during the same period.

In this connection, attention is again called to our former request that all letters relating to experimental work, or questions of any kind, should be addressed "*Director of the Station*" as such, and not to individuals, as has been very generally done heretofore.

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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CROPS AROUND PARADISE.—Cor. Gridley *Herald:* A drive in the vicinity of Paradise, Saturday, shows steady improvement. The grain and hay crops never looked better. The way the young orchards are growing is wonderful; olives and English walnuts are a decided success; oranges and lemons do fairly well. It requires but a small amount of imagination to forsee one of the finest fruit countries in the world located right here in Paradise.

CROP OUTLOOK.—Oroville *Register:* We lately had a chance to note the condition of hay, wheat and barley in the best agricultural sections of the county, and saw that the crops would be better than most people have heretofore estimated. About Moore station the grain and hay will both be heavy this season. Near Gridley there is an immense area of land that has been summerfallowed, but the land that is seeded will produce good crops. Both east and west of Biggs, the crop outlook could hardly be better than it is to-day. Near Nelson the crops are fine; at Durham and vicinity it would be hard to find better crops anywhere in the State, while about Chico they are equally as good. There are thousands of tons of hay that have been cut, and barley is nearly ripe for the sickle, if we may use that biblical phrase. The crop of wheat will be one of the greatest ever harvested in Butte. So far as we have been able to observe, there will not be over half or possibly two-thirds of the usual yield of fruit.

Calaveras.

SCIENTIFIC AND PRACTICAL FARMING.—F. S. Chapin in Sacramento *Record-Union:* Mr. Tift of Campo Seco purchased, one year ago, one of the most neglected places in California, and proceeded to renovate the place with the energy and enthusiasm of Hercules. Fifty orange trees were sold with the place, but they had been standing for a long time in grass, and were in sad plight. Cultivation and fertilization failed to restore them to a healthy color, when a friend, who was a practical chemist, visited him, examined the soil and advised an application of alkali. This he applied in a spray of soda ash and crude potash, with the effect of turning the leaves a dark healthy green and promoting a vigorous growth of young wood. The trees are 15 to 20 feet high, and he used from three to six gallons of the wash per tree. It was applied a little too strong. He would recommend the following formula: 1½ pounds soda ash, worth 2½ cents; ¼ pound crude potash, worth 8¼ cents; 6 gallons water. It will be seen that materials for this wash cost about one cent per gallon. The soil is quite red, and is underlaid by slate at no great depth. One tree that stands in what was once an old cellar is nearly twice as large as the others. Some of the trees bore large crops of oranges last year, and many others are promising to come into profitable bearing very soon. Mr. Tift has some homemade incubators that cost him only $2 each, besides his own time and some old lumber that he used. He has made some brooders on the same principle, and is very successful where most amateurs have their main trouble—in raising the chicks. He hatches no more at one time than he can easily care for, and promotes them from one grade to another, like boys in a school. While another party visited was said to have lost chickens enough to fence his ranch, none of the dead were scattered about Mr. Tift's place. He says that success in the poultry business depends upon very careful attention to feed and cleanliness, and in keeping never to exceed 50 in one place.

Humboldt.

WADDINGTON CREAMERY.—Cor. Eureka *Standard:* Our creamery is ready for business. We are receiving a little more than 13,000 pounds of milk per day, all from stockholders of the creamery, and will have more soon, as many cows have not come in yet. We are making close to 600 pounds of butter per day. The machinery, though new, is doing splendid work and runs very smoothly. We have some material advantages, that of drainage being the principal one, and that is a very necessary consideration. We have adopted several improvements, among which is the cleaning of all waste spouts by steam, so that there is never any smell from them, which is so annoying in many institutions of the kind. Another great innovation is the placing of all belts below the floor, doing away with all dust and waste oil which is continually flying in the air and settling on and in everything. The late rains have put us back with our crops, but at the present the weather is fair, and every available team is engaged in putting in corn, beets, peas, barley, carrots and grass seed for cow feed. Grass is looking fine, although up to the last few days it has grown very slowly. The outlook for this section is good, and all seem of good courage. We ship this morning 20 boxes of fine butter from three days' churning.

Kern.

"DESERT" LAND CROPS.—Visalia (Tulare Co.) *Times:* J. D. Waugh returned from a visit to Kern county and brought samples of wheat and barley grown on "desert" land in Kern county without irrigation. Mr. Waugh said: "The barley was raised by Knight & Cowles on section 8, township 31 south, range 30 east, about 15 miles southeast of Bakersfield, on desert land claimed by Lucky Baldwin. This is the third crop raised on the same land. Two years ago the land averaged from three to three and a half tons of hay to the acre, some of it going as high as six tons. This year the crop will be cut for grain by Mr. Moshmayer. The grain was put in without plowing, nothing being used but a spring-tooth harrow. Mr. Moshmayer has in 800 acres of wheat and barley on sections 9 and 16, township 31 south, range 30 east. The wheat will yield from 10 to 12 sacks to the acre, the barley fully 15 sacks. This was sowed and plowed, but not harrowed. On section 20, township 31 south, range 30 east, Baldwin put in some wheat for hay which was cut the early part of last week, and now it is green again on the same stock. This is all done without irrigation on desert land."

IMPORTED STRAWBERRY PLANTS.—Bakersfield *Californian:* There is no question but that the region in the vicinity of E. Chauvin's artesian well, near Delano, is a favored spot. He has had two crops of alfalfa harvested already this year, and the third will be ready for cutting in about ten days. New potatoes have been eatable there for the past three months, or since the first of March. But the strawberry plants that he has are indeed worthy of mention. They were imported from France by Mr. Tesser of San Francisco, and are what is there called the "wood strawberry," and came originally from wild stocks, but under careful cultivation have been greatly improved. They are not large, averaging not over the size of a thumb's end, but they have a flavor equal to that of a garland of flowers, and when picked their bouquet fills the room with an exquisite odor, and to the palate their flavor is delicious. They seem to be the original of Bishop Berkeley's tribute, when he said: "God might doubtless have made a better berry than the strawberry, but, doubtless, he never did." And to think that these luscious berries grow and ripen at Mr. Chauvin's place every month in the year and nearly every day in the week.

Sacramento.

WILD BLACKBERRIES. — Sacramento *News:* Wild blackberries are very plentiful. The weather has been such that the crop will come all in a bulk, as ripening is remarkably uniform this season. The quality is better than for years, the berries all being plump and juicy Both Indians and Chinamen claim the season will be short, and that they will not pick for less than 12½ cents, being higher than usual. Gathering the berries is attendant with much hardship, on account of the high water and the myriads of mosquitos which infest the swamps and lowlands. Chinamen were supposed to be invulnerable, but the tough-skinned Mongol declares, "misketee heap too much bitee," and the Indian is free to admit that "sketo heap bite."

San Bernardino.

FRUIT NOTES FROM AZUSA VALLEY.—Ontario *Record:* A large acreage is being set to oranges this year; the improvements in this direction compare favorably with those in San Bernardino county. The soil in general is a rich chocolate loam, much like that of Hermosa, with a trace of adobe in it on the lower lands. At Glendora there is more gravel, and the best tracts are similar to Ontario foothill land. The damage from wind last winter was general and severe, but everybody seems to be going ahead courageously, and more new orchards are being set than last year. The most of the valley is watered from the San Gabriel river; Glendora's supply comes from Dalton canyon, and most of the mesa ranches are watered from small springs. While preeminently an orange section, the Azusa valley has a great reputation on small fruits. In April, May and June of last year, about 20 carloads of strawberries were shipped from Azusa and Glendora. The shipments for the same period this year are not so heavy, but will reach about 15 carloads. We believe this entitles the section to the palm on the berry business. Glendora will ship blackberries this year by the carload. Glendora is one of the favored nooks on frost, and large winter shipments of peas, tomatoes and cabbages have been made from that point. There is a large acreage of deciduous fruits in the valley, and fruit driers will be run at Azusa and Glendora this summer.

TARDIFF ORANGE.—Riverside *Press and Horticulturist:* J. E. Cutter has brought us, for examination, some specimens of the Tardiff orange which seem to confirm his theory that in this orange we have a variety which we can profitably propagate in place of the Mediterranean Sweet. It appears that this variety, when planted in the immediate vicinity of the Navel, the Malta Blood and the Mediterranean Sweet, has withstood the frosts which have affected the others more or less severely. The quality of the orange even in May is sufficiently good to allow of its use at the season when the Ruby and the St. Michaels are made use of, while it can hang upon the tree as late as is desirable without serious deterioration. Its habit of growth, like the Ruby, is vigorous, and Mr. Cutter is of the opinion that in the Navel, the Ruby, the St. Michaels and the Tardiff, we have a "big four" in the orange line which will, with the Seedling, cover the complete round of the shipping seasons satisfactorily. It seems to us that the Tardiff, while not superior in quality to the best Mediterranean Sweets, is more uniform in quality and superior as a keeper, and, since it will go unharmed through a cold spell which would ruin a crop of the latter, that its superiority as a late orange must be fully admitted.

San Joaquin.

THE WATERMELON CROP.—Lodi *Sentinel:* The watermelon crop will be about ten days later this year than last, on account of the late spring rains. The prospects for a large crop are good, although a number of the growers complain of the ravages made by a small worm. This worm, or "grease bug" as the melon men term it, may be found on the under side of the leaf, which, after being attacked, shrivels up and appears withered. The vine, as well as the ground under it, looks greasy; hence the name "grease bug." About five years ago the same bug did considerable damage to vines, and no remedy was found to check its ravages. Several growers have tried spraying with different solutions, but as yet without success. From a prominent grower, a *Sentinel* reporter obtained the following names of farmers who have planted melons in this vicinity this year and with the acreage each has in: S. S. Gillespie, 50; H. L. Clark, 30; L. O. Gillespie, 60; H. Tecklenberg, 40; H. Binger, 80; Wm. Pope, 60; T. A. Pope and E. Eisler, 80; H. Pope and Thomas Troy, 80; C. W. Norton and E. Angier, 80; H. B. Coleman, 40; A. Harmen, 40; J. Lang, 80; John Acker, 50; F. N. Smart and Ed. Allison, 80; W. W. Huron, 160; James Perrott, 30; Wm. Hart, 40; Geo. Hogan, 40; J. Harshner, 40; Frank Miller, 40; Millogiay & Co, 30; James Thompson, 40; small patches, 200. Total, 1470. If the melonmen will adopt some plan of cooperation, they will be able to control the melon market, instead of the market controlling them as has heretofore been the case. It is a well-known fact that the Lodi melon is by far the best raised in the State, and there is no reason why Lodi growers should not make a handsome profit if they will only come together, make some equitable agreement and live up to such agreement. As long, however, as they insist upon placing small and inferior melons on the market when there is hardly sale for good melons, they will make a failure. Come, gentlemen, do not complain that the farmer is the victim of corporations, rings, etc., when you do not take the means to protect yourselves when you can.

Santa Barbara.

ANOTHER CREAMERY.—Santa Maria *Graphic:* Joseph Muscio is one of the most progressive dairymen in this section. While other dairymen have been talking about building creameries on the joint stock plan, he has put in a plant of his own for the use of his dairy, and he is well pleased with the result. The cream is passed from the strainer right into the separator, which is run by means of a vapor engine. Here the cream is at once separated from the milk. It is then placed in the cellar for 24 hours, being kept constantly cool by means of cold water around the vessel and by exposure to the cool night air. It is then churned. This treatment insures a uniform quality of butter, and Mr. M. assures us that the difference in the quality over the butter he used to produce by the old pan method is well marked by the increased price which the creamery butter commands. While Mr. Muscio could undoubtedly handle the cream for other dairies than his own, he prefers the creamery for his own use, and is very well satisfied with his outlay. If more of our dairymen, who are able to do so, would follow his example, they would feel well repaid for the expense of doing so.

Santa Clara.

TOBACCO-GROWING. — Gilroy *Gazette:* Mr. Culp of San Felipe, not disheartened by many reverses, although cramped by lack of capital and rebuffed by those who never believed the home production could equal the foreign importation, has persistently grown crops of tobacco since 1859. During these 33 years, he has never failed in getting a crop. People will be astonished when told his actual production has exceeded 4,460,000 pounds. But such is a fact.

Sonoma.

FRUIT OUTLOOK.—Santa Rosa *Democrat:* Reports from various parts of the county show that apples are a full crop; pears, one-half crop; prunes and plums, a little under half a crop; and cherries, one-fourth crop. Peaches in the Sebastopol country, Russian River Valley, and a few other sections, are a full crop, while in many localities they will not be more than half a yield. Apricots are a failure. On the 20th inst., Inspector Rogers stated that State Quarantine Officer Alex Craw sent to Dr. White of Santa Rosa a colony of steel blue lady birds (*orchus chalybeus*), a parasite for San Jose and red scale from Australia, which were placed in E. R. Hughes' orchard.

Tehama.

LARGE HAY CROPS—FARM HANDS ARE SCARCE. Corning *Observer:* Hands have been scarce here for the haying time; also scarce at Kirkwood, and a telegram came from Woodland to send down all idle men. The hay crop is very large and never better. The north high wind the past week has hurried on the ripening of the hay as well as the grain crops, and the harvesting of grain will be right after the heels of the hay mowers. Indeed, on Sunday, in coming from Kirkwood, we noticed a large stretch of barley belonging to the O'Niell Bros., already ripe for the sickle (the harvester, now-a-days). Crops of all kind are very fine, and the long north wind stopped the rank growing of the crops, and now the heads will fill out and rapidly ripen.

Tulare.

VISALIA PRUNE CROP.—C. J. Berry in Visalia *Times:* Last year our prune crop was not so large as it had been in previous years, but it was good enough to pay a profit of $300 or $400 per acre, even at the low price of fruit. This year the crop is simply immense. In the older orchards, trees seven years old will average 700 pounds of fruit to the tree. It will be safe to make the statement that some of the trees will yield 1000 and up to 1200 pounds. At the present price of prunes, there are 900 trees on the Briggs' orchard, situated near the city, that will yield the owner at least $9000. The orchard is under the supervision of M. J. Rouse, who was the manager in 1890, when one prune tree yielded 1102 pounds. I wish to say right here that Mr. Rouse's ideas of pruning a tree and mine coincide. Orchardists cannot pay too much attention to their pruning, as on it depends to a great extent its crop. The entire crop of fruit of this orchard is simply immense. One would scarcely be believed if he were to tell the bare truth. To an amateur fruit grower any large statement is accepted, but to a practical fruit grower the production of the fruit trees of our Visalia district is phenomenal. I'll venture the statement there is one Moorpark apricot tree on the Briggs' orchard that will yield one ton of fruit. For a number of years fruit growers have been trying to find out some way to prune the Moorpark apricot so it will bear every year. These trees that yield so heavy—one of them one ton of fruit—have never been pruned at all, so I reckon that must be the right way to treat the Moorpark apricot. As a fruit-producing country, the Visalia district beats the world.

Ventura.

THE APRICOT GROWERS.—Ventura *Observer:* The apricot growers, to the number of 25, met in the court room on Saturday. After a good deal of discussion, the "Ventura Apricot Association" was organized, with the following officers: A. Everett, President; J. M. Sharp, Vice-President; T. G. Morrison, Secretary; Chas. Barnes, Treasurer. An estimate of the apricot crop showed that about 4000 tons will be raised in the county this year.

A HEALTHY BEAN CROP.—Ventura *Democrat:* W. L. and D. Richardson have been farming the James Leonard place, over the river, or a portion of it, the past couple of years, and as evidence of the fertility of the soil in that section of the valley, we quote the following estimate of last year's crop of Lima beans: Of the 450 acres planted, 140 acres averaged 2650 pounds to the acre, and the average of the whole was 2200 per acre. The Richardson Bros. are cultivating the same ground to Lima beans this season, and have a promise of as large a crop, if not larger, than that of last year.

Yolo.

FRUIT ORCHARDS AROUND GUINDA.—Guinda *Independent:* In the fall of 1886 W. B. Stitt of Kentucky, together with several prominent fruit growers of Vaca Valley, formed a company and purchased of the Capay Valley Land Company a tract of land, which they immediately set out with the finest varieties of early fruit. Since that time there has been a gradual increase each year in the number of purchases of land around Guinda. Although the above mentioned orchard is only three years old, between 8000 and 10,000 boxes of the earliest fruit in the market will be shipped from it this season. Mr. Stitt shipped a few boxes of Alexander peaches to Boston last season (1891), and received a letter from a commission house stating that the fruit arrived in excellent condition, and was among the finest fruit received by them. Immediately south, adjoining this ranch, are the three years' old orchards of J. H. Sharp and Wm. Sproule, two business men of San Francisco. These gentlemen have about 80 acres of orchard, containing many varieties of the choicest fruit. The trees show a good growth, and will this year turn off several hundred boxes of first-class fruit. Among the other fruit growers in this locality are: J. G. Woodbury, Thos Steele, W. T. Barnes, J. W. Cook, B. F. and John Davisson, J. C. Frank, A. L. Rhodes, M. F. Tarpey, O. Leach, C. Y. Hamilton, H. Galvin, J. B. Everett, Mrs. —. Cummings, C. J. Snyder and E. J. Campbell, most having from 20 to 40 acres in trees and vines.

CROPS AROUND GRAFTON. — Cor. Woodland *Democrat:* The grain crop is very promising. A heavy yield is expected on J. G. Fair's "Reed Ranch." On the smaller farms, the crops will probably exceed the anticipations of the owners. The orchards never looked better, and peach trees especially are bearing so abundantly that it is necessary to relieve them of some of their green fruit.

ARIZONA.

NUT CULTIVATION. — Phœnix *Herald:* Nut culture will soon be on a sound footing in this section. The nut that bids fair to soon make a beginning in Arizona is the pecan. So far, the attention seems to have been given almost entirely to fruits, but another season will probably see several acres set out to different kinds of nuts. A gentleman who has given some study to nut culture, in speaking of the successful growing of the pecan in Arizona, said that in another year he expected to put out ten acres of pecans as an experiment, at least. He felt so sure of being able to make a success of nut culture that he was going to set out, in addition to the pecans, ten acres of walnuts and ten acres of almonds, making thirty acres in nuts. There is little doubt about the success of the undertaking, as the different varieties of nuts can be produced on our rich bottom lands in profusion.

NEVADA.

A LARGE CATTLE PURCHASE.—Reno *Gazette:* Mason & Bradley and Russell & Bradley have purchased between 3000 and 4000 head of two, three and four year old steers recently, and will ship them from Deming, N. M., to their range in this State about the middle of the month. The cattle at this time are very thin in flesh, but strong enough to ship.

OREGON.

THE MOHAIR CLIP.—Eugene *Register:* Considerable mohair is marketed in this county every year, and the industry is growing all over the State. A couple of carloads have already been shipped from Portland this summer. A dealer in this article says the clip this year will amount to about 60,000 pounds, and that the production of mohair is to become one of the great industries of the State. Oregon mohair ranks better than any other produced in the United States. A very fine article of mohair plush is now produced in the United States from American mohair for upholstering furniture, railroad cars, etc.

WOOL CLIP IN EASTERN OREGON.—Baker City *Democrat:* The harvest is now in full blast, and shearers are in demand. The wool crop in this section this season will be the greatest known for years. Mr. Heilner has excellent facilities for handling wool, his warerooms being large and commodious. The roads are improving fast, and wool will soon commence to arrive in large quantities.

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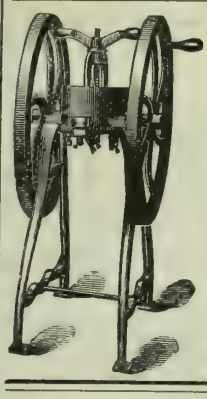
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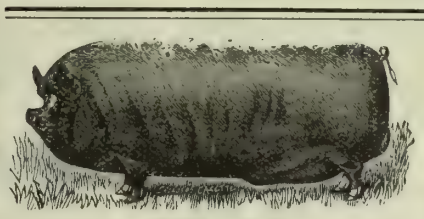
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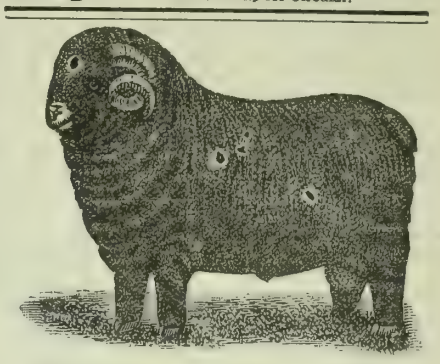
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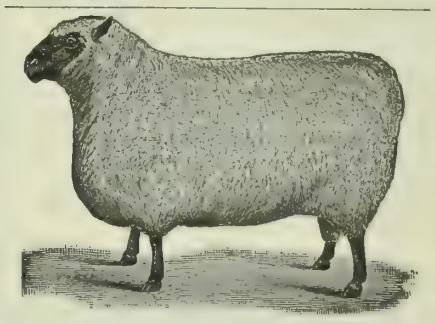
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DOMESTIC ECONOMY.

Chicken Milk for Invalids.

Although every one is now talking of the merits of the new "Chicken milk," it is a very old friend, and does not even pretend to a new face. The recipes here given are in the possession of a member of the "Ancient Noblesse" of Canada and came from France in the early days of "The Old Regime." They are now being used in all the hospitals. No. 1 is the more delicate of the two, and can be used in cases where the patient cannot retain even a soft-boiled egg. No. 2 is prepared in a different manner, and is more for cases where the patient is stronger or more nourishment is necessary.

CHICKEN MILK, NO. 1.—Cut a chicken into small pieces and see that it has been cleaned in the most careful manner, removing the skin. Put it into a china-lined sauce-pan, with the bones and neck, the white part of a head of celery, and the stalks (not leaves) of a fresh bunch of parsley, a few pepper-corns and a little salt. Cover the meat with cold water, and let it simmer till it is in rags and falls from the bones. Strain into a flat basin or large bowl. When cold it should be in a stiff, clear jelly. Carefully, with a skimmer, take off the grease, and then take a soft, clean pantry towel, dipped in hot water, and gently wipe over the top of the jelly with it so that no particle of greasy matter can possibly remain. Take equal quantities of this jelly and fresh milk, put them into a small china-lined sauce-pan and let them boil together. Boil up the mixture three times and strain into a cup. A teacupful is generally considered sufficient at a time.

CHICKEN MILK, NO. 2.—Prepare the chicken in the same manner as above, but instead of using water, cover it with a quart of fresh milk and use a bain-marie, or improvise one by putting the chicken and milk into a very large jam-pot, and setting that in a sauce-pan nearly filled with cold water; when the milk in the jam-pot boils, the "chicken milk" is ready for use.

OTHER DISHES FOR INVALIDS.

RICE JELLY.—Mix one tablespoonful of rice flour in cold water, put it in a pint of boiling water and sweeten; break in while boiling, one stick of cinnamon. Pour in molds and set on ice.

BLANC MANGE. — Dissolve one tablespoonful of moss farine in a quart of new milk. Sweeten and flavor; stir in a beaten egg.

OATMEAL PORRIDGE.—Put a quart of water in a sucepan, let boil, stir in meal to thicken, with a pinch of salt, let boil slowly half an hour, add a little more boiling water, and let simmer one hour. Serve with sugar and cream.

PANADA.—Lay six or eight crackers in a bowl, sprinkle with powdered sugar, add a pinch of salt and a teaspoonful of fresh butter. Pour over a teacupful of boiling water, let stand near the fire an hour; add a teaspoonful of wine or brandy, grate nutmeg over the top.

ARROWROOT CUSTARD.—Take one tablespoonful of arrowroot, mix smooth in a little cold milk, and stir into a pint of boiling milk with half a teacupful of sugar and two beaten eggs. Let boil, and flavor with cinnamon. Set in a cool place until very cold.

TAPIOCA JELLY.—Soak half a pint of tapioca several hours, put on to boil in a quart of water; sweeten and flavor with lemon juice, boil one hour, put in molds and set on ice. Eat with sugar and cream.

BUTTERMILK STEW.—Boil one pint of buttermilk, sweeten, and stir in a tablespoonful of buttter; flavor with extract of ginger.

MULLED BUTTERMILK.—Put a pint of buttermilk on to boil; add a well-beaten egg; let boil up once.

KUMISS.—Fill a quart bottle with fresh milk up to the neck, add two tablespoonfuls of sugar dissolved in warm water; when lukewarm, three tablespoonfuls of yeast; set in a warm place, shake often until it begins to sparkle. Then cork tightly and set on ice for six hours. The virtue of kumiss as a diet for the sick is that it refreshes and stimulates with no after-reaction from its effects.

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Irrigation Canals and Irrigation Works.

One of the most complete scientific treatises ever published in this State is that of P. J. Flynn, C. E., on "Irrigation Canals and Other Irrigation Works," and "The Flow of Water in Irrigation Canals," printed by George Spaulding & Co. of this city. It is a book for engineers engaged on works of irrigation, water supply, sewerage, land drainage, river improvement, etc. The work is divided into two parts, is illustrated and abounds in well arranged tables. By the use of the tables, any problem relating to open or closed channels, likely to arise in practice, can be rapidly solved. A great saving of time and labor can be gained by the use of the tables. There are 37 examples relating to open and closed channels, which will be of especial use to the student.

Tables 30, 31 and 32 give the velocity and discharge of a large range of open channels, and tables 68 and 69 give the velocity and discharge of circular and egg-shaped pipes, sewers and conduits.

At pages 8, 195, etc., is given the most complete collection of formulæ, old and modern, 69 in number; that has ever before been published, in a single work, in the English language.

The "Flow of Water" will be useful, not only to the irrigation engineer, but also to the engineer engaged on water supply, sewerage, drainage of land and improvement of rivers, etc.

The tables of contents of volumes 1 and 2, and the index of volume 1, are very full, and will enable the reader to find any subject referred to in the book, without loss of time.

Mr. Flynn is acknowledged to be one of the most accomplished mathematicians on this coast, and has had great practical experience in this country and abroad on irrigation and other engineering works. He is therefore perfectly competent to write authoritatively on this subject, and has evidently devoted great labor to his work. The typographical appearance of the book is exceptionally fine. Good ink has been used on heavy paper, and the table work skillfully done. The two volumes are bound in one book; price $8, post free. The work contains 711 pages and 211 illustrations. This branch of engineering science, of such great importance to California and the Pacific coast, has been neglected by our writers until now. While Mr. Flynn has given much of what has heretofore been known, he has also added much that is original and of great value. Professional men will appreciate the labor bestowed on this book, especially on the table work.

Visiting Cards.

Card etiquette is one of the finest and most delicate tests by which a woman classifies her acquaintances. Its laws are unalterable, its sins of omission or commission among the few that are absolutely unpardonable. This bit of snowy pasteboard, by which judgment is meted out to you by the social tribunal, must be fine in texture, pure white in color, a little smaller than those of last year in size, nearly square in shape, and have a smooth but unglazed surface.

The name, engraved in script through the center of the card, has the address below it in the right-hand corner, the day for receiving in the left corner.

This name should never include a husband's title or profession, but should spell out the husband's name in full, and not be written with the initials alone.

A daughter, in the first year of her social life, has no card, but engraves her name on her mother's card. After this probationary year the eldest or the only daughter in a family writes only Miss before her family name; the younger daughters write the full name. It has been decided that on a widow's card the dear name so long borne, so hard to relinquish, may be retained with propriety for social use, though in all practical matters the widow writes her own Christian name instead of that of her husband.—New York Sun.

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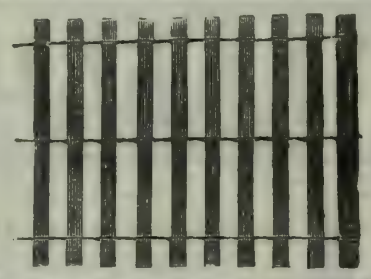
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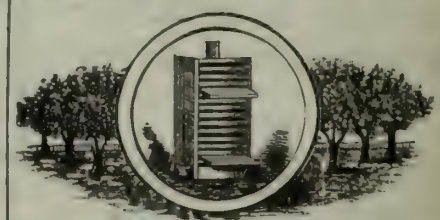
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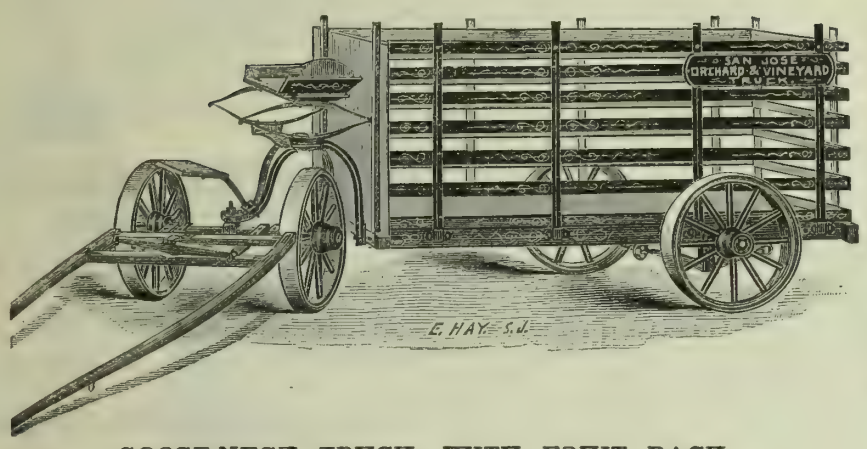
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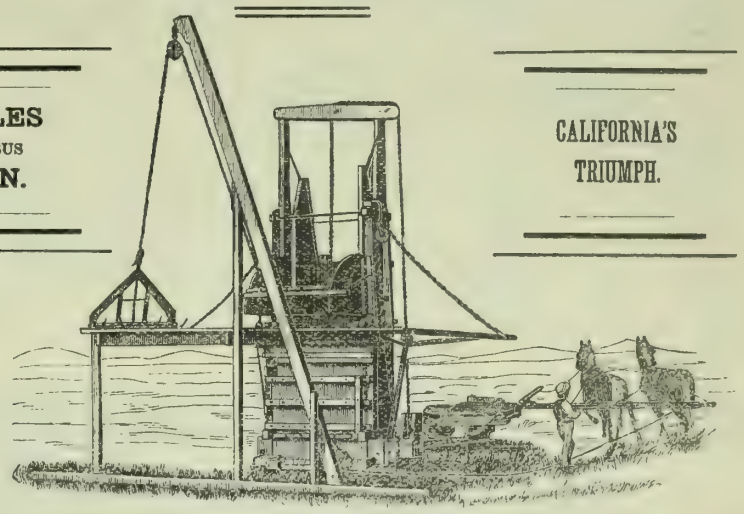
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PATRONS OF HUSBANDRY.

The Secretary's Column.

State Grange Finances.

[By A. T. DEWEY, Secretary State Grange of California.]

Owing to the special canvass of State Grange Lecturers, incurring considerable traveling expense, it is natural that interest should be felt as to the State of our Grange finances. We are happy to show there is a healthy balance in the treasury. There was on hand on Jan. 1st, in the general fund, $560.87, in the lecture fund $2059.78, making a total of $2620.65. On the 1st of June there was on hand in the general fund $597.89, in the lecture fund $1810.08, making a total of $2407.97. This shows a decrease of $212.68, only created by the extensive canvass which has been made during the past five months. It should be remembered that only five (instead of ten) cents per capita per quarter is at present received in the lecture fund.

Now that good seed has been sown throughout our Grange field we hope local workers will be found to make a farm to farm canvass and organize at least a dozen new Granges before our annual gathering at San Jose. Very liberal compensation is offered by the State Grange for those who succeed in organizing new or reviving dormant Granges. Full information and proper blanks will be furnished on application to the Secretary.

LET US HEAR FROM ALL. — The following Granges have failed to send in a quarterly report to March 31st: Nos. 15, 100, 147, 172, 203, 242, 245 and 289. It is to the advantage of the Order at large as well as for every Grange that each shall make its quarterly report prompt and in full. We hope that all Patrons will use their best efforts to thus forward the work.

CHILDREN'S DAY.—How many Granges gave heed to the proclamation of the Master of the National Grange for holding children's meeting on Saturday, June 4th. We should like to hear from all that celebrated, giving brief hints of the best features for making the day pleasant to old and young and for advancement of the Order. To those Granges which did not celebrate we would say by all means set apart a day for the special enjoyment of the children.

FOURTH OF JULY PICNICS.—Many Granges have had no picnic this season. Why not hold a gathering of Patrons and neighbors interested in having a good, time July 4th, inspiring patriotism and the true progressive American spirit. Some of the best celebrations have been thus held under the auspices of the Grange. Let each Grange take this subject up.

HOLD MEETINGS.—It has been the custom of some Granges to discontinue all meetings during the hot and busy season of the year. Let us consider if this custom has not become too sweeping in its application. Cannot every Grange hold at least a short session once a month to advantage? It is only four months before the State Grange meets. See if there is not some good Grange work that can be sandwiched in with home and field work in the meantime. Make the effort and you may find it an easier matter to hold more meetings than heretofore, during the busy season, and reap good results from the same.

NATIONAL GRANGE.—The "Granite State" has secured the next annual session of the National Grange, and the chiefs will gather in council next November at Concord, N. H.

TRY FOR THEM.—There is talk of organizing new Granges at Fresno, Livermore, San Diego, and at least half a dozen other places in the State. Would it not be well for local Granges to appoint committees to organize and revive Granges in contiguous territory; also to furnish, by subscription or from the treasury of the Grange, sufficient funds to pay expenses while efforts are being made by Patrons to secure the charter list of new Granges; in case of success the money to be refunded from premiums ultimately paid by the State and National Granges?

SACRAMENTO GRANGE.—The "Special Canvass Meeting" of this Grange took place May 21st. An open session with good attendance and much earnestness and enthusiasm prevailed. Hon. Thomas McConnell led the speaking, followed by Past Masters I. C. Steele and J. V. Webster, Judge J. H. McKune, Hon. H. M. Larue, Bros. W. A. Jenkins and others. Good music helped out the excellent program.

NATIONAL GRANGE DIGEST.—A new edition has been received and will be mailed for 35 cents. to any person desiring it, by the S. G. Secretary. It is the only revision made since 1890.

RESOLUTIONS on the death of Mrs. Albert Woods, a long esteemed and honored member of the State Grange, were recently passed by Tulare Grange.

CALIFORNIA PATRONS extend hearty congratulations to Washington State Grange upon fourth annual session opened at Vancouver, June 7th.

MASTER E. W. DAVIS, assisted by P. M's. Martin and Purvine of Two Rock, installed the officers of Petaluma Grange last Saturday, the meeting being a full and interesting one.

TEMESCAL GRANGE.—Saturday last Bro. Stevens gave an interesting sketch of his recent visit to the home of Mrs. C. E. Kinney, Dutch Flat. He and Mrs. Stevens enjoyed the recent visit of the National Editorial Association to the mines of that section. Among other amusing happenings, Bro. Stevens mentioned that he ventured to say to one of the old miners panning out, that there was no gold in his pan. "Just you keep still," replied the miner, "and these here editors will never know the difference." Master Roxie Dennis reports Eden Grange moving along O. K., with the hope that some early efforts will revive Livermore Grange.

CORRESPONDENCE, announcements of meetings, and information of Grange transactions and news in brief is solicited for publication in this department.

WORTHY MASTER DAVIS has his hands full of Grange and other business, all of which he is transacting with good zeal and promptness.

YUBA CITY GRANGE. — George Ohleyer, Sr., called in on Tuesday and reports that a class of ten received the third and fourth degrees on Saturday last. From six to eight applicants are also on the way to the Master's desk. This Grange has lately obtained from this office 145 badges, the handsomest, we believe, ever produced in California. Certainly Yuba City is prospering nobly.

THE LECTURER'S CIRCULAR.

At the last session of the National Grange the following regulation was adopted and made a part of section IV, paragraph 57, page 64, of the Digest:

It shall be the duty of the Lecturer of subordinate Granges to report to the Lecturer of the State Grange at the end of the March and September quarters, giving a report of the literary work within their Grange, the State Lecturer to summarize the same and make semi-annual report to the Lecturer of the National Grange.

We met State Lecturer Huffman at Stockton last week. Among other efforts put forth lately, he mentioned the sending of circulars to each subordinate Grange, a copy of which we have not received. We understand, however, with other good suggestions, it urged the carrying out of National Lecturer Whitehead's proposition, viz.:

THE PLAN.

I have arranged the following plan for uniform and systematic distribution and circulation of the best essays and papers read in our Order to be used by Lecturers in their "Lecturer's Hour," which ought *never* to be omitted from the exercises of *any* Grange, and which *every* Lecturer will provide for if the obligation and instructions given at installation are lived up to.

We will suppose there are 100 subordinate Granges in a State. In compliance with the rule of the National Grange each Lecturer twice a year reports to the Lecturer of the State Grange and forwards an average of five of the best essays or papers read in the Grange. This places in the hands of the Lecturer of the State Grange 500 essays or papers. He selects one out of ten (50 in all) and forwards them to the Lecturer of the National Grange. With 30 States complying, this gives the Lecturer of the National Grange 1500 of the best.

The Lecturer of the National Grange then has printed slips with names of all the States and the names of the Lecturer of each State Grange, with postoffice address printed with his State. One of these slips is attached to each package of 50 essays, and one of them (package) is sent on its way to the Lecturer of each State Grange. This slip is also checked, so that this State Lecturer will know to which State Lecturer *he* is to send them, after their use in *his* own State, and so they will be passed along the line. For instance, a package of 50 goes to Alabama's State Lecturer; after using he sends to California's State Lecturer (by mail); California to Colorado; Colorado to Connecticut, and so on, alphabetically, to the end of our grand national chain of States.

When the State Grange Lecturer receives this package and "National Slip" in his office, he attaches to each essay a "State Slip," containing the names of the Lecturers of each subordinate Grange in his State (or, if thought best, only of Pomona Granges), (or, if a large State, he can have four or five divisions, with package going the rounds in each), and the State Lecturer also uses such number of the original papers he started with (500) *in addition* to the National Grange package, and sends all on their journey around his State.

Each Lecturer, of course, understanding that after an essay has been used in his Grange, that it must be at once mailed to the next address on the slip attached, his own being checked off, and, finally back to the Lecturer of the State Grange, who will, when those forming his *National* package have all returned, as before said, start them on their way to the Lecturer of the next State Grange found on the "National Slip."

Now, just as soon as I have received from the Lecturers of *five* State Granges enough essays or papers to make "a trial trip," I will start them on their way *in those five States*, and as fast as other States cooperate in the work, they will be included also. WE CAN IF WE WILL. *The way to cooperate is to cooperate.*

As in other pursuits and professions, many of the best writers of our country to-day had their early training upon the farm, and received their first inspiration direct from nature. Our Order, with its beautiful ritualism of field and forest, its lessons of the springing grass and running brooks, "bud and bloom, sweet perfume," is leading thousands to higher aims and broader and better views of life. A noted divine once said:

"Every book which interprets the secret lore of fields and gardens; every essay that brings man nearer to the understanding of the mysteries which every tree whispers, every brook murmurs, every weed even hints, is a contribution to the wealth and happiness of our kind."

Let us improve the opportunities the Grange offers in this direction.

The above is followed by a series of questions to be answered by Subordinate Grange Lecturers, which we believe have already been submitted by our State Lecturer to each Grange.

OREGON STATE GRANGE.

I am glad to receive, from its faithful Secretary, the following favorable news from the annual session of Oregon S. G., held at Albany last week. Master Boise and Lecturer Hayes are both experienced and effective men in the positions they have been again called on to fill:

TURNER, OR., June 4th.

BRO. D.—You will pardon me for not responding sooner to your kind fraternal telegram of greeting to Oregon State Grange. The session was a very busy one. We had the largest attendance, most enthusiasm, most harmonious, pleasant and profitable session that I have had the pleasure of attending. Bro. and Sister Heald and Bro. and Sister Newton, all of Santa Rosa Grange, were present from the Golden State, and they appeared like our own folks, since Sister Heald is a sister of our lamented Bro. and Past Master Wm. Cyrus. The Grange of Oregon has held its own remarkably well both numerically and financially during the past year, notwithstanding the rush to organize other farmers' organizations within our borders. You have learned ere this that Bro. R. P. Boise is again at the head and Bro. Hayes in the Lecturers' chair; Secretary and Treasurer reelected almost unanimously. It is pleasing to us to realize that our humble efforts to serve the Order are appreciated by the Patrons of Oregon. We increase the pay of Deputies, and now with what they get from N. G., they will receive $10 for each new Grange instituted and $5 for reorganizing old ones. Five hundred dollars is appropriated to keep the Lecturer in the field as much as possible. We are now mapping out our work for a vigorous campaign. We were very much disappointed not to have Bro. Davis, M. of Cal., with us.

CROP PROSPECTS.

The prospects for fruit are not flattering, the frost thinning many varieties. Spring crops of grain promise well, while fall wheat will be less than average, on account of cold, wet weather in April and May.

Fraternally,
W. M. HILLEARY.

Protect Your Trees from Sunburn, Borers, Rabbits, Etc., by Using

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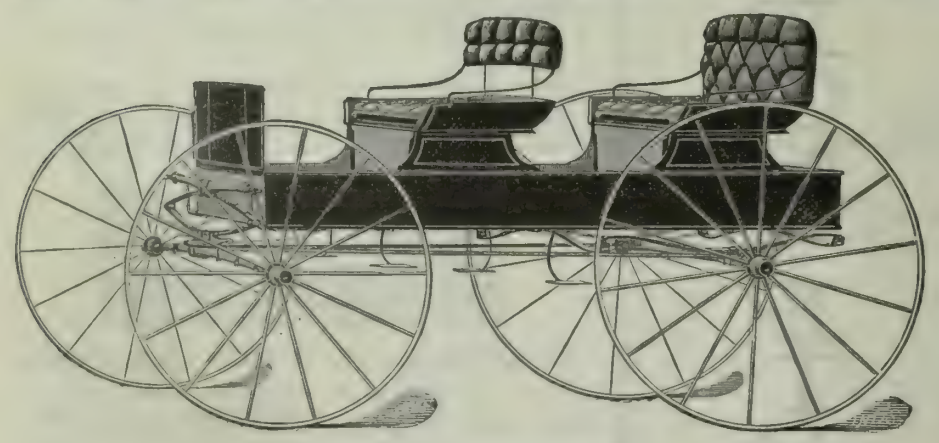
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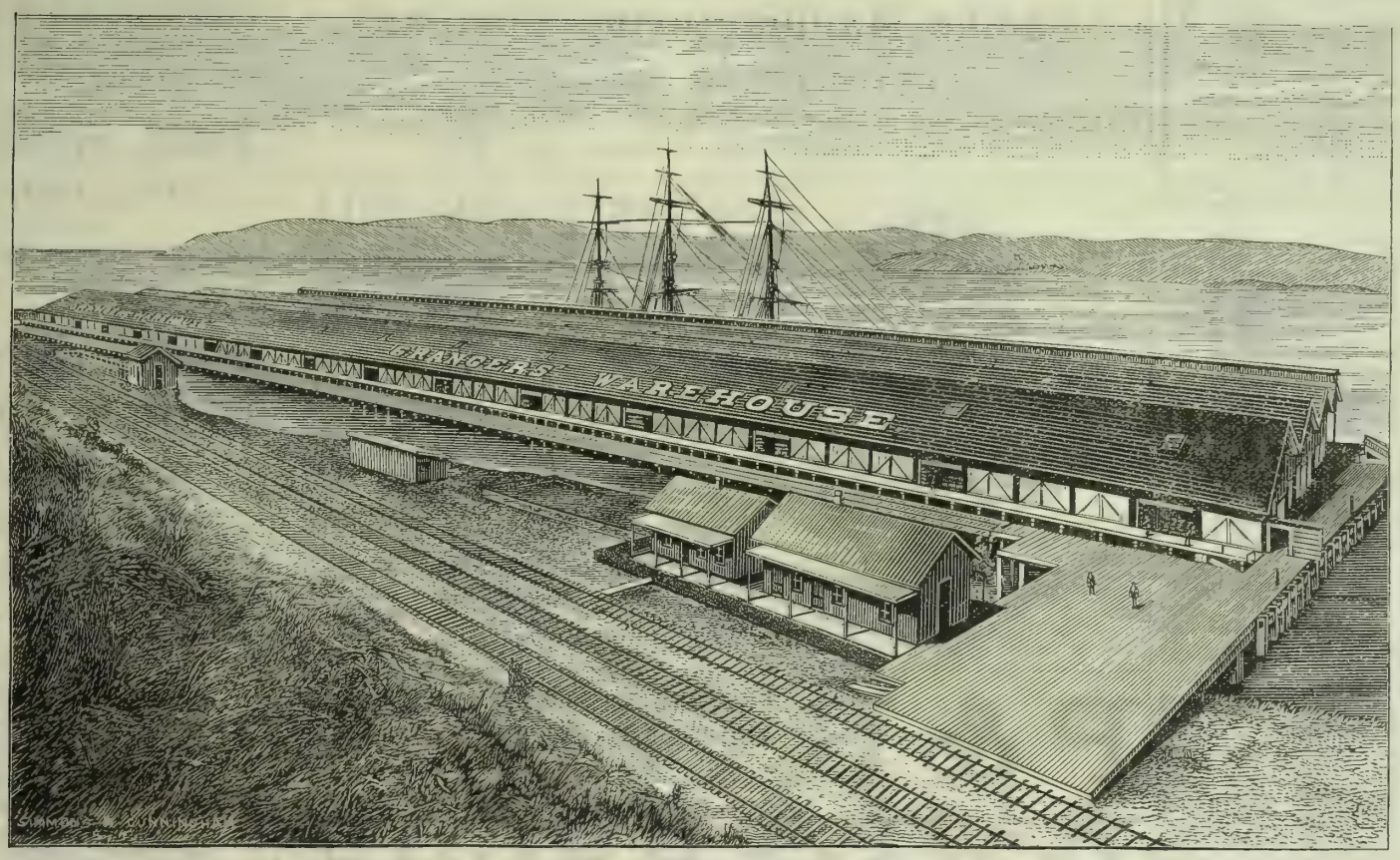
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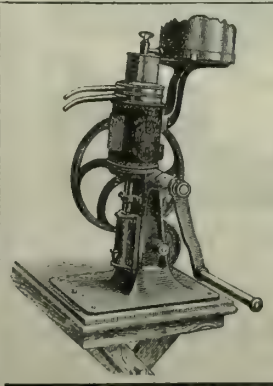
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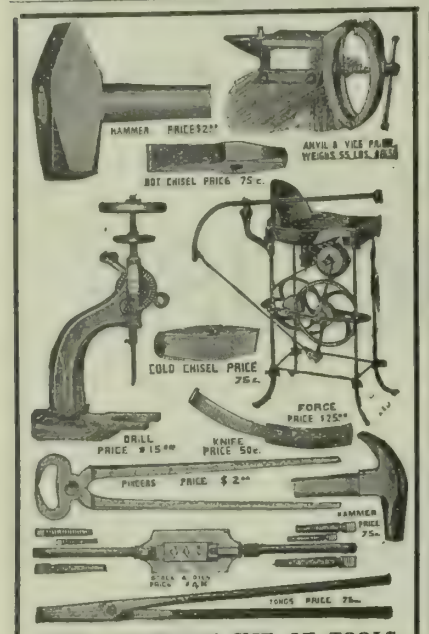
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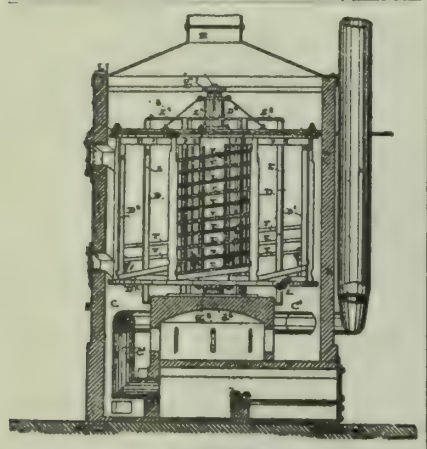


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S. F. Market Report

Market Review.

SAN FRANCISCO, June 8, 1892.

General trade the past week was more active, with a marked increase in the volume of goods sent out on orders. Favorable weather for maturing crops, and cool weather on the mountain ranges, causing snow to melt more slowly, are the prime factors in producing a stronger feeling of confidence with the trade in general. With returning confidence there is more of a disposition shown by capitalists to place idle funds, and, therefore, securities offered are not so closely scrutinized. Silver shows an advancing tendency, which is accepted as a harbinger of better times for all lines of produce.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s09½d	6s10 d	6s11 d	7s09 d	7s00½d
Friday	6s09½d	6s.0½d	6s11½d	7s0½d	7s00½d
Saturday	6s09½d	6s10½d	6s11 d	7s00½d	7s.0½d
Monday	....	....	....	....	....
Tuesday	6s10 d	6s10 d	6s11 d	6s11½d	7s00 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. O.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	35s3d	35s6 1	35s6 1	Slow.	Showery.
Friday	35s3d	35s6d	35s6d	Steady.	Fine.
Saturday	35s6d	35s6d	35s6d	Firmer.	
Monday	....	....	....		
Tuesday	35s6 1	35s6d	35s d	Quiet.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, June 8. WHEAT—Upward tendency. California spot lots, 7s 4d; off coast, 35s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, American advices offset market favorably; on passage, higher prices asked but no advance established; English country markets, steady; French firmer.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.
Thursday	150⅝	152½	152⅝	152½
Friday	151⅜	154¼	154½	153⅜
Saturday	152⅛	154⅝	155⅛	155⅝
Monday	151½	153¾	154	154½
Tuesday	154⅛	156	157½	157½

The following are to-days' telegram:

NEW YORK, June 8.—WHEAT - 91¼c for June, 93½c for July, 94c for August, 91½c for September and 96½c for December.

CHICAGO, June 8.—WHEAT—86¼c for July and 86½c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	....	141	....	....	...
" lowest	....	141	....	....	....
Friday, highest	139½	....	....	142½	....
" lowest	139½	....	....	142½	....
Saturday, highest	140	....	....	142½	141⅜
" lowest	139½	....	....	142½	141⅜
Monday, highest	139⅜	....	....	....	....
" lowest	138½	....	....	....	....
Tuesday, highest	141	....	....	....	141½
" lowest	139½	....	....	....	141½

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	96½	....	....	....	....
" lowest	95½	....	....	....	....
Friday, highest	96½	....	....	....	....
" lowest	96½	....	....	....	....
Saturday, highest	96½	....	....	....	....
" lowest	95⅝	....	....	....	....
Monday, highest	95½	....	....	....	....
" lowest	95½	....	....	....	....
Tuesday, highest	94⅝	....	....	....	....
" lowest	94⅛	....	....	....	....

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: Seller 1892—300 tons, $1.40½ ₩ ctl. Buyer December—100 tons, $1.44½ ₩ ctl. Regular session: Seller 1892—300 tons, $1.40½; 1000, $1.40⅝; 600, $1.40⅝; 3300, $1.40½ per ctl. Afternoon: Seller 1892—500 tons, $1 40⅜ per ctl.

Barley—Morning—Informal: Seller 1892, new—300 tons, 94½c. Regular session: Seller 1892—600 tons, 94½c. December 100 tons, 98½c. October—100 tons, 96½c per ctl. Seller 1892, new—100 tons, 95½c; 200, 95½c per ctl.

Bran—Seller 1892—295 tons, $16.50 per ton.

Markets by Telegraph.

Foreign Grain Review.

LONDON, June 6.—The Mark Lane *Express* says: The hay and oat crops threaten to be very short. Seven weeks may bring wheat and barley nearly to mean; expectations of full crops are abandoned. Deliveries of English wheat the past month were unexpectedly heavy. Foreign wheats were depressed at Hull and is. lower at Liverpool. California wheat was firmer; the downward limit of American produce seems to have been reached. America practically controls the trade. Flour is extremely low. The spring grain trade is unsettled. Corn is 3d higher; Indian shipments were 50,000 quarters for the week below a year ago; prices are 32s per quarter against 40s then.

Delaware Peach Crop.

NEW YORK, June 6.—The Commercial Bulletin's Delaware advices report that the prospect indicates a short crop of peaches suitable for canning. Yellow peaches are very scarce.

California Fruit East.

CHICAGO, June 3.—Two carloads: Black Tartarian cherries at $1.05@2.05; White Bigarreau, $1.15; Pontiacs, $1.30; Rockports $1.25@1.45; Black Bigarreau, $1.55; Pringle Apricots, $1.25@1.40; Seedlings, $1.50@2.50; Cherry plums, $2.10@2.25; Hale's early peaches, small boxes, $1.

CHICAGO, June 4.—Two carloads: Royal Apricots at $2.50; Seedlings, $2.15; Pringle, $1.05@1.20; Tartarian cherries $1.50@1 80; Bigarreau $2.05; Royal Anne, $2.06@2.65. Some in very bad order sold for less.

CHICAGO, June 4.—One carload: Pringle apricots brought $2.50; cherries $1.10@2.40. Fruit is in good condition. The weather is bad and it is raining hard.

CHICAGO, June 6.—One carload: Royal apricots brought $2@2.20; Seedlings, overripe, $1.25@1.75; peaches, $2.70@8

CHICAGO, June 6.—One carload: Tartarian cherries $1.20@1.70; Royal Anne, $1.70; Republican, $1.50; Seedling apricots $1.70; Pringle, $1.05@1.10.

Eastern Dried Fruit Markets.

NEW YORK, June 6.—Eastern crop reports, especially of peaches, stiffen recent prices for present and prospective California packings. Evaporated peaches are out of the list. The quality of prunes is poor, but the demand is active, as our berry season is late. Sellers try to make the stock presentable by steaming it into a marketable condition. Grocers pay 7⅛@11cts for small to best sizes. A line of small ungraded sold at 7 cts.

Raisins—Sellers are closing out as fast as they can; common to fair, loose and in layers, are 90c@$1 05; good, $1 10@1 15; prime, $1 25@1 30; bags are out of first hands; last fall, 4½@5 cts. Valencia layers at 5¼@6¼ cts. divert a large portion of buying for summer wants.

There are no apricots in commercial lots. Cherries have had warm weather against them and range wide; the first sales of the week were 65c@$1 95; a few boxes sold at $2 75; Porter Bros. sold a car of black Tartarans at $2 50@4, also one on Saturday ranging from $1 10 to $2 40. Apricots, $1 70@2 30, with selections, $5 15.

CHICAGO, June 7.—California Dried Fruits—There is a good demand and firm market for all lines named below except raisins, but in this description there is not much doing. Prunes, apricots, nectarines and peaches all rule firm. On account of apricots being scarce nectarines are doing better.

NEW YORK, June 7.—Offers of $1.40 for a line of Horseshoe brand A, loose muscatel raisins, were refused.

Eastern Wool Markets.

NEW YORK, June 9.— Business is fairly active. Assortments are not in convenient bulk for large buyers who desire to match lots on hand. Prices are steady at late rates, and no prompt response is promised to the new clip figures which reach the seaboard. Australian is a menace to many home lines that have been talked higher. There is much complaint over the heavy condition of some of the Western arrivals. The Texas clip is estimated to be one-third smaller than last year's, and is reported well sold out of grower's hands. It is also reported here that most of California's clip has been placed at the principal points. Sales in New York, 183,000 domestic and 310,000 foreign. Boston sold 1,700,000 domestic and 448,000 foreign, mainly Australian. Philadelphia had fair sales of high grades of wool at full prices. There is no indication of advance in any sort.

English Potato Markets.

CHICAGO, June 7.—Potatoes, new—The market is slow and unsatisfactory. The daily arrivals from California and the South exceed the demand. Consumers are not buying and holders are anxious to sell and offer to accept reduced prices, but failed to call out inquiry. California, northern, per sack, $1.50; southern, $1@1.25; bad order, 60@75c.

Miscellaneous.

NEW YORK, June 6.—Lima beans are easier for spot at $1.70@1.75. Most of the best grades are absorbed. To arrive in two months, $1.60@1.65. Hops—Prolonged quiet has given more stress to brewer's wants and with increased inquiry at last prices, with more strength, and a better disposition is shown by holders of choice to part with their stock. In options there is no excitement. Closing bid and asked: June 24, asked, 26¾; July 25, bid, 25¾; asked, 27; August, 26 bid.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 7, '92, were as follows:

Flour, qr. sks	75,872	Bran, sks	7,659
Wheat, ctls	154,531	Buckwheat "	....
Barley, "	20,695	Middlings "	1,860
Rye, "	396	Chicory, bbls	100
Oats, "	345	Hops, "	....
Corn, "	835	Wool, "	3,255
*Butter, "	1,625	Hay, ton	2,609
do bxs	946	Straw, "	90
do bbls	14	Wine, gals	216,100
do kegs	51	Brandy, "	18,485
do tubs	2	Raisins, bxs	2,500
do ½ bxs	29	Honey, cs	14
†Cheese, ctls	1,125	Peanuts, sks	....
do bxs	150	Walnuts "	....
Eggs, doz	41,200	Almonds "	....
do " Eastern	82,239	Mustard "	....
Beans, sks	18,309	Flax "	593
Potatoes, sks	19,675	Popcorn "	....
Onions, "	5,741	Broom corn, bbls	....

*Overl'd, 239 ctls. †Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 30, '91.	July 1, '91 to May 28, '92.
Flour, ½ sks	386,138	462,493
Wheat, ctls	1,393,084	1,288,845
Barley, "	269,912	56,791
Oats, "	359,993	426,676
Wool, bales	7,420	8,238
Hops, "	508	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,048

Report of Flour and Grain Remaining in the State of California on June 1, 1892.

LOCATION.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ct's.	Rye, ctls.
San Francisco and Oakland wharf, including grain afloat in harbor and in transit	30,167	156,789	186,224	41,986	53,807	33,052	3,881
Sonoma, Humboldt, Napa, Solano, Yolo, Colusa and Glenn Cos.	8,175	264,980	32,585	1,210	....	3,070	....
Sacramento, Yuba, Sutter, Butte and Tehama Counties	24,000	266,070	44,700	....	1,900	6,700	....
Contra Costa and Alameda Counties	1,000	3,194,555	110,410	....	....	....	....
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern Cos	30,765	796,215	65,010	....	....	1,500	2,000
San Mateo, Santa Clara, San Benito, Santa Cruz, Monterey and San Luis Obispo Counties	18,785	283,190	320,164	4,830	23,115	1,200	....
Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and San Diego Counties	7,675	81,720	15?,960	790	45,010	42,925	....
Totals	120 517	2,100,149	913,049	48,786	128,132	92,837	5,881
December 1, 1891	140,043	9 064,575	2,883 602	168,401	275 126	268,255	39,545
June 1, 1891	121,166	1,626 562	352,862	45 074	46,632	76,738	14,136
December 1, 1890	118,123	12,168 993	1,615,655	61,085	174 391	302,921	37,150
June 1, 1890	81,090	4,8 1,083	1,004,457	61,235	39,603	91,111	15,892
December 1, 1889	116,275	15,300,388	3,391,860	120 356	107,419	184,916	66,540
June 1, 1889	100,565	2,092,439	2,082,630	119,245	107,413	184,915	10,218
December 1, 1888	96,906	10,819,630	4,087 060	120,175	235,320	266,747	7,040
July 1, 1888	71 920	3,891,960	2,063,450	62,095	33,675	82,200	900
January 1, 1888	50,979	9,780,060	798,500	42,400	74 405	121,900	4,350
July 1, 1887	50,275	2,790,400	4,622,990	65,380	109,925	72,330	1,350
January 1, 1887	89,606	7,812,860	2,690,260	47,400	243,650	136,650	44,050

First Receipts of New Crop Barley.

The following shows the dates on which new barley has arrived at San Francisco and the prices paid for the same:

Year.	Month.	Price.	Year.	Month.	Price.
1870	June 19	$1 20	1882	June 12	1 65
1871	June 12	1 57½	1883	June 25	95
1872	June 6	1 40	1884	June 28	90
1873	June 5	1 10	1885	June 16	1 25
1874	June 9	1 45	1886	May 26	1 25
1875	June 20	1 35	1887	June 3	1 15
1876	May 30	90	1888	June 5	92½
1877	June 30	1 55	1889	June 1	75
1878	June 11	80	1890	May 31	1 00
1879	June 30	75	1891	June 6	*1 42½
1880	June 24	64¾	1892	June 6	1 05
1881	June 21	$ 90			

*Sold by auction worth about $1.20. † Sold by auction worth about $ 95

The first lot in 1891 was received on the same date, and came from the William Sharon estate, Fresno county. The first received this year was shipped by P. Fabian & Co. of Tracy, San Joaquin county. The grain was bright and fairly heavy, coming up to the No. 1 standard.

Cereals.

Mark Lane *Express*, May 23:—English wheat has been on large offer for the time of year. Farmers have lost heart, and are clearing their reserves at a very low figure. The sales of English wheat last week at 196 statute markets were larger than we ever remember them for the same week In 1890 they were decidedly heavy, but without coming quite up to last week's standard. Value is as much as 8s. 4d. below that of a year ago, but this time last year was a period of excitement and advance, and Whitsuntide, which fell at this period of May 1891, was marked by frost and sleet, which did widespread damage and caused farmers to hold grain for a relatively high price. Value has in reality reverted to the moderate level associated with the easy trade conditions of 1890. It is estimated that 5,533,440 qrs. of the last harvest have now been sold, and that 2,466,560 qrs. remain for sale. A year ago it was estimated that 2 269,307 qrs. were still in farmers' hands. Foreign wheat has lately been pressed on sale, and this pressure at the ports being coincident with heavy offerings on the agricultural exchanges value has proved impossible to maintain. The decline, however, does not exceed a shilling in white wheat, which is by far the most abundant quality just now, or sixpence on red. There must be a decided substratum of firmness in the market for the recent strain to have been borne with no greater loss on previous values than a shilling per quarter. It is, however, very remarkable that South Russian wheat which this time last year was making 42s., with free shipment, is to-day worth only 35s., despite the prohibition of exports since November. The costs of holding being added, it is probable that a loss of as much as 10s. per quarter has in some instances been sustained. The imports of wheat since harvest have been 10,838,348 qrs., and of flour have equalled 4,791,648 qrs. The mean weekly rate of total imports has been 422,000 qrs, against 362,000 qrs. last year. The British visible supply of wheat is put at 5,405,000 qrs. against 4,223,000 qrs. in the two preceding years. The American visible supply is 4,400,000 qrs., as compared with 2,400,000 qrs. in 1891 and 2,850 000 qrs in 1890

Reducing flour to wheat, and adding the product to wheat exports, the equivalents in wheat exported from this city for the first eleven months of the cerea year compare as follows:

	Centals.	Value.
1887-88	10,724,400	$15.724,600
1888-89	15,175 200	22,560,300
1889-90	16 359,100	21 457,100
1890-91	16,514 200	23,501,800
1891-92	15,980,000	26,781,400

The wheat exports for the past eleven months show the following monthly value averages:

	1890-91.	1891-92.
July	$1 37	$1 59
August	1 38	1 65
September	1 38	1 68
October	1 36	1 68
November	1 36	1 78
December	1 37	1 77
January	1 36	1 75
February	1 37	1 64
March	1 48	1 62
April	1 55	1 54
May	1 71	1 67

The monthly average values of the flour exports compare as follows:

	1890-91.	1891-92.
July	$4 10	$5 06
August	4 00	4 73
September	4 20	4 76
October	4 11	4 95
November	4 27	4 92
December	4 03	5 00
January	4 00	5 00
February	4 08	5 00
March	4 10	4 70
April	4 70	4 50
May	5 00	4 37

Oats have ruled firm throughout the week. Receipts have been light, while the demand has been steady.

In corn there has been and continues to be a strong bear pressure, but unfavorable crop prospects in the Central States and the prospects in this State favorable for a fair crop only, cause holders to be firmer in their views. The stock in this State shows an increase this year over that held at the corresponding date in 1891. The supply in this State is said to be well concentrated.

Rye is very dull and heavy.

London cables report as follows: Imports into the United Kingdom for the week ending June 7th: Flour, bbls., 159,000; Wheat, qrs. 363,000. Stocks on hand June 1st: Wheat, 300,000@320,000 qrs.; flour, 270.000@280,000 bbls. Amount of wheat and flour on passage June 7th: To United Kingdom, 2,814,000 qrs.; to Continent, 1,064,000 qrs.

Strong north winds in the Sacramento and San Joaquin valleys did not do any perceptible damage to the growing crop of grain, but it is claimed the wind did good, owing to its being succeeded so soon by cooler but very favorable weather. Harvesting will soon become quite general, and unless an unfavorable change in the weather takes place, the ingathering of grain will be done in better shape than for some years past.

The strong bear position heretofore reported in the local wheat market is still in full force. It looks very much as if the majority of the members of the Produce Exchange are pulling in the one direction, to keep prices down so that the 1892-93 season will be entered on a low range of values. Whether farmers, in the commencement of the season, will be able to resist the strong bear pressure is an open question, for, at all times, there are far too many impecunious farmers, and it is those that country merchants compel to sell, let the market be what it may. With the wheat crop of the world less this year than it was in 1891, the price of silver showing a tendency to advance, and a large supply of tonnage at this port and to arrive, we fail to see how it is possible for wheat not to sell at higher prices before the fall months pass.

Barley has held to fairly strong prices under moderate receipts and good demand. The stock of barley in the State is larger than many dealers had thought it would be, and consequently it is being used as a lever to depress the market. With unfavorable crop prospects in the Central States and in England, it looks as if there will be a larger demand from shippers the coming season than there was in the season drawing to a close.

Feedstuff.

For ground feed there has been a good demand at fairly steady prices. At the close, it is said, bran and middlings are very firm. The output of the mills is less, owing to the scarcity of milling wheat and the low price of flour.

The receipts of hay show a decided increase. It is said that the increase is due to new storage charges commencing soon, and to save this additional expense holders are letting go their last year's hay. New hay is coming in quite freely, but buyers are still slow in taking hold. It is hard to get over $10 a ton for the best new hay. A large part of new received so far this season has been poor and trashy.

Dairy Produce.

Choice to gilt-edged butter has been very strong throughout the week, with a slight advance obtained. Creamery gilt-edged was readily placed at 21 cents, and dairy, gilt-edged, at 20 cents. Off grades were slow and hard to place. The higher prices for gilt-edged were largely due to the packing demand. Off grades coming in competition with Eastern ladle are hard to sell except concessions are at times given.

Cheese is weak at a slight decline in prices Full cream is now selling at 8@8½ cts., and fair to choice at 6½@7½ cts. Young America holds strong. It looks as if the supply at the low prices now current is being absorbed.

The egg market is in more or less of a mixed condition. Poor to fair eggs are very slow and hard to place except at low prices, but choice to strictly choice fresh laid are strong, with large-sized well-selected fresh laid sold even above our outside quotation. Eastern eggs are doing better; choice, of a well-established packer's brand sell readily at 20 cts.

Vegetables.

The warm wave immediately after the cool weather in April, and a hot norther in the past week, greatly damaged the growing crop of string beans, peas and tomatoes. The effect is witnessed in the high prices now current for beans and other vine vegetables. The cool weather which has prevailed the past four days has been of benefit to growing vegetables. We are still dependent on the southern part of the State for tomatoes.

Onions are hard to sell owing to the market east of the Rocky mountains being well supplied and prices low. The range of prices in this market is so very low that growers cannot net a profit.

Potatoes strengthened slightly under smaller receipts, but at the close some shading in prices is reported. The quality of this year's potatoes is said to average better than for two years past. Shipments overland are very heavy, which keeps our market from sinking to prices which would net a loss.

At to-day's market, string beans sold 2 cts. a pound less than yesterday's prices. Peas were also slightly lower, as were asparagus, rhubarb and summer squash. Tomatoes sold very high. The receipts of corn showed an improvement. Sales were made at 10@20 cts per doz.

Fruit.

Berries sold high the past week, owing to light receipts and a good demand. On Monday, strawberries sold as high as $20 a chest for Longworths. Gooseberries have advanced. Raspberries sold quite high, but toward the close prices are slightly lower under freer receipts. Blackberries are beginning to come in, but as yet prices are too high to tempt much buying. Currants sold slightly higher. The combination in Alameda county keeps the market so regulated that the average price does not go much below $4 to $4.50 per chest as an inside figure.

In tree fruit, we note a stronger market for cherries, with a slight advance obtainable. Low prices the previous week caused heavier shipments to the East and larger contract sales to canners. These naturally cut off a part of our receipts, and as there was a good demand the market strengthened. Apricots have fluctuated. The price, as usual, is controlled by the supply. Canners and dryers are as yet not able to buy, although some contracts have been made on the basis of $25 to $35 per ton. Peaches are coming in more freely. The quality is improving. A few consignments of Red Astrakhan apples have come to hand. The quality was fair for the first received. Cherry plums have ruled steady.

In citrus fruits, the market is largely overstocked with oranges, and sales are made with considerable difficulty. Cool weather is against both limes and lemons.

For 1891 dried fruit there is a better inquiry, with a slight advance obtainable. Raisins are also stronger. Stemless raisin grapes sell at 3@3¾ cts. a pound, but wine grapes about 1½ cts. less. For grapes on the stem there is no call.

To-day cherries sold lower, owing to heavy receipts. The quality of this year's crop averages large in size and excellent in flavor. Gooseberries were steady. Currants, under free receipts, are lower. Canners took a few at $3 a chest. Strawberries were slightly higher. This being between crops, receipts are light. Peaches and apricots were barely steady. The former are too green.

Canners are in the market at the following prices: Apricots, $25 to $35 per ton; cherries, 5 to 7 cents per pound; currants, $3 to $4 per chest; gooseberries, 4 cents per pound; peaches and Bartlett pears, $30 per ton. This is the price now talked, but it may be changed when growers are ready to contract.

Wool.

A fire in a wool house, whereby about 500,000 lbs. of wool was more or less damaged, and the death of a prominent dealer, had very little effect on the local market. The strengthening in the market noted for two weeks past appears to be more pronounced. An advance in cotton at the East and abroad and an improved demand for wools at the East, are largely in favor of holders. Scourers are kept busy; they are reported to be running to full capacity.

Live Stock.

There has been more or less pressure to sell, which causes both bullocks and mutton sheep to incline in favor of buyers. Nevada advices continue to report heavy purchases for this State and up north; they also report heavy receipts of cattle for grazing. Hogs are steady. Milch cows continue in good demand. The call is for better milkers.

Miscellaneous.

Poultry, outside of chicks, has held to strong price under moderate receipts and a good demand. Duck are lower and weak.

Beans are steady with a continued good demand. Crop prospects are said to have improved.

Hops are scarce and wanted, if choice to gilt-edged; For new crop, buyers are reported willing to pay 17@18 cts. ₩ lb.

From reliable advices up to June 8, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	256,895	336,457	*158,057	61,833
San Diego	19,440	18,798	2,603	.....
San Pedro	7,045	14,840	....	
Oregon	27,992	29,280	18,245	14,299
Puget Sound	20,392	26,878	.....	
Totals	332,245	426,253	178,932	76.132

*Engaged for wheat, 1892, 19,79?; 1891, 34,961 †For new crop loading, 16,879.

The statistics of produce exports from this port from July 1st to June 2d, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,596,158	13,154 808
Flour, bbls	1,016,416	1,126 729
Barley, ctls	1,107,400	306,432

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

WEDNESDAY, June 8, 1892

BEANS AND PEAS		**HOPS.**	
Bayo, ctl	2 00 @ 2 15	1891 Choice to Ex.	25 @ —
Butter	2 50 @ 3 05	Fair to Good	22 @ —
Pea	2 20 @ 2 70	**FLOUR.**	
Red	2 00 @ 2 20	Extra, City Mills	4 65 @ 4 75
Pink	1 90 @ 2 45	Do Country Mills	4 50 @ 4 75
Small White	2 20 @ 2 55	Superfine	2 75 @ 3 10
Large White	2 20 @ 2 45	**NUTS—JOBBING.**	
Lima	1 90 @ 2 25	Walnuts, Cal. lb	4 @ —
Pkd Peas, blk eye	3 00 @ 3 50	Do Choice	6 @ —
Do green	1 50 @ 1 75	Do paper shell	7 @ —
Do Nlee	1 30 @ 1 40	Almonds, sft shl	10 @ —
Split	4 50 @ 5 50	Paper shell	12 @ —
BUTTER.		Hard Shell	6 @ 7½
Cal. Poor to fair, lb	15 @ —	Brazil	6½ @ 8
Do good to choice	17 @ —	Pecans small	11 @ 13
Do Gilt edged	— @ 20	Do large	14½ @ 16
Do Creamery rolls	— @ 22½	Peanuts	1½ @ 3
Do do Gilt edge	— @ 21	Filberts	10½ @ 12½
Eastern	— @ —	Hickory	7 @ 8
CHEESE.		Chestnuts	11½ @ 16
Cal. choice mild	— @ 7½	**ONIONS.**	
Do fair to good	6½ @ —	New Reds	32½ @ 37½
Do gilt edged	— @ 8½	**POTATOES.**	
Young America	— @ 10	Early Rose, ctl	50 @ 75
EGGS.		Do do in boxes	60 @ 1 25
Cal. ranch, doz	19 @ —	Peerless	80 @ 70
Do do selected	— @ 24	Garnet Chilies	50 @ 55
Do store	16 @ —	**POULTRY.**	
Eastern	17 @ 20	Hens, doz	6 00 @ 8 00
FEED		Roosters, old	6 50 @ 8 00
Bran, ton	17 50 @18 50	Do young	8 00 @12 00
Feedmeal	26 00 @27 00	Broilers, small	3 00 @ 4 00
Gr'd Barley	22 50 @24 00	Do large	5 00 @ 6 50
Middlings	20 00 @21 50	Fryers	7 00 @ 8 00
Oil Cake Meal	@25 00	Ducks	5 00 @ 7 00
Manhattan Food ₰ cwt	1 50	Geese, pair	1 25 @ 1 50
HAY		Goslings	1 25 @ 1 75
Wheat, per ton	11 00 @ —	Turkeys, Gobblr	17 @ 19
Do choice	— @14 00	Turkeys, Hens	15 @ 18
Wheat and Oat	10 00 @12 00	Manhattan Egg Food ₰ cwt	11 50 @ —
Wild Oats	10 00 @ —	**PROVISIONS**	
Cultivated do	10 00 @ —	Cal Bacon, heavy, lb	9½ @ —
Barley	10 00 @12 00	Medium	10½ @ —
Alfalfa	8 00 @10 00	Light	12 @ —
Clover	— @ —	Lard	9 @ 11
New Hay	7 @ 10	Cal. Sm'k'd Beef	11½ @ —
Straw use	45 @ 60	Hams, Cal salt'd	10½ @ —
GRAIN, ETC		do Eastern	13 @ —
Barley, feed, ctl	95 @ —	**SEEDS.**	
Do Choice	99½ @ —	Alfalfa	12 @ 12½
Do Brewing	1 02½ @ —	Clover, Red	14 @ 15
Do do Choice	1 07½ @ —	White	20 @ —
Do do Giltedge	1 10 @ —	Flaxseed	1½ @ 2
Do Chevalier	1 05 @ 1 40	Hemp	3½ @ 4
Do do Giltedge	1 45 @ 1 50	Mustard, yellow	3½ @ 4
Buckwheat	— @ —	do Brown	3 @ 3½
Corn, White	1 37½ @ —	**WOOL.**	
Yellow, large	1 35 @ —	SPRING, 1892.	
Do small	1 37½ @ —	Humb't & Men'cino	17 @ 21
Oats, milling	1 47½ @ —	Sac'to valley	16 @ —
Feed, Choice	1 45 @ —	S Joaquin valley	11 @ 16
Do good	1 39½ @ —	Cala'v & F'th'll	16 @ 21
Do fair	1 34½ @ —	Oregon Eastern	12½ @ 19
Surprise	1 50 @ —	do valley	18 @ 23
Black Cal	1 15 @ —	So'n Coast, def	10 @ 12
Do Oregon	1 30 @ —	Nevada (S ate)	15 @ 19
Gray	1 30 @ —	**HONEY.**	
Rye	1 25 @ —	WhiteComb, 2-lb	8 @ 11
Wheat, milling, Gilt edged	1 47½ @ —	do do 1-lb frame	10 @ 13
Do Choice	1 45 @ —	White extract'd	6½ @ 7
Do fair to good	1 41½ @ —	Amber do	5½ @ 6
Shipping, choice	1 41½ @ —	Beeswax, lb	25 @ —
Do good	1 38½ @ —		
Do fair	1 36½ @ —		
Common	1 33½ @ —		
Sonora	1 33½ @ 1 40		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 8, 1892.

Limes, Mex	4 50 @ 5 50	Figs, Arizona, lb	— @ —
Do Cal	— @ —	Apricots, Royal, pr box	1 00 @ 1 25
Lemons, box	50 @ 3 50	Cherries, box Black	50 @ 60
Do Sicily	5 50 @ —	Royal Ann	75 @ 1 30
Oranges, Seedlings		White	40 @ 60
Redlands	2 50 @ 3 00	Beets, sk	— @ 1 00
Riverside	1 50 @ 2 50	Carrots, sk	50 @ —
Los Angeles	1 50 @ 2 00	Okra, dry, lb	15 @ —
Do Navels—		Parsnips, ctl	— @ 1 25
Redlands	— @ 4 00	Peppers, dry, lb	10 @ —
Los Angeles	— @ 2 50	Do green	— @ —
Riverside	— @ 3 00	Turnips, ctl	50 @ —
Duarte	@ 3 00	Cabbage, 100 lbs	45 @ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Garlic, lb	2 @ 4
		Squash, Sum, bx	50 @ 1 50
Strawberries, per chest—		Tomatoes, box	5 00 @ 3 50
Longworth	10 00 @18 00	Asparagus, box	1 00 @ 2 00
Sharpless	6 00 @ 9 00	Peas, green, sk	60 @ 1 00
Gooseberries, lbs	3 @ 05	Rhubarb, box	1 00 @ 1 35
Oregon limp	6 @ 7	String Beans	6 @ 7
do English	7 @ 8	Do do wax	7 @ 8
Raspberries, dr	65 @ 75	Do Refugee	7 @ 8
Currants chest	3 00 @ 5 00	Cucumbers, doz	50 @ 1 00
Peaches, box	1 00 @ 1 25	Mushrooms	10 @ 30
Cherry Plum, dr	60 @ 75	Egg Plant, lb	17½ @ 20

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	5½ @ —	Wethers	7 @ —
Grass fed, extra	5½ @ —	Ewes	6½ @ —
First quality	5 @ —	Do Spring	8 @ —
Second quality	4½ @ —	**HOGS.**	
Third quality	4 @ —	Light, ₰ lb, cents	5 @ —
Bulls and thin Cows	3 @ —	Heavy	4½ @ —
VEAL.		Feeders	3½ @ —
Range, heavy	6 @ —	Stock Hogs	4 @ —
Do light	7 @ —		
Dairy	7 @ —		

Grain and Wool Bags.

Calcutta, spot	7 @ 7½
Wool Bags	36@ 38

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Messrs. Armstrong & De Guerre, the well known stationers and blank-book manufacturers, have just published a popular work upon the law governing elections in this State, including the amendments to the statutes of 1891, which is the best that we have seen. Their brochure is as full of meat as an egg; yet the arrangement of the code sections and the dissertation of the compilers upon the method of voting under the so-called Australian Reform Ballot System is so concise and clear that the most illiterate of voters will readily comprehend all the requirements of the new law, the entire text of which is set forth, together with sample ballot and detailed explanations of much value. We commend this pamphlet to County and State Committees of all parties for general circulation, price being 15 cents each by the hundred. The subjects treated comprise all that is necessary to know in the management of election machinery under the Australian Ballot Law, from which good results are to be expected. If this system is rightfully carried out, fraudulent voting will be an impossibility.

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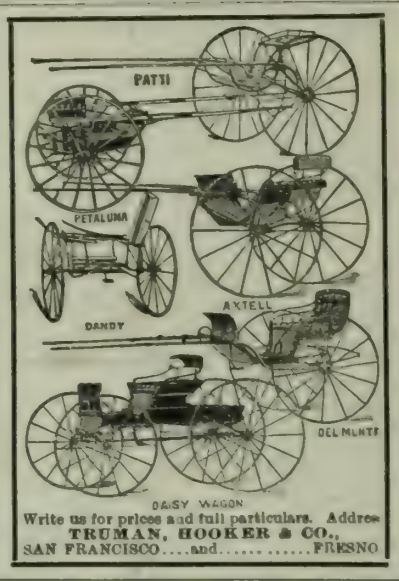
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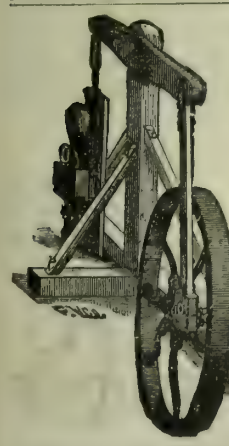
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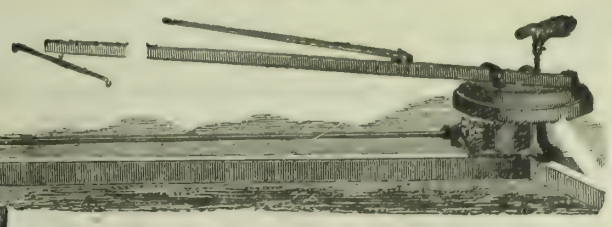
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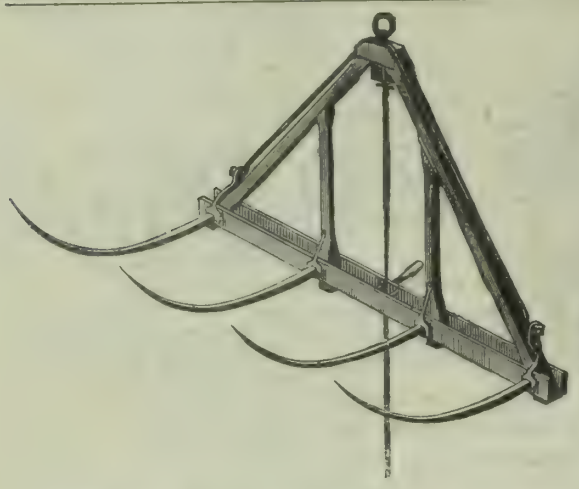
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The purpose of this notice is to inform both farmers and merchants, who use or who sell Horse Forks, that I am fully protected by the Courts, in the exclusive manufacture and exclusive sale of Horse Forks like that illustrated in this article. Makers and sellers of these Forks infringing these patents will be promptly and rigorously prosecuted.

Arrangements have been made with manufacturers in the East for the making and selling of, not only the Jackson Light Weight Fork, as illustrated above, but of other designs similar to the Jackson Light Weight Fork, but which patents I control, for the Eastern trade; but these contracts or licenses expressly provide that such forks shall not be sold west of the summit of the Rocky Mountains under any circumstances.

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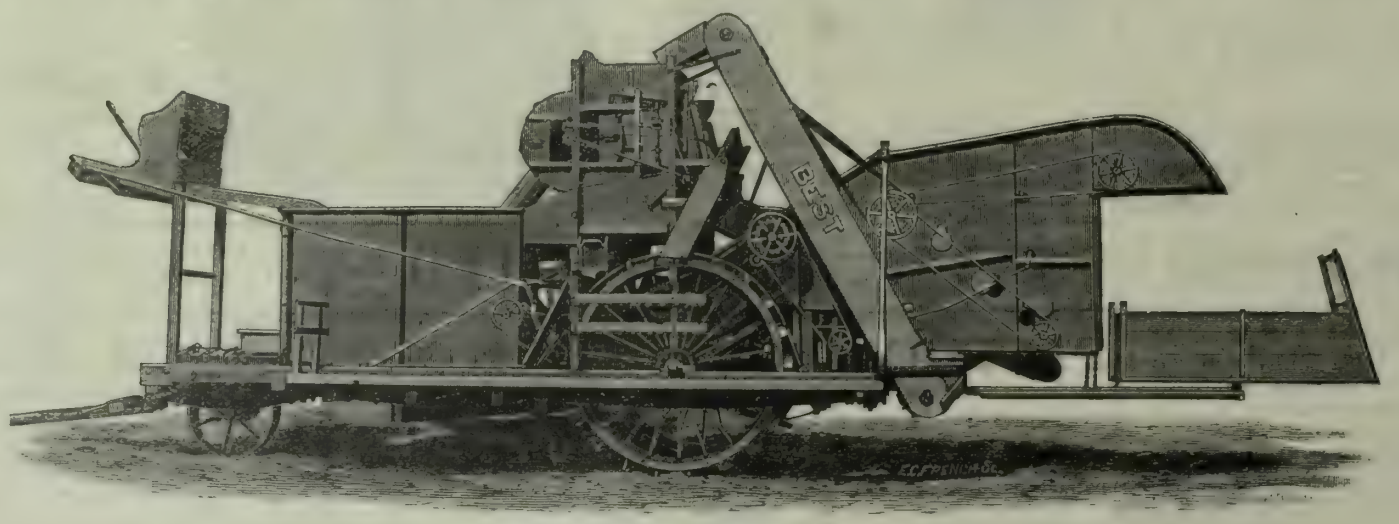
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DANIEL BEST AGRICULTURAL WORKS,

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PACIFIC RURAL PRESS

Vol. XLIII. No. 25. SAN FRANCISCO, SATURDAY, JUNE 18, 1892.

THE DEWEY PUBLISHING CO
Office, 220 Market St.

The Barley Situation.

It has been fully two years since the barley market has been subjected to such a strong bear pressure as is now dominant on Call Board. There does not appear to be any just reason for the depression, unless it be done to bring new crop barley prices to a low range for speculative purposes. The consumption of barley is steadily increasing, and it requires a large carryover into the spring months to provide against any unexpected shortage in the crop, which is liable to occur any year through unfavorable weather.

In 1891 the acreage seeded in this State to barley was 1,167,627, against 852,902 seeded in 1890. This was an increase in the acreage of over one-third, and yet on June 1, 1892, the stock of barley in the State was only 45,652 tons, against 17,644 tons at the corresponding date in 1891. Under natural conditions, that is, with no material increase in consumption and no increased export, the surplus on June 1st in this year would have been fully 150,000 tons. The characterizing feature of the demand the past seasons was an increasing demand for rolled or ground barley for feeding, which will be more marked in the season of 1892–93 than ever before. This opinion is grounded on the well-established fact that there has been a large increase in fruit-planting and a largely increased attention given to the dairy industry, both of which call for more of the barley in grain and also ground or rolled for stock-feeding.

There were exported from this port from July 1st to June 1st the following: In 1890–91, 15,322 tons, and in 1891–92, 55,370 tons, an increase of 40,048 tons. The receipts of barley from Oregon and Washington at this port during the above two periods of time were as follows: In 1890–91, 13,495 tons, and in 1891–92, 2834 tons, a decrease of 10,661 tons, so that the increased shipments of barley so far this season, over the like time in the season of 1890–91, were drawn from the California crop. In the coming season the export movements promise to be fully as large, if not larger, than they were in the season drawing to a close. As the acreage seeded to barley in this year is not much, if any, larger than that seeded in 1891, the outturn will not be much more than will be wanted, unless the yield to the acre should be more than is now expected.

FREIGHT RATES ON WHEAT.—Traffic Manager Leeds has compiled comparative rates on wheat in Kansas and in California, which show that from points averaging 137 miles distant from Port Costa or San Francisco, the average rate charged per ton is $2.80½, while the average charge for the same weight and distance in Kansas is $2.32.

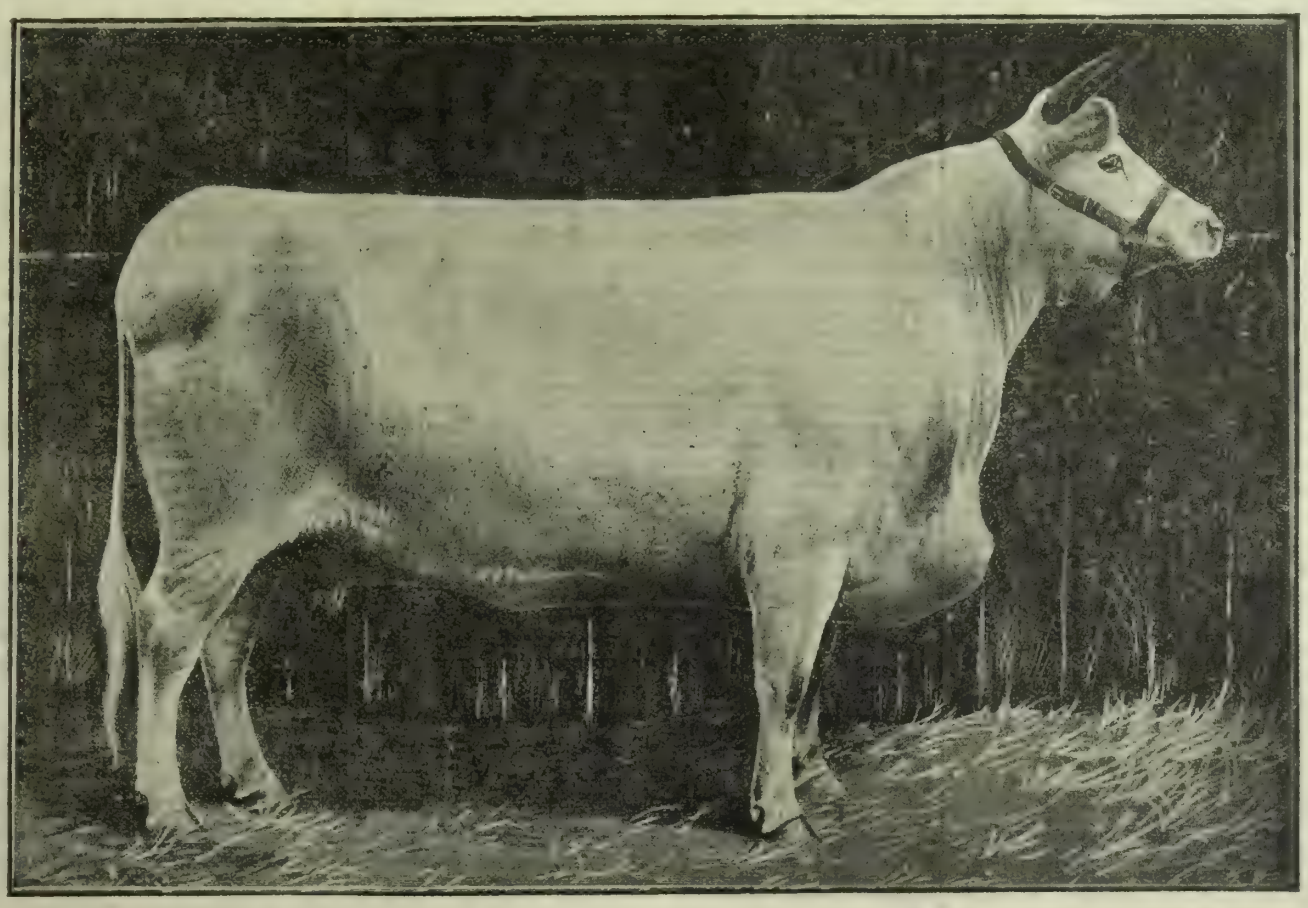
Rose of Connaught 3rd.

The animal portrait which we present on this page is one of the most striking which has ever adorned our pages. The *Breeders' Gazette*, from whose frontispiece we have reproduced the engraving, properly alludes to the outline of the white cow against the dark background as forming almost a perfect silhouette, and so graceful is the poise of the animal's head that the original photograph is really statuesque in its beauty.

Rose Connaught 3rd was bred by Hon. J. A. Angas of Collingrove, and was first at Melbourne and Adelaide as a two-year-old in 1888; first at Adelaide and second at Melbourne as a three-year-old in 1889; first at Adelaide and second at Melbourne as a four-year-old in 1890; and last year, in her five-year-old form, was not only first at Melbourne and Adelaide, but was made champion of Australia at the former show. She is clearly of Bates extraction, and from her hips forward is certainly an animal of rare character. The shoulders are well covered, the chine seems broad and thick, the ribs well sprung, chest wide and deep, neck vein well developed, and legs both short and neat. Her weakness appears to be in her quarters and thighs, with some inclination to patch about the rumps. She was sired by Duke of Hazelcote 62d from Rose of Connaught, and while we are without the extension of the pedigree it is a fair inference that she carries at least one cross of the famous Berkeley Castle bull Duke of Connaught, that did such royal service for Fitzhardinge.

In connection with the color discussion recently presented in our columns by Robert Ashburner, it should be noted that white does not bar to highest honors in Australia.

COLUMBUS AT HOME.—The people of Genoa have already begun their festivities in honor of Columbus, which are to be continued until Oct. 15th.



AN AUSTRALIAN PRIZE-WINNING SHORTHORN — ROSE OF CONNAUGHT THIRD.

The Dried Fruit Market.

The high prices that ruled for dried fruits in 1890 induced a larger drying in 1891, and as a result the markets on this coast and also at the East were overstocked and low prices were the order. The low prices entailed heavy losses on early fruit buyers, for soon after the season opened prices began to settle, which made buyers cautious unless offered concessions, and these concessions continued well into the season. Low prices and very heavy supplies enabled buyers to seek new distribution centers in the States east of the Rocky Mountains. This has opened up new markets for California dried fruits, provided prices are within the means of general consumers. A better understanding of the difference in prices at the East can be had from the following compiled comparisons of prices in the New York market on May 21st: In 1891 evaporated peaches sold at 24 cents per pound, pitted cherries at 30 cents per pound; in 1892 they were respectively eight and eleven cents per pound. Raisins in this year werefully 50 per cent less than they were at the corresponding date in 1891, prunes from 40 to 50 per cent less and apples from 55 to 60 per cent less. Apricots were very considerable lower as were other dried fruits. The low prices inthis year and, as for that, throughout the past season, allowed stocks to be worked off and to-day they are quite small on this coast and also at the East, with the better grades out of market. The cleaning up of supplies admits of new crop dried fruits coming on a bare market and if prices are not unduly inflated our surplus will be marketed at fairly renumerative prices quite early in the season.

J. J. Pratt, manager of the fruit cannery at Yuba City, Sutter county, who returned a short time ago from a business trip to the East, not only confirms the above but also states that some of the largest dealers informed him "that their dried fruit sales increased 50 and 100 per cent the past season, and bid fair to do the same this season." When it is considered that the population of the United States is over 60,000,000 and rapidly increasing, it is readily seen that the surplus for years to come can be consumed, provided the best varieties of fruits are cultivated and proper attention be given to picking, curing and packing the fruit.

THE PHYLLOXERA ABROAD.—The phylloxera has appeared in the provinces of Almeri, Barcelona, Cordova, Gerona, Granada, Jaen, Leon, Lugo, Malaga, Orense, Salamanca, Sevilla, Tarragona, Zamora and on the Balearic Islands. Six hundred and seventy-five thousand acres are affected.

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ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 18, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Gas Engines—Union Gas Engine Co.
Fruit Trees—H. H Berger & Co.
Spanish Merino Sheep—F. Bullard, Woodland, Cal.

See Advertising Columns.

The Week.

It has been rather an active week in weather circles, and not altogether an acceptable one to agriculturists. Heavy showers have caught some hay and floored some grain. Showers and winds and other things, known and unknown, have not been altogether favorable to the grape crop, and reduction in the estimates of the wine and raisin output is still in order. The rain has, however, been acceptable in Nevada, judging from a valuation of half a million which was put upon two inches of rainfall at Carson.

But our weather vicissitudes have been light as compared with Eastern disturbances as reported by telegraph, for while in the great Atlantic the death rate has alarmingly increased by prostrating heat, in the central west tornado and water have wrought disaster—even to blowing down again a part of the wall of one of the largest of the World's Fair buildings, which was flattened by a previous "twister." We prefer the monotony of the Pacific coast summer to the grand, gloomy and peculiar freaks of the elements on the other side.

Midsummer activity is beginning—the grain harvest, the Eastern shipment of fruits in expedited trains, the work in the canneries—all these are giving employment to all who desire it. The rush from the valleys to the coast and the mountains, and from the cities to the country, is at its height. Humanity sighs for a change, and this is the fashionable time for it.

VETERINARY PROGRESS.—At a meeting of the State Veterinary Society in this city last week several important papers were read. The president congratulated the members on the satisfactory progress made by the association during the past 12 months, which he hoped would continue until the whole profession was enrolled on the association's list of membership. The passing of the proposed bill for the protection of the profession by the next Legislature was indorsed and the members pledged themselves to use every effort in their power to secure the passage of the bill. We understand this is to regulate the practice of veterinary medicine with a view to excluding quacks and ignoramuses.

SCARED BY THE CATCH.—The Board of Supervisors of Monterey county have repealed the squirrel bounty ordinance. Since the last meeting of the board, one month ago, there have been deposited with the County Clerk about 125,000 scalps, which, at three cents each, have cost the county between $3000 and $4000. These facts should have induced the continuance of the ordinance, rather than its repeal.

Another Queen of the Jerseys.

The reigns of the Jersey queens are becoming shorter. Dethronement and coronation crowd closely upon each other. To hail the coming and speed the parting dairy potentate in the Jersey kingdom keeps the agricultural writer moving to quick music. It is as late as August 8th, 1891, that we gave in the RURAL the result of a years milk and butter test which proclaimed Bisson's Belle queen of the Jerseys upon a record of 1028 lbs. 13⅝ ounces of butter in a year which ended July 13. Bisson's Belle now retires to history and the reigning Jersey queen is Signal's Lily Flagg, owned by Gen. S. H. Moore and W. E. Matthews, of Huntsville, Alabama, who closed a year's record on June 1st, 1891, with a credit of 1047 lbs. 6¾ ounces of "well-worked merchantable butter."

The queen-finder whose authority we cite in this case, is the same as that of her predecessor, viz., W. Gettys of Athens, Tenn., who makes his announcement in the *Breeder's Gazette* of June 8th. He saw Lily Flagg produce four lbs. 10½ ounces of butter on the last day of her years trial. Her milk for the year weighed over 10,000 lbs., the best day was 50 lbs. 4 ounces, and her best month was 1356 lbs. which made 118 lbs. 15 ounces. Her best weeks record was the last one conducted officially, which made 27 lbs. 12½ ounces of butter. Of the treatment of the cow during the year Mr: Gettys writes:

Her feed consisted of oats and corn ground together, wheat bran and oil-meal. Of this she has consumed during the year's test an average of eight gallons per day with silage and hay in the winter. During the last days and weeks of her test she ate 12 gallons per dav of the above named grain food with a run to pasture. Her appetite and powers of digestion and assimilation are to me as wonderful as her butter record. The test was made under circumstances favorable to the cow. She started with perfect health, in a genial climate, owned by men of liberality in their ideas of feeding, and managed with great care.

It is interesting to recall the steps by which the successive Jersey queens have gained and lost their scepters. The series began with Jersey Belle of Scituate, 705 lbs. 3 oz.; Eurotas, 778 lbs. 1 oz.; Mary Anne of St. Lambert, 867 lbs. 14¾ oz.; Landseer's Fancy, 936 lbs. 14¾ oz.; Eurotisama, 945 lbs. 9 oz; Bisson's Belle, 1028 lbs. 13⅝ oz., and Signal's Lily Flagg, 1047 lbs. 7¾ oz. Who will next ascend the golden stair of Jersey queenship?

It is interesting to note that the present queen is not nearly allied to earlier reigning families. Mr. Gettys' statement is:

Her breeding is plain—so plain that one is at a loss to know to what family she should be assigned. She is called a Signal cow, yet she has only 12½ per cent of that old bull's blood. Her sire, Georgian 6073, although out of Optuna, test 13 pounds for three teats—considered one of the best daughters of Signal—is not known to have any other tested daughters. Her dam, Little Nan, was known to have been a good family cow, but is without a week's test. Without high birth or rich kin she has, by virtue of her individual worth, forged forward into fame and become the founder of a new family. Notwithstanding her plebeian origin, she has demonstrated her prepotency—the power of transmitting her worth to her offspring—for she has two tested daughters, one over 14 pounds, the other over 20 pounds of butter in seven days. She has produced six calves—three bulls and three heifers. All the bulls are dead; all the heifers are living and owned by the Messrs. Moore and Matthews.

This fact will be encouraging to all who own well-bred Jerseys to push forward with their breeding and feeding in hope of reaching the first place, for the first place seems to be that of a democracy rather than a monarchy. The sovereigns are born to rule, but not by accident of birth; the American Jerseys, like the American people, have full encouragement to strive for the highest places upon the basis of merit and actual accomplishment.

It seems to us significant that the honors in the Jersey line are going south of Mason and Dixon's line. When enterprise works with the advantage of genial climatic conditions, similar enterprise under rugged winter conditions is surpassed. Tennessee last year and Alabama this year furnished the Jersey queens. Upon this same line, California should win, for we believe California excels even the Sunny South in environment which favors animal development and excellence. Where are our California Jersey breeders that they do not win such honors for the State and for their herds?

DRIED FRUIT FOR LONDON.—The enterprise of the State Board of Trade in endeavoring to develop an English market for California dried fruits is yielding promising results. At the meeting on Tuesday of this week there was read a letter from Parker, Wellesley & Co., of London, which stated that the profits of all fruits sent from California to England, which had not to pay duty, was 9 cents and 2 mills per pound; and on apricots, plums and prunes, upon which duty was chargeable, the profit was 7 cents and 2 mills per pound. An agent who recently scoured the State for fine dried fruits for the London market could not find any, showing that all had been disposed of, even though low prices have ruled. We can, however, soon produce plenty, and new avenues for its exit are desirable.

Prize Letters on Fruit-Handling.

Do not forget the prize competition, for which letters must be mailed to us on or before July 1st. The following is the general announcement formerly made:

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

Fruit-picking, of course, includes condition of fruit for various purposes, and how to detect it, and proceeds then to the best way to gather it, the best help available, and the best way of regulating pickers, and the outfit to provide them, etc. So proceed with each following act in handling the crop, writing fully and plainly, so that all readers may understand just what your experience approves. Do this for a single kind of fruit or for many kinds, as your experience warrants you in writing.

Do not think, because you are not a large grower or shipper, that your advice is not worth giving. We expect more from small growers than large ones. Even if you do not own an orchard, but have merely worked for others, write just the same. Perhaps your experience in different orchards, and with different methods of work, may enable you to give much good advice. No matter whether you are a subscriber to the RURAL or not, take up the subject if you understand it. We want the fullest, freest discussion of the subject. Never mind about stylish stationery. If nothing else is handy, write on the wrong side of a handbill with a lead-pencil. We are after facts and experience; we do not care how they come or who they come from. The searcher for trustworthy information is not particular from what corner of the realm of truth it is brought to light. We are trying to remove every obstacle from this competition. The prizes of $10 and $5 and the RURAL PRESS for one year will go to the writers who do best on these free terms.

THOSE FORFEITED RAILROAD LANDS.—United States Surveyor John F. Sheehan has prepared the official notification of the opening of the forfeited railroad lands in Monterey and San Benito counties, and will publish it in the Hollister *Free Lance*, of San Benito county, immediately. The notice announces Wednesday, July 27th, as the day when the office will be open for entries of the lands. All land in the tract which is held under Mexican grants will be protected and will not be open to entry. The department in this city advises parties seeking knowledge of the lands to proceed to Tres Pinos, where they can see the country for themselves better than it can be described in this city. Tres Pinos is 101 miles distant from San Francisco by rail, and the fare is less than $3.

THE VITICULTURAL COMMISSION.—At a meeting held in this city on Monday, the following officers were elected for the coming year: President, George West of Stockton; vice-president, Charles Bundschu of San Francisco; treasurer, Allen Towles of Towles, Placer; secretary, Winfield Scott of San Francisco; chief executive officer, C. J. Wetmore; executive committee, I. de Turk, Charles Bundschu and E. C. Priber. The Commission is urging the World's Fair Commission to double its allottment of $6000 for the display of California wines at Chicago next year.

THE FLORAL SOCIETY.—At its meeting held last week, it was shown that the flower show in May, in the Mechanics' pavilion, did not meet the expenses and the amount of premiums, but arrangements were made by which all obligations will be speedily discharged. The Society considered the effort a success, and will push forward for a grander display still at the chrysanthemum show in November. Prof. E. L. Greene, of the State University, read a paper on native ornamental shrubs, which we hope to publish at some future time.

ANOTHER INQUIRY ON ARTESIAN WELLS.—A Washington telegram says that the Census Bureau has issued a bulletin on the subject of artesian wells for irrigation, in which the statement is made that over one-half of the total number of such wells located on farms in the United States are in the State of California. The computed number for the entire country is 3930, and 2060 are in California, three in Oregon and none in Washington. The average area irrigated by one well in California was 18.63 acres, the total area being 38,738.

A WINE FOUNTAIN.—It is currently reported that Senator Stanford has resolved to make an exhibit of California wines on a grand scale at the World's Fair, and has applied for permission to build a wine fountain that shall play for two hours every day California vintages. Sometimes the fountain will spout red wine and often white. No partiality will be shown in the selection of wines, and every wine grower in California will have a chance to advertise himself. The application of Senator Stanford has not yet been answered.

From An Independent Standpoint.

Since the last number of the RURAL went to press, the national Republican party has put before the country its candidates for president and vice-president. As the RURAL has all along predicted, Mr. Harrison was renominated. This was in the nature of things inevitable. Mr. Harrison had the support of the best two-thirds of his party, and his candidacy had the further strength which comes from popular respect independent of party. Nobody denies that the record of his incumbency is one of the cleanest chapters of our national history; nobody doubts his ability or questions his purposes, and everybody admires the propriety and purity of his private life. The objections to Mr. Harrison will be radical, and they will no doubt be manfully put forth during the months between now and November, but they will have their basis in principles and not in personalities. He will be opposed as a Republican, as an advocate of the protective tariff, as an opponent to free silver coinage and probably for many other reasons, but they will be public and legitimate reasons with a basis in principles upon which intelligent and honest men may fairly differ. A campaign urged upon such lines, educates the people and advances their intellectual and moral standards; and is, therefore, of vast benefit to the country. On the other hand, a campaign of personalities, of recrimination and controversy, is a national damage and discredit. Mr. Harrison's nomination goes far toward assurance of a clean campaign and, therefore, from the nonpartisan ground from which we view it, is a happy one. The nomination of Whitelaw Reid for vice-president is the usual concession of the second place to the New York money power. Mr. Reid is an eminently respectable though by no means a great figure. He has a rich father-in-law—D. O. Mills, formerly of California—and rich associates in general, and will roll up a big barrel for campaign expenses. It is the bad habit of both parties to trade off the second place in this way—a habit that reflects infinite discredit upon the political methods of the country.

The opposition which Mr. Harrison met and overcame at Minneapolis was not the opposition of Mr. Blaine. If Mr. Blaine had, at the right time and in the right way, expressed a desire for the nomination or even a willingness to accept it, he would unquestionably have gotten it. He has the affection of the Republican masses while Mr. Harrison only has their approval. But Mr. Blaine did nothing of the sort—he declined in advance to be a candidate and when at Minneapolis his name was put forward it was without his authorization and by a set of men who have no claim to be his special friends. Finding no strength to oppose Mr. Harrison in their own character, they sought to accomplish his defeat by appropriating to their side the great name of Blaine. That this appropriation was unauthorized; that it was in itself a reflection upon Mr. Blaine's integrity, they cared not at all. The fight, we repeat, was not by Blaine but by a coterie of disgruntled politicians who, in their several States, had not been allowed to "handle" the executive patronage to their own notion. A nastier crowd of self-seeking politicians than Platt of New York, Clarkson of Iowa, Quay of Pennsylvania, Filley of Missouri, Thurston of Nebraska, De Young of California and their associates, never set up their claims against the decent public judgment. There have before been powerful coteries in American politics, but never before one so utterly destitute of national purpose, personal talent or private character. In the whole list there was not a man of broad respectibility. They did not represent Blaine and they were not beaten by Harrison—they represented themselves and they were beaten by the overwhelming decent sentiment of the country. It is one of the melancholy things of politics that their humiliation involved something like an affront to the man nearest the heart of the Republican party. But the delegates at Minneapolis saw clearly; and among those who voted for Harrison were the warmest and truest friends of Blaine. It was, in its broader aspects, a fight between the people and the bosses and the bosses went to the wall.

The platform adopted at Minneapolis, like most platforms, was made to placate different voting elements, but it represents the general purpose and genius of the Republican party measurably well. Respecting the doctrine of protection, it is the clearest utterance ever put forth officially by the party. It declares "that all articles which cannot be produced in the United States, except luxuries, should be admitted free of duty, and that on all imports coming into competition with the products of American labor, there should be levied duties equal to the difference between wages abroad and at home." This is plain enough certainly. On the subject next in importance, silver, there is less frankness. It "demands the use of both gold and silver as the standard of money, with such restriction, and under such provisions, to be determined by legislations, as will secure the maintenance of parity values of the two metals, so that the purchasing and debt-paying value of a dollar, whether silver, gold or paper, shall be at all times equal." The meaning of this, when it is carefully extracted from the rubbish of words, is a declaration for the gold standard, with an amiable wish to look out for the interests of silver. Both of the nominees are pronounced gold men, and, taken in connection with this fact, the plank under review affords small comfort to the advocates of free silver coinage. These—the tariff and silver—are the only real "issues," but there is the usual list of party "principles." A "free ballot," is demanded; "certain outrages in the South" are denounced; pauper and contract immigration should be restrained; there is a sop to the struggling Irish and the suffering Russian Jew; trusts are denounced; etc., etc. The only plank directly related to rural interests is as follows: "We approve the policy of extending to towns, villages and rural communities, the advantages of a free delivery service, now enjoyed by the larger cities of the country, and reaffirm our declaration, contained in the Republican platform of 1888, pledging a reduction of the letter postage to one cent at the earliest possible moment consistent with the maintenance of the Postoffice Department and the highest class of the postal service." Nothing is said about the more important matter of parcel postage, by which the postoffice would do cheaply the work now done with heavy charges by the express companies. The plank on the Nicaragua Canal is as follows: "The construction of the Nicaragua Canal is of the highest importance to the American people, but it is a measure of national defense, and to build up and maintain American commerce, and should be controlled by the United States Government." This is about all. The only two planks that really mean anything are those relating to the tariff and silver. In all likelihood, the leaders on both sides will be antisilver men, so the fight, so far as it will rest upon questions of future governmental policy, will be waged as it was in 1884 and 1888, upon the tariff issue.

The Democratic hosts are gathering in Chicago, where their National Convention will be held during the coming week. The division in the Republican ranks, manifested at Minneapolis, has added hopefulness to the Democratic situation, and the Chicago meeting will unquestionably be a spirited occasion. Democratic conventions do not nominate as easily as Republican conventions. A majority vote knocks the persimmon in the latter, while in the former a two-thirds vote is required. The Democratic practice is unquestionably safer, since, under it, it is practically impossible to stampede a convention, or to force upon it a nominee not in sympathy with the majority of its members and of the party at large. All indications point to the nomination of Mr. Cleveland. About half of the 900 delegates have been instructed to vote for him, so that comparatively few uninstructed votes will be required to give him the necessary two-thirds. It is not likely that there will be repeated at Chicago the record of the convention at Minneapolis. It is true that Mr. Cleveland meets with opposition of the same sort that Mr. Harrison has already overcome, but it is not likely to manifest itself in a convention contest. Already the professional politicians and machine workers in the Democratic party have been beaten in the several State Conventions, and it looks as if there would be practical harmony at Chicago, if not in support of Mr. Cleveland, for some other man who, like him, stands for the cleaner sort of politics. We take it that Mr. Cleveland's nomination is practically assured, and that the tickets for the contest of '92 will be the same as the tickets for '88, with only changes in the nominations for the Vice-Presidents, which goes for little with the country. The temptation to follow the Republican lead and give the vice-presidential nomination to somebody with a "pull" on the moneybags will be great; but there are indications that the convention will rise above it and name some Western man, like Boies of Iowa or Palmer of Illinois. If this shall be done, it will give the party a certain advantage in the campaign, though it must be admitted that the public regard is singularly apathetic respecting the Vice-Presidency. If, as we assume, Mr. Cleveland, or some man of his stamp, shall be the nominee at Chicago, it will be another signal triumph of decent American judgment over the "managing" element in our political system, and therefore a most welcome circumstance to those who view public affairs, with the RURAL PRESS, from a nonpartisan standpoint. The best hope of the American people lies in the dominating influence in public affairs of the respectable but unorganized masses of society, whose interest in politics reflects not an appetite for spoils, but a legitimate, patriotic interest in the affairs of the country. In the nature of things, the best sentiment of the country can never be "organized," but, thus far in our national career, it has always prevailed over the powers which, from time to time, rise to oppose it.

On the Fourth of July the National Convention of the People's Party will be held at St. Louis. What it will represent and what it will do are alike uncertain. It is claimed that every State in the Union will be represented in its councils, that a National ticket will be put into the field and that an electoral ticket will be nominated in every State. Present indications point to Mr. Weaver as the Presidential nominee. Indeed he is now about the only available man, since within the past week Col. L. L. Polk, the president of the National Farmers' Alliance and Industrial Union has passed away from earth. It is impossible to have even an intelligent opinion as to the effect of the People's Party movement upon the coming election. A few enthusiastic partisans profess to believe that it will sweep the country and land its nominee in the White House; and, on the other hand, the old party prophets sneer at it as a thing of no consequence. Both are mistaken. It will not sweep the country but it will get votes enough to disturb old-party calculations. The election in Oregon last week, where political conservatism lives in its favorite stronghold, gave the People's Party candidates a vote not yet reported in figures but which the dispatches call "surprising." There will, no doubt, be "surprises" in other States before the year is done.

The death of Col. Polk will be a grief rather than a blow to the Alliance movement. The favorite leader will be missed, but the cause has other able leaders, and it will suffer no check or embarrassment. Col. Polk was born in North Carolina in 1837, and his education was the log schoolhouse culture of the "Forties." Before the war he was a "planter," and in 1860 was elected a member of the legislature. He opposed the war and in the North Carolina Convention made a gallant fight against secession, but when the separation came, he entered the ranks of the Confederacy and became a colonel commanding a regiment. Before the war a man of considerable fortune, he came out of it penniless and took up the work of the farm. He was his own blacksmith and his own carpenter, and held the plow with his own hands. It was this practical experience that fitted him for the work which he was afterward to take up in the interest of the agricultural classes. He was a leading Granger in his State, and from that grew into the wider work of political agitation which he laid down only the day he died. His later years have been given wholly to the farmers' cause, and no matter how opinions may differ as to the political wisdom of his policies, nobody ever questioned the patriotism of his motives or the personal respectability and purity of his character. He was a pleasing and sterling man who deserved fully the high respect which he attained among those associated with him.

The State Press.

Santa Cruz *Sentinel*: "The formation of the League of Progress, an organization of young men who have banded themselves together to rescue California from the monopolies and other evils which threaten her welfare, is a good omen. The young men all over the State are called upon to unite with the central body now being formed in San Francisco."

Salinas *Index*: "The term 'cheap Chinese labor' is fast becoming obsolete in California through the operation of the Exclusion Act, which shuts out importations and makes the Chinese now here masters of the labor situation. The beet sugar farm had contracted the care of its beets this year to Chinamen, but the thinning out and weeding was being neglected and Superintendent Gaffey put on a force of boys to do this work. The Chinamen struck in a body, declaring that they would not be brought into competition with cheap white labor. Gaffey had to discharge the boys, and was absent at Sacramento at the time of your correspondent's visit, looking for more Chinamen."

Stockton *Mail:* "W. S. Hobart left an estate valued at about $6,000,000, which will be divided between his three children. Here is a chance for some social philosopher to arise and ask questions about how these three people are entitled to millions of dollars which they have not earned, and why a graduated income tax should not look after such cases, etc. These social philosophers always do ask such ridiculous and unpleasant questions."

San Jose *Herald:* "Everybody knows that the rates charged by the Southern Pacific Company in this State, taken as a whole, are at least 25 per cent too high. Everybody also knows that the policy of the company, taking it for all in all, is arbitrary, insolent and tyrannical to the last degree. There is not, as a rule, even a pretense of considering the interests, or consulting the wishes, of the people. Wherever a dollar can be squeezed from the public, the squeezing is done, and generally done in such a spirit as to add insult to robbery."

LARGE SHIPMENTS.—Six carloads of fruit for the Eas were sent from this place Tuesday afternoon. This is the largest day's shipment this season, and puts Winters among the prominent shipping points in the State.

Mr. Abbott Kinney on the Canal Question.

LAMANDA PARK, June 12, 1892.

TO THE EDITOR:—The concessions from Nicaragua and Costa Rica and Senate Bill 4827, being a bill to amend the Act incorporating the Maratime Canal Company of Nicaragua, are now before me. These documents modify my views on the canal question. With some amendments the scheme as a whole is not bad.

The situation in a nutshell is as follows: Nicaragua and Costa Rica grant rights of way and franchises for a ship canal. The canal and its ports remain neutral and all commerce passes through without any custom charge or any charge other than the canal company's toll. Each of these Governments give a land grant along the front of the canal, lake and river to the company. This is in alternate blocks extending back from one to six miles. These Governments receive, with certain minor advantages, stock in the company. Nicaragua gets six per cent of the total stock issue. The stock issued to her must be of the par value at least of four million dollars. Costa Rica gets one and one-half per cent of the total stock issue. In case one and one-half per cent of the stock issued would not amount to a million and a half dollars, Costa Rica is to receive stock representing this sum at par as a minimum. The canal company agrees to pay the expenses of the officers of these countries in preventing smuggling and maintaining order along the canal. The company has ten years from April 23d, 1887, to complete the canal. The concession is for 99 years. There is a lease proviso at the end of this time for another 99 years, the company to then pay 25 per cent of its net proceeds to Nicaragua and six per cent to Costa Rica. At the expiration of the lease the canal and all its appurtenances go to these two countries. The canal may be forfeited for various reasons that are not important. One of these possibilities, however, is dangerous—that providing for a forfeiture in case the canal is not operated for a continuous period of six months. This should be amended out, the time for completion should be extended, and, above all, the *concession should be made perpetual and without any reversion whatever.* Each of these countries has one director. The toll charged when it produces a net revenue of more than 15 per cent on investment, must be reduced to this point.

So much for concessions; now for the Senate bill: This provides for the payment to the promotors of all their bills for expenses incurred in the starting and prosecution of the canal, not to exceed four million dollars. The bills are to be approved by a commission duly appointed by the Government to audit these claims. This payment is made in Government bonds drawing six per cent interest. These bonds would be worth about 150 in the market. So the arrangement provides for a virtual bonus above the claims of two million dollars. These gentlemen agree also to receive the company's stock to make up the difference between what the auditing committee allows and seven million dollars. Presuming the stock to be worth no more than par, this would make the total bonus for their work and concessions about five millions. This should be changed to pay, after the bills for expenses have been settled in cash, a further cash bonus to be agreed upon, say two or three millions. They should get no stock, nor should any private person or corporation.

The bill goes on to provide for the issuing of bonds to the extent of $100,000,000 as the canal is constructed and for its construction under the supervision and approval of engineer officers detailed by the Government. It makes the issue of each lot of bonds subject to the approval by these engineers of the work the bonds cover. The stock of the company is $100,000,000. No stock is issued except that already mentioned as a bonus to the promoter and the agreed shares of Nicaragua and Costa Rica. But the companies books are to be open to actual cash subscribers. The Government holds an option on 70 per cent of the stock at par. This option continues until the bonds mature. The money going to the company, should their option be exercised, goes to pay any delinquent interest, or to pay the bonds directly or indirectly, as the Government may elect. The company is protected from foreclosure for five years and consequently would pay no interest for that period.

Supposing the concessions of Nicaragua and Costa Rica to be amended to become perpetual and annulling their provisions for a general subscription to the company's stock and the Senate bill amended to cut out all provision for private stock holding we have this situation. Costa Rica has in stock 1,500,000; Nicaragua 4,000,000; United States 70,000,000.

If we exclude all private holders, which in the extreme case can be done by organizing another company, we have the canal constructed and controlled by the United States Government. All the subsidiary provisions of the bill, such as giving the Government five directors out of fifteen, are both useless, dangerous and ridiculous. If the Government has an arrangement such as is here outlined, it is in a safe and satisfactory situation.

If I am correctly informed, the promoters of the canal have concluded that the business is too large for them, and consequently they are willing to get out. Their organization, literary bureau, conventions, etc., have attracted public attention to the matter, and I do not see why an arrangement satisfactory to the people cannot be made and the patriotism of the canal promoters receive a proper financial phillip as they step out waving the flag and rattling the appropriation in their breeches.

The probabilities are that a straightforward policy on the part of the Canal Company and its special counsel will most facilitate a seasonable settlement. The people are more awake just now than they have been, and while disposed to be liberal, they are not so likely to be deceived by hurrah business as in times gone by. The packed canal convention that refused to hear Marion Cannon was as much a mistake as our old packed irrigation conventions that so disastrously failed in the attempt to control the legislature and judiciary of California in the interest of a private firm.

If a scheme cannot bear the light of free discussion, there is nothing that will so promptly make the fact apparent as a packed convention.

It is equally a mistake in my judgment to present any dodging scheme to hide the bonus for the canal promoters. The people are willing to give a fair bonus. Nothing, however, is more likely to alter this feeling in the present temper of the people than the discovery of a dodger in the bill. The proposal to pay for the work so far done in a 6 per cent Government bond will deceive no careful person. It is a bonus of 50 cents on the dollar approximating $2,000,000 on the deal.

The people want no shenanigan in bonds or company stocks. A clean-cut proposition excluding every one but the three Governments from any control of the canal will meet popular approval and continued support. No other proposal, even if adopted by Congress, has any certainty of being carried to completion; consequently no other should be considered by the real friends of the canal. The promoters scheme is organized upon the usual corporation plan, which is so justly unpopular. There is the Maritime Canal Company of Nicaragua, with Hiram Hitchcock as president and a staff of officers, and then there is the Nicaragua Canal Company with Warner Miller, of the old wood-pulp monopoly, as president. Here is a reminder to drift us back to the doings of the Pacific railroads and their construction companies, with all the wrongs of which they were guilty. But we might as well come back through the smoke of the Railroad Construction Company's burning books and declare, once for all, that any such form of public deception we will never again recognize, much less indorse.

The modifications in the concessions and Senate bill required to give the Government a perpetual control, to exclude all private complications, while giving a liberal price to the canal promoters for their work, and concessions are few and simple. A congressional bill on the lines suggested might be passed to become law on the amendment of the concessions to make these perpetual with an extension of the construction time by Nicaragua and Costa Rica.

This canal will be a great thing for the Pacific littoral. We can expatiate on what it is likely to do for us, but we will never really conceive it in its full benefits until the canal is finished. The opening of the Nicaragua canal will be the opening of an era of prosperity on this coast which no other work can produce. It will move us into touch with the great civilized world. It will reduce the time and cost of laying our goods down in the great world marts, as it will reciprocally take off a similar tariff on foreign goods brought here.

California struggles against both excessive artificial and excessive natural tariffs. Vast distances make natural tariffs against us, and combined monopolies in freight tariffs add their artificial incubus to those gathered at the customhouse. Let us stand together in working for the great relief this canal will give and straighten it into shape rather than oppose it.

ABBOTT KINNEY.

Weather and Crop Bulletin for Week Ending June 13th.

Following is a synopsis of the crop conditions as reported to Director Barwick by the numerous voluntary observers scattered throughout the State, and issued by the State Agricultural Society, in cooperation with the United States Agricultural Weather Bureau Branch:

Humboldt county reports a favorable outlook for most all the crops. In some portions of the county the peach trees are dropping their leaves.

Shasta county reports the fruit prospects as very good in Happy valley.

The Sacramento valley, generally speaking, reports all crops as doing quite well. The hay crop will be a good one, although slightly damaged by the local rains of the 8th and 9th.

Red Bluff reports the fruit crop as abundant and of excellent quality, but from some cause or another (probably late frosts), the raisin grapes are dropping badly.

The same report comes from the Fresno vineyards, the cause of which is unknown.

There has been some damage by the high winds threshing the grain and barley from the heads in the fields that were ripe enough.

As a general rule, the week ending last night has been an extremely cool one for so late in June, and the weather has retarded the rapid ripening of grain, fruits and berries, and prevented a glutting of the markets, which certainly is a good thing for the grower, if not for the purchaser.

About all the fruit that will be more than an average yield will be peaches. Reports from all over the State generally speak very favorably of the prospects.

That the season for hops is a peculiar one, is generally admitted by all people. Conservative and competent judges do not venture in giving an approximate estimate of what the yield will be, owing to the peculiarities of this season, which are something unknown to growers of long experience. The coming weather may materially change the present prospects, either for better or worse. Under the present circumstances and conditions, the prospective yield may now be estimated at about two-thirds of a crop throughout the entire hop-growing districts of the State.

The cry generally goes up all over the State for warmer and more settled weather. Harvesting has begun in a few localities, and will be general over the great wheat belts of the State during this and the coming weeks. Stanislaus county expects to have new wheat on the market by next Saturday, the 18th.

In the Montezuma Hills (Solano Co.) section the grain will be somewhat shrunken on account of the recent hot wave.

Napa county reports that warmer weather is needed to develop the fruits, and that cherries are being shipped East by the carload lots.

Alameda county reports barley slightly injured by the hot wave. Haying is completed and the yield is large. Peaches and prunes are doing well. Pears are scabby and apricots rusty.

In Santa Cruz county, cherries and prunes were greatly injured by the frosts late in May, and barley by the hot wave in May, but the late crops were benefited greatly by the late rains. The wheat and barley yield will be below the average, but oats will be a good crop.

In Monterey county, the cool weather has been beneficial to grain. The hay crop is light, but fruit promises a good yield.

Nevada county reports the cold weather as retarding haying, on account of the slowness in curing.

San Luis Obispo county reports the heavy trade winds as doing damage to beans by blowing them down or breaking them off.

The heavy thunder and lightning storm in San Joaquin county on the 8th did no apparent damage to hay. Grain is slowly ripening, and harvest will be, of course, later than usual.

Stanislaus county expects an average yield of grain. Rye harvesting has been going on for some time, but the grain ripened in spots, thereby making harvesting a slow process.

In Tulare county, the continued cool and rainy weather has damaged all crops in the vicinity of Visalia, but there will be a fair crop of peaches and prunes. All other fruits are short.

Glenn county, in the vicinity of Willows, reports peaches ripening, and the crop will be an unusually good one.

Amador county reports continued cold weather, with streaks of thunder and lightning, which struck in several places in the county. Frosts near Coyoteville have nipped the vegetables, and fires are glowing in the grates. It seems more like autumn than summer. The hay crop in Amador is generally good. The sheep and dairymen are leaving daily with their stock for the mountain ranges, where they will remain for the next three or four months.

The following dispatch from the Observer at Los Angeles shows the condition in Southern California: High westerly winds on the 9th injured the bean crop, necessitating the replanting of the same. The wind blew off some fruit, while the rain in some localities injured slightly the hay that was lying in the fields. Generally the weather has been fair and favorable.

OREGON WEATHER AND CROPS.

PORTLAND, June 14.—The Oregon Weather Bureau in its weekly crop bulletin says the outlook for crops is not of the best. The acreage is about the same as last year, with a preponderance of spring-grown grain. Up to May 20th the prospects were excellent, when a period of five days of hot weather seriously injured the crops, especially in Umatilla, Morrow, Gilliam, Sherman and Wasco counties. It is estimated the wheat crop of 1892 will not be over four-fifths of what it was last year, and the fruit crop will be 50 per cent short, owing to the cold rains of April. The indications are that the hop lice will do more damage than last year. The berry and hay crops are unusually heavy. Willamette valley wheat is quite good. Rains east of the Cascades within ten days will greatly improve the wheat prospects in that section.

THE average girth of trees in Britain is not more than 12 feet, nor the average height above 60 feet. But in New Zealand there are miles of kauris whose average height is not less than 100 feet and whose girth is not less than 30 feet. The largest kauri yet discovered was 70 feet in girth, and the trunk was 200 feet high.

QUERIES AND REPLIES.

Answers to Hay Queries.

SAN LUCAS, MONTEREY CO., June 10, 1892.

TO THE EDITOR:—The correspondence in your issues this spring, on hay-making and kindred subjects, has afforded me much pleasure and instruction, and, with the purpose of lending a helping hand, I will endeavor to answer the Ensenada letter in your issue of May 28th.

1st. The Eclipse stacker I believe to be fully equal to any of its type, though farmers naturally prefer the machine they have used and are familiar with.

2d. I have never found any actual saving, in the use of patent stackers, over the man and pitchfork method—excepting when it is desired to erect an extra high stack of hay or straw. They are very nice machines to have, when the farmer is mechanically inclined and willing to attend to it, or has sons who are working in the field. The machine saves a lot of muscle and heavy labor, but when it becomes a question of hiring men to work with or without the improved machine, I should say, stay with the old fork and wagon every time; for, after figuring on the investment, wear and tear on ropes and machinery, the owner will, as a rule, be out, both in the expense bill and time of work.

A cheap and expeditious way of putting up hay into low stacks, for baling or future moving, is to use a "buckrake," commonly called "go devil." Three men, with one span of horses, can stack a large quantity of hay, in the field where it is cocked, in one day. Farmers cannot be too careful as to their investments in farm machinery; if not, the chances are they will have many white elephants on their hands, in the shape of unnecessary machines. I am of the opinion that a large percentage of the profits of nearly every farm in California is expended in comparatively useless machines.

3d. Hay should not be stacked immediately after raking, and no hay should be stacked in less than one week after cutting. If cut at the right time, there is more chance of its becoming moldy and souring. If the hay is put up promptly after cutting, in good-sized, shapely cocks, and left for a week or ten days, bleaching by the sun will cut no figure, and light showers will not damage it.

As regards Chevalier barley for hay purposes, I would say:

(*a*) It is not better than common barley, excepting when both are grown on very rich, heavy soil with plenty of water, when the growth will be rank.

(*b*) The above holds good as to Bald barley.

(*c*) It is not supplanting wheat-hay, except, perhaps, for farm work horses.

(*d*) It has not the same range in climate and soil as ordinary barley, being affected to a greater degree by heat and cold.

(*e*) It yields less per acre, on an average, than ordinary barley.

(*f*) It does not entirely do away with sore mouth in animals, though less liable to cause the complaint, being of a softer tissue, and lightly bearded

(*g*) It does not equal common barley for grain feed, being exceedingly heating; and, as to yield of grain per acre, it almost invariably falls short, by several centals, of common barley sown under similar circumstances.

S. SHERWOOD.

Letters in discussion of points already published in our hay articles are still in order. There is a prize of $5 for "discussion letters" on hay still awaiting award. Write soon, or the writer of the above letter will get it.

Measure for Weight of Wheat Hay.

MIRAMONTE, KERN CO., June 11.

TO THE EDITOR:—In estimating the weight of alfalfa hay in this district, in the stack, the custom is to allow a cube of 8x8x8 feet for a ton, after 30 days settling in the stack.

Grain hay is of course much heavier, but owing to the fact that but little has hitherto been raised, there exists no rule for measurement nor apparently any accurate knowledge on the subject.

Will RURAL readers kindly inform me what rule prevails among the growers of wheat hay ascertaining the bulk of hay, in cubic feet, required to make a ton, after allowing the stack 30 days to settle.

From two and one seventh acres here we have a stack measuring 24 by 16 feet, and 11 feet high, after making due allowances for averages etc. How many tons of wheat hay is in the stack? G. A. RAYMOND.

Let us have the rules and the computations.

AN OLD PEAR TREE.—Passengers to Lawrence via the Essex branch of the eastern division of the Boston and Maine railroad may see, in passing the high bridge approaching Davenport, a wonderful instance of the vitality of the pear tree, by glancing down into the little hollow on the left. It was planted by Governor Endicott, the first head of the Massachusetts Bay Colony, in 1630, and stands on the once famous colonial "Orchard Farm," within 60 rods, bearing southeast, of the sturdy Governor's mansion. The old tree, a mere shell, with apparently all its inner integuments gone, nothing but the outer bark remaining, and the substance of that split in twain, still stands, and renews again its vernal beauty in a wonderful display of blossoms.

ALL IN ONE ROSE.—Florists are not without their trials and tribulations. An old German florist, relating his tribulations, said: "I have so much trouble with the ladies when they come to buy mine rose. They all wants him hardy; they wants him dooble; they wants him nice gooler; they want him nice shape; they wants him fragrant; they wants him moondly; they wants him everydings in one rose. Now, I have to say to dem ladies, though not what you call an ungallant man, I says that I sees not that lady that is rich, that is young, that is good demper, that is beautiful, that is healdy, that is smart, that is everydings in one lady; I see her not mooch."

THE DAIRY.

The Dairy at the World's Fair.

BADEN, SAN MATEO CO., June 6, 1892.

TO THE EDITOR:—In view of the unusual facilities that will be offered at the World's Fair in 1893, for handling and testing the quality of milk produced by the various breeds of cattle exhibited, the American Shorthorn Breeders' Association has issued a circular to the Shorthorn breeders of America, in which are offered inducements for the encouragement of intending exhibitors, to prepare their best milkers for the coming national contest.

Mr. H. H. Hinds of Stanton, Mich., has been appointed commissioner of the association, for the purpose of securing the necessary cows, and all parties owning Shorthorns possessing unusual (?) merit as milkers are requested to report the same to Mr. Hinds without delay, he being authorized to visit and inspect such herds as may be deemed of sufficient importance.

The association invites the entire cooperation of Shorthorn breeders, and urges upon them the importance of embracing this opportunity of exhibiting to the world the dairy qualities of Shorthorns.

It is pretty generally known that the dairy qualities of the American Shorthorns have, as a rule, been pretty much neglected, yet we will live in hope. All have not neglected them as milkers, and there has of late been some little inclination on the part of a few breeders to develop the milking qualities of the breed, but as this can only be done by milking the cows and hand-feeding the calves, it involves more labor and attention to details than the breeding and rearing of cattle for beef purposes only, in which the best and most economical practice is undoubtedly to let the cows suckle their calves. I know that some men's ideas as to what is a good milch cow are very limited in regard to quantity of milk, and any cow that gives a gallon or two of milk a day more than her own calf will take, up to the time it is six or eight weeks old, is considered to be a good milker.

I hope, for the sake of the breed, that there will be some better cows exhibited at the World's Fair than have yet been exhibited at any State Fair in the Union, for the liberal premiums offered by the association for the best milking Shorthorn cows.

Where will they come from? Will it be from among the high-priced, line-bred, inbred or fashionably bred cattle? No; for, while they may do for highly fed show cattle, they have not the stamina and constitution required to stand the drain of heavy milking year after year, for which there *must* be sound breeding from animals sound and healthy on both sides for several generations back.

What is the breeding of the best milkers that have been awarded the association's premiums in the past three years? Not of the class named, certainly; and, if there has been in some of them a little inbreeding, it seems not to have gone beyond the bounds of prudence, guided by experience, but has probably been practiced a little in order to bring together and concentrate certain good qualities inherent in the family or families. In any case there is not one line-bred or fashionably bred animal in all those worthy the name of dairy cattle. It will be conceded that the quantity of milk and butter produced by some of the cows exhibited was ridiculously small, and not in any way likely to enhance the value of the breed for the dairy, but rather the reverse.

Now, I venture to predict that the majority of the best-milking Shorthorns will be, as they are now, descended from cows that were among the early importations of Shorthorns into this country, and of such families that were scarcely thought worthy of notice a few years ago by the majority of buyers. Yet there were those who prudently stuck to that which they had proved to be good, regarding not fashion for its own sake; only where usefulness was in an animal was worth and merit. This class of breeders are now having their day, whether it be in the breeding of dairy or beef cattle.

To return to the circular; it says: "The school will be in operation during the entire time of the Exposition, during which there will be a number of tests under varying conditions, so far as the methods of handling the milk and cream and the manner of determining the awards are concerned. One period of the school will be devoted to illustrating the methods of handling milk and cream, another period to making cheese.

"All cows must be on the ground not later than May 1, 1893.

"The entire product of the cows will become the property of the World's Columbian Exposition, but this association will furnish (free of expense to the owner) transportation, all stable help necessary for the proper care and handling of their cattle, and the help necessary to milk the same. The Exposition will furnish a liberal supply of water and food commonly fed to dairy cattle."

In the matter of awards, it says: In the three-months test, awards will be made based upon the value of the products obtained, after deducting the cost of the food consumed, and allowing for the increase or shrinkage of live weight in accordance with a scale provided by the chief of the Department of Agriculture. The awards in this test will be as follows:

a. For the best individual cow in each breed competing.

b. For the best individual cow in any breed competing.

c. For the best herd of five cows in each breed competing.

d. For the best herd of five cows in any breed competing.

e. For the best herd.

In the cheese test, the award will be for the best herd competing.

All cattle entered must compete in all the tests except that for young herds, which will be upon the basis of the butter yield, 80 per cent butter fat. Animals competing in the class for young herds must be under three years old, and cannot be shown earlier than September 15, 1893.

The circular concludes as follows: "The Shorthorn possesses too great merit to be left out of it (the contest), and this association is determined to do all it can to afford the various breeders of the country the opportunity to win for the breed the dairy honors which it undoubtedly deserves."

Yes, the Shorthorn has great merit, in more ways than one, to a greater extent than is possessed by cattle of any other breed, but merit is developed according to the channels through which the skillful and judicious breeder has guided its development. If beef has been the end and aim of the breeder, he will have beef for his reward, but, if dairy products, well, then, milk.

California has exhibited as good a cow as any other State, according to reliable reports, for the association's premiums. Will the State be represented at the World's Fair, under the inducements offered to Shorthorn breeders, by an exhibit of milking Shorthorns from any of our herds? Have we got the cattle, the enthusiasm and the necessary pluck for the undertaking? R. A.

HORTICULTURE.

Can Frost Injury be Prevented.

An essay by H. J. RUDISILL at the Redlands meeting of the Southern California Pomological Society.

This is a question that will not admit of a categorical answer, but like many other important queries on horticultural topics can only be intelligently answered when all the circumstances and conditions of the case are clearly stated and understood, nor is it in this as well as in other matters safe to establish a plan of action upon the success of one or two experiments.

Some 60 years ago the medical fraternity were very much at sea as to the best treatment to be given patients suffering from what is now usually named malarial fever, where the use of the old formulas of calomel and jalap was always followed by fearful salivation of the patient, and far too often by great suffering and death. A young physician who was feeling his way along in the treatment of this disease, and kept notes of his practice for future guidance, had a patient who was very low and was begging piteously for something of an acid nature to either eat or drink. The doctor refused it, telling him it would, in his present condition, be certain death to eat anything of the kind. The patient's importunities continuing and his condition becoming gradually worse, the doctor finally told him that if he would assume all responsibility in the matter, he might eat and drink what he wanted to. The conditions were accepted by the patient, and he called for sourkraut, ate freely of it, and to the astonishment of the doctor and friends soon got well. The physician made note of it in his memoranda, "that sourkraut was efficacious in certain stages of malarial fever." His next patient passed through all the stages of the disease under the usual treatment, until he was at death's door, but had not asked for anything sour, nevertheless the doctor thinking that sourkraut had succeeded so well in the other case he would upon his own responsibility prescribe it in this, and did so. The patient ate of it and died.

Unfortunately for science and the medical fraternity, the first patient was a German and the last one an Irishman, and the doctor permitted his judgment of the efficiency or inefficiency of the prescription to be influenced by a question of nationality instead of investigating more thoroughly the true cause of its failure to act alike in both cases, and amended his notes by the statement, "that sourkraut was good for a German in certain stages of malarial fever, but not good for an Irishman."

Horticulturists too frequently jump at conclusions in a similar manner, but as they have in semitropical California comparatively new fields for investigation, and grand opportunities for the continuous study of all the conditions of plant life, as well as for the study of the many new obstacles to successful horticulture, they will not be excused from hasty judgments based upon false premises. They occupy here a magnificent domain, in fact a territory where the forces of nature are more directly under their control than in any other portion of the United States. They have soils of unsurpassed fertility that will grow successfully everything that can be produced in semitropic as well as temperate regions. They can check the torrents in their mad career through the mountain passes and lead them over hills and through the valleys, and compel them to give life and beauty to the desert plains. They have a climate whose extremes of heat and cold are not excessive, and from the injurious effect of which they can in average seasons protect their plants and fruit.

Possessing all these, wherein lies the answer to the question of preventing injury to plants and fruit from frost by irrigation? First, in my judgment, is the preparation of the plant to resist frost. In localities subject to early frosts, say about the latter part of November, I would neither irrigate, fertilize or cultivate late in the season, but do this work early and as much as possible secure a strong and vigorous growth, and have it matured before there is danger of frost. A healthy vigorous tree with matured wood will stand both a much lower and higher temperature than one in a weak or immature condition. We find this is true of animal life also—the strong and vigorous withstanding the changes of temperature much better than the weak and sickly.

Under our irrigation systems water can be given or withheld at pleasure, and the growth should be continuous until such time as you desire to check it. I have found in several instances that witholding the irrigation that is usually given about the middle of September, checks the later fall growth, and enables the trees to mature their wood. But care must also be exercised in this, and if the rains do not appear at the usual time in the fall or the trees indicate a want of water before the rainy season, they should be irrigated, as it has been found that trees suffering from a want of water are as susceptible to frost injury as those growing too freely.

Some years ago the Riverside Land and Irrigation Company budded several thousand seedling orange trees that were in orchard in the lower Arlington district. The buds grew finely and as the season was warm and dry, they were cultivated and irrigated late in November, when an early frost caught them, killing thousands of the buds and hundreds of trees to the ground. In the midst of this territory was a ten acre tract of seedling orange trees of the same age and average condition. The owner budded them also at the same time the others were, and cared for them until he was called East, about July, leaving the care of the orchard for the balance of the season to a young man who cultivated and irrigated it in August, and then went to the seashore for a vacation. He omitted the usual September irrigation and cultivation, and did not return till October, when the buds showed that their growth was checked and that they needed water. It was given but it did not start them into growth again that season, and when the frost came in November they were not injured at all though those all around them that had been kept growing quite late were greatly damaged. In Colorado it is found that late irrigated decidious trees are very much injured in both bud and branch by the severe frosts. Whereas if the irrigation is withheld early in the fall to enable the trees to mature before their winter season sets in, they go through it without injury.

Late spring frosts, when following a dry winter with occasional hot spells, are liable to catch the trees in a premature growth, and cause considerable injury. The red oak, which grows as far north as Manitoba, and endures a temperature of from 20 to 50 degrees below zero, cannot be considered a tender tree, while the orange is; yet in March, 1890, a freeze occured in Mobile county, Alabama that killed the red oak, but it did not injure the orange trees much. The cause of this was that for weeks the weather had been warm. The orange, which there scarcely stops growing in winter, was well along in maturing its seasons growth, while the red oak, always tardy at starting, had been forced into that tender budding state which freezing hurts much; therefore, if the winter is a dry one, I would recommend irrigation to retard the growth, which it will do if not followed by cultivation.

For a second answer, to prevent injury from frost, I would recommend a stream of water running through the orchard, as a protection to plants and fruit, when a frost is threatened. The use of a tub of water by our mothers and grandmothers, to protect their house plants from freezing, is no doubt remembered by the older members of this society. The influence of large bodies of water in protecting vegetation for a considerable distance inland, and the testimony of our Mexican predecessors and the older residents of Southern California, that wet winters are warm and comparatively free from frost, all go to show the prevalent opinion of the influence of water in mitigating the effects of the frost. This influence is due to the heat evolved in the cooling process it undergoes in reaching a freezing temperature. Starting with water at 60 degrees Fahrenheit, reduced to the freezing point; releases some 30 degrees of heat, which must necessarily influence the temperature of the surrounding atmosphere, and to that extent prevent injury, and the greater the area of water exposed, the further the influence extends. If water could be turned loose in the orchard during nights when frosts are threatened, I believe it would be found efficacious in protecting both trees and fruits from injury, and the more freely it could be used, the better the result.

Some experiments of this kind have been made at Riverside by a few individuals with favorable results, but, to test it thoroughly, the condition of the trees must be noted, and several neighbors should unite and apply it upon 100 acres or more in a body, for the larger the area experimented upon, the greater the amount of latent heat released.

Possibly experiments have been made in other irrigation districts, but, if so, I have not found in my general investigations any report upon the subject.

In treating of this subject, I of course refer to frost as indicating a temperature of not lower than 24 or 25 degrees Fahrenheit. When a fruit-grower has neglected his trees and plants, or when the temperature drops to 18 or 20 degrees, it will require other means than the use of water by irrigating to preserve from injury, and, if the cold is prolonged for many hours, at this low temperature, it would probably be impossible to protect them from injury by any means now known to the horticulturist.

Orchard Devices.

A correspondent of the *Record Union*, visiting in San Joaquin county, sends the following notes from Senator Langford's ranch.

The senator's son George, is in charge of the place, and is determined that no weed shall be in sight when his father returns from the East. He showed me a San Jose truck with bent axles that bring the platform, mounted on good springs, within less than 20 inches of the ground. It has two separate reaches, crossing each other under the bed, extending from the left end of the front axle to the right end of the hind axle, thus causing the hind wheels to follow the tracks of those in front, no matter how you turn. This permits of using so long a platform even between rows of trees that you need not pile the boxes upon one another when hauling a large load. With its wide tires and easy springs this leaves little to be desired in an orchard truck.

Senator Langford's younger son is studying mechanical engineering at the Stanford University. For some time I have been looking over drying establishments, questioning fruit-men and trying to find or invent a device for raising a load of trays from the truck when it runs into the sulphur

box. I found it at Langford's, and found that it was the invention of his son.

The truck should be made about six inches narrower than the length of the trays, so that they may project three inches on each side when loaded. As the truck runs into the sulphur-house there is a scantling on each side of the truck resting on hinged legs that carry the load an inch higher than the platform when they are perpendicular. Near the back end of each scantling is a stop, against which the load strikes and carries itself up, grasshopper fashion, by the momentum of the load, until the hinged legs have passed the center and the load rests on the scantlings and against the back end of the house and the truck is free for other uses while the load of fruit is in the sulphur-box.

It is a good idea, and valuable to those who have that kind of work to do, in proportion to its simplicity. When you want to load the trays on the truck again, all you have to do is to run it under and pull hard enough on the stack of trays to swing back the grasshopper scantlings over the the center on their hinged legs.

The Langford sulphur-houses are on a brick foundation, with a little cellar two feet square and two feet deep, nicely bricked up and connected with the house by a flue. Here they burn the sulphur without any danger of setting fire to the house, provided they replace their wooden cover with one of iron, or line it with asbestos.

FRANK S. CHAPIN.

Thinning Fruit.

T. S. H. writes to the Pomona *Progress* as follows: I want to tell your readers something about the way the best and most successful peach and apricot growers in California thin their fruit. In St. Helena, San Jose and Vacaville during the past ten days, I have seen hundreds of white men and Chinamen busy thinning the fruit crops, although the yield there will be short. In the great Spencer orchard of 135 acres at St. Helena, I saw 70 men at work thinning the apricots. I saw fully 20 tons of young green apricots that had been pulled from the trees, and was told that as much more of the green fruit would be taken from the branches. I saw a small army of men and boys in the hundreds of orchards about Vacaville, all pulling green apricots and peaches from the trees, and there were big piles of the young fruit in every orchard. The rule in Vacaville and that region, is to leave enough fruit on the ten-year-old trees to make 200 pounds of fruit when it is ripe in July or August. In this way the trees are never allowed to overbear, and the grower gets steady returns from his property year after year. The workmen leave a space of two to three inches between each growing peach and apricot, or, in other words, they leave the distance covered by a man's four fingers between the growing fruit. In San Jose I saw literally hundreds and hundreds of green apricots and peaches lying under the trees where they had been thrown by the men who were employed to thin the crops.

"We people here have raised deciduous fruits for over 30 years," said a rich orchardist to us at Vacaville "and our long experience tells us that it is just as necessary to thin our fruit each year as it is to pick it when it is ripe. We look upon the man who allows his trees to overbear as a fool and a disgrace to horticulture. The trouble with Southern California deciduous fruit growers is that they are too new and young in the business. We make a science of fruit-growing, while Southern Californias are experimenting and hate to pull off green fruit from their trees. Your orchardists will, however, soon come to the conclusion that a systematic thinning of some fruits is the best. A ton of big plump fruit is better for the grower than a ton and a half of poor, small and measly fruit."

Pinching in Nursery and Orchard.

I. H. Thomas of Visalia has for some time been working upon the idea of forming the heads of his young trees while in the nursery. By this method the planter, instead of cutting them back to within 15 inches of ground in order to have the three buds next below throw out leaders for the main branches (as they do in the vase system of pruning), has his leaders already formed and is practically one year ahead, so far as fruiting is concerned.

This plan is specially adapted to the rank growth of stock secured in such rich land as Mr. Thomas' nursery is located upon, where he grows such trees that many nurserymen would take oath that his yearling trees were two years old.

When the buds have reached a little higher than the point where he wants to form a head, he pinches back the terminal and causes them to throw out side branches. These he checks with thumb and finger, from time to time, until he has trees formed upon the vase system in the nursery, and so avoids the common tronble of growing a large amount of wood to be thrown away. Perhaps this system might not give so good satisfaction in places where trees made only average growth. To avoid the trouble of handling such large trees as grow in that locality, his neighbors who run the Giant Oak Orchard and Nursery, are propagating June buds, principally intending to sell the trees at one year from the pit.

Mr. Thomas informed me that he was trying the plan on his young prune orchard. When the laterals had grown to the point where he would naturally cut them back next winter, on the old system, he pinches off the terminal, and so gets the side branches that he wants this year instead of next.

Possibly this system might not give laterals and branches sufficiently stocky to form a good head in soils that gave an average growth, but in soils that will grow a bud from ten to twelve feet in one year, as some of the Tulare and river-bottom lands do, it is more than half likely that Mr. Thomas is on the right track. His experiments will bear watching, and I hope to visit his orchard often enough to keep our readers posted upon the success of these experiments.—Frank S. Chapin in Record Union.

THE VINEYARD.

The Manufacture of Vinegar from Wine

Wine or any other alcoholic liquor of moderate strength will, if left to itself in contact with the air, ultimately turn into vinegar, the alcohol absorbing oxygen, and being thus transformed into acetic acid through the aid of a microscopic organism. This process, however, is too slow to admit of its being adopted in practice, and several methods, having for object the more rapid oxidation of the alcohol, are had recourse to.

In France, three principal methods are adopted, which may be enumerated as follows:

1. The Orleans process.
2. The German process.
3. The Luxembourg process.

The Orleans process is the one which was formerly the most used. It enables excellent vinegar to be made, but is somewhat slow.

In the first place, the temperature of the building in which the vinegar is to be made must exceed 70 degrees Fahr. Provision must also be made for good ventilation. In this building the casks in which the vinegar is to be made are placed. These casks, capable of containing about 100 gallons, have a hole about six inches in diameter made in the upper part of the front head, in order to admit air. About 25 gallons of good, strong vinegar are placed in each cask, to which three gallons of the wine to be acetified is added every week until the cask is half full. It should then be left alone for a fortnight, by which time it will be converted into vinegar. One-half of this is then racked off, and the same process gone through again, care being taken to always leave 25 gallons in the casks after each racking.

The German or rapid process differs considerably from the above, and consists in causing the wine, heated to 80 degrees Fahr., to trickle slowly over shavings in a cask, in presence of plenty of air. The wine should be passed three or four times through the cask, when the acetification will be complete.

The Luxembourg process is a modification of the former one, and consists in leaving the liquid in contact with the shavings—for which marc (the refuse of the vintage) may be substituted—during the day, while this is exposed to the air during the night. This result may be brought about in different ways. Two casks may be employed—one containing the marc, and so arranged as to allow of the entry of air once the liquid has been removed, and the other as a reservoir for the latter during the night.

Another process which gives very good results is to place the wine in rotating casks which are filled with shavings. These casks are only one quarter or thereabouts filled with the wine to be treated, and an opening is provided in the center of each head to allow the free entry of air. These casks are turned round once every three hours, thus bringing fresh portions of liquid in contact with the shavings. Although not so rapid as the German method, this process is sufficiently so for practical purposes, in addition to which it presents the advantage of causing less waste. With the German process the loss through evaporation may become considerable.

The first, or Orleans process, is the one which produces vinegar with the best flavor and aroma, as the volatile perfume ethers formed are less likely to be lost through evaporation.

When making vinegar, it is well to see that the wine does not contain more than 20 per cent of proof spirit. If necessary, it may be reduced by the addition of water.—Australian Vigneron.

FRUIT PRESERVATION.

A Suggestion for Dipping Prunes.

Many RURAL readers will hear with regret of the illness of R. B. Blowers of Woodland, so well known for his progressive work in horticulture. Even in his illness he remembers his friends in the fruit interest, and recently gave F. S. Chapin the following for a letter to the *Record-Union:*

In dipping prunes it is desirable that the alkaline wash should be hot, and of about the strength given by one pound of concentrated lye to eight gallons of water. The prunes should remain in the hot dip just long enough to crack the skin, then be at once rinsed so thoroughly as to remove every trace of alkali, and finally run into three or four grades before drying. The proposition is to combine appliances calculated to handle several carloads per day in this way.

In the first place, suppose we have a galvanized iron tank, with sloping ends, 12 feet long, 3 feet wide and 2 feet deep, mounted on a brick arch with solid supports. Ten barrels of water and 50 pounds of concentrated lye would fill it a little more than half full. Then we could have an endless belt made of wire cloth, or similar material, to run over rollers so placed as to carry the belt through the tank under the dip and deliver the prunes upon a similar belt that should carry them through a bath of clear water.

The second belt should deliver them to a third, which should carry them over a dripping pan. While the fruit was passing over the third belt he would have a hose throwing a spray of fresh water over them and the dripping pan would be arranged to carry this water back into the rinsing tank. From the third belt they should run over a grader that would assort them into proper sizes before they went on the drying trays.

The speed of the belt could be so adjusted as to keep the prunes under the alkaline bath as long as desired—a thing that cannot be exactly regulated by appliances in use—and as they generally need to remain under about half a minute, and it would take more than 50 pounds of prunes to fill such a belt one deep, one may safely calculate the capacity of such a device at 100 pounds a minute, or three tons per hour, or a carload of dried prunes per day. It would take help enough to put them into the machine, keep up the fire and spread it on the trays. In other words, you touch the button and the machine will do the rest, and do it right.

FRUIT MARKETING.

Dried Fruits for the English Trade.

Campion Goodsell & Co., Lt., of London, have issued a circular on Californian evaporated fruits, from which we quote as follows:

As we have already advised you, the fruit which commands most attention is apricots, and the sales during the past few weeks have been sufficiently important to almost clear the market of this kind, and it is quite possible that a few more may be required to supply the probable demand before the close of the present season. We, ourselves, have effected a few sales at 50s., but the price at which most contracts have been put through is 48s. per cwt., and, if these prices offer any inducements for old stock, we should recommend our friends to make us some shipments.

With regard to the new crop, we are taking steps to create a demand "to arrive," and we should be glad to receive offers of apricots and other fruits for shipment during next season on cost, freight and insurance terms, as we think it more than probable that we may be able to put some contracts through with our buyers, and this will no doubt greatly facilitate the business for shippers.

For the guidance of our friends we beg to say that the kinds of fruit which are principally in demand are the following: Apricots, pears and apples (both in rings and whole). Silver prunes (unpitted) have also been in good demand, and during last season a fair quantity was sold at from 65s. to 70s., although this fruit is not likely to command the attention which apricots, apples and pears are likely to receive.

Silver plums and peaches are almost unsalable, and we do not recommend any shipments of these kinds, while nectarines only command a fair sale.

PACKAGES.

We have been requested by several of our friends to give our opinion as to the size of package most suitable, and we have no hesitation in saying that boxes of 25 lbs. net, as showy as possible, are liked better than anything else. A little expense in getting up these boxes, giving them a taking and showy appearance, will, we feel sure, be recompensed in the proportionately better price they are likely to obtain. Apples may be packed in boxes of 50 lbs. net, and perhaps this is the most suitable package for this fruit.

Dried fruit in bags and sacks is almost unsalable, and we strongly recommend our friends to ship nothing in such a package for this market.

We find that a good deal of doubt still exists in the minds of some shippers of Californian fruits as to the duty to which they are subject in England, and we take this opportunity of pointing out that apples, pears, peaches and nectarines are quite free and pay no duty whatever on entering this country. On the other hand, apricots, prunes and plums are liable to duty at the rate of 7s. per cwt.

Ventura Apricot Growers.

What are we to do with our apricots? is the question that now confronts the growers of that delicious fruit. There is a large crop this year in this county, but it is exceedingly small in other apricot-producing sections of the State, particularly that portion adjacent to and north of San Francisco. As a whole, probably, the yield of the State will be less than that of last year. There is no reason why prices should fall short this season, as there is no pretext of an oversupply. Buyers, however, have been a little tardy about coming into the field, though some offers have been made at figures not altogether satisfactory to growers.

The present crop of this county is estimated at about 4000 tons, and the handling of it is a question which is just now perplexing the minds of our orchardists. In view of this dilemma, a meeting was held at the courthouse last Saturday, at which was organized the Ventura Apricot Association, comprising 24 members, and more, we understand, are ready to join. The officers of the association are: President, A. Everett; vice-president, J. M. Sharp; secretary, T. G. Morrison; treasurer, Charles Barnes. The subject of handling the present apricot crop was informally considered, and the preponderance of opinion expressed was that the better policy would be to dry the fruit by a cooperative system, or other plan, right here at home. It was claimed by several present that the apricot could be sun dried anywhere hereabouts that space could be procured, as well as at Newhall or other remote points, the process being a little slower on account of the damper atmosphere nearer the ocean, but the cured fruit would be equal in quality to that prepared at any other place.

It has generally been believed that the fogs and dampness characteristic of the coast weather would present an insurmountable obstacle to success in that direction, but parties who claim to derive their knowledge of the matter from experience say there is substantially nothing in it; that apricots can be dried near home as well as elsewhere, except, as a rule, it will require longer time.

No definite conclusion having been reached in regard to future action in the premises, the association decided to hold another meeting, at the same place, at 2 P. M., Wednesday, June 8th, when the subject will be fully discussed and probably some decision arrived at.—Democrat, June 4th.

THE FIELD.

Our Duty to the World's Fair.

An essay read at the Redlands meeting of the Southern California Pomological Society by MRS. FLORA M. KIMBALL of National City, and a Member of the California Board of Lady Managers.

In a convention like this, where interests are identical and all have purposes in common, we are wise in taking counsel together on the most important question for fruit growers that has ever been presented to them. The opportunity of the century is offered to us to show the world what are our resources, our climate, intelligence, energy and our probable future. To do this successfully, we must exhibit that in which we excel. We have but three great industrial specialties—fruit-raising, agriculture and mining. We lack the manufacturing interests of Pennsylvania, New York and Massachusetts. A display at the World's Fair of manufactured articles will be overshadowed by these States, but with a backing of our products of the soil and our mines, California may stand at the head of the long list of States and Territories. Her exhibit next year will be a remarkable one—remarkable for its great excellence and the favorable comments it elicits, or remarkable for its meagerness and the unfavorable advertising the State will receive. There is something in the atmosphere of California and the magnetism of the people that produces extremes. There is little ordinary work done here. Great failures or grand successes are constantly being heralded from the moaning pines of Maine to the golden shores of the Pacific. And so the eyes of the world are always turned to this distant, western outpost of the Republic in expectant waiting for some extraordinary development. Already the newspapers in their chatty, journalistic way, are speculating on California's exhibit at the World's Fair, the great distance of transportation, the perishable nature of some of our products and the irrepressible energy of a people, to whom space and obstacles are like thistle down in the wind. Thousands are waiting to see what California reproduced in miniature in Chicago will be like. If it gives promise of the future, based on substantial merit, the most conservative and careful will not hesitate to cast their lot with us.

We cannot escape the conclusion that upon the fruit growers of California depends the success of our display next year. Upon the products of our orchards we must rely for an exhibit that will meet the expectations of the world. From the luscious berries of Del Norte to the golden oranges of San Diego, from Oregon to Mexico is every variety of fruit that can be grown wherever the genial sunshine is supplemented by the showers of heaven. Figs from the Mediterranean, olives from Spain and Italy, fruits of the Orient, pineapples and bananas from the tropics, and all the fruits of the temperate zone, have made us famous the world over, and bear unimpeachable testimony to the magical power of our climate. Climate is the grand boast of all loyal Californians, and we have no other way to exhibit it in Chicago except by a presentation of our perfect fruits. Some genius has suggested that a building at the Word's Fair be set apart to advertise California climate, the temperature to be regulated each day to accord with weather reports from here. Infinitely more convincing would be the product of our climate, fruits rivaling in excellence those of the famous health-restoring countries of the Old World. With the assurance demonstrated by the fruits of our orchards, that this State excels all others in her genial climate and productive soil, the home seekers, waiting in expectance for the judges' verdict in Chicago, will turn their faces toward this sunset land—not wild men led astray by a false alarm, but rational men and women who have seen the proof that no State in the Union can furnish equal facilities for making good and happy homes.

Population is the great want of the State, for population increases the production of the country, and increased productions bring increased facilities for transportation, and the only way to bring about an era of prosperity is to advertise in the most practical way to attain this result. All the fir and tamarack of the Sierra Nevada mountains converted into paper, and the paper covered with glowing accounts of California's incomparable resources, would have less weight with thinking people than one carload of California's best oranges arranged to catch the eye of visitors in our State building in Chicago.

France, with a population of 200 to the square mile, supports a population of 40,000,000, her chief industries being fruit and silk-raising, both products of the soil. California, with only a population of seven to the square mile, in the same ratio, ought to maintain a population of 31,672,000—28 times as many as she now supports in the State. To acquire this number of people is largely the mission of fruit growers, whose occupation, of all callings, is most enticing.

But I fancy that sometimes we press the fruit growers a little too hard. There are fruit growers and fruit growers. Men with small means, small ranches and large indebtedness may have the most excellent fruits, and we are frequently admonished that we must exhibit only the very best. We are as proud of our neighbor's fruit as of our own, and are as pleased to point it out in an exhibition as coming from our neighborhood as if it had grown in our own orchard. And so, when local or distant fairs are contemplated, we go at once to the producer of a superior article and pay him the compliment of soliciting his best fruit for exhibition. If we are refused, we are apt to say something personal about somebody's being unpatriotic and lacking in public spirit. The banker, the merchant, the professional man, the well-to-do artisan, are exempt from contributing, while the small fruit grower, whose industry, intelligence and self-denial have brought the grades of his fruit to a high standard, is never passed by. This is hardly just, and while every fruit grower in the State who has something worthy of exhibition ought to contribute to the great display next year, the small growers should be protected from actual loss by the moneyed men who will share the benefits arising from the exhibit.

Southern California cannot afford to hide her light under a bushel. We want the world to know that thousands of carloads of the finest oranges, lemons and raisins under the sun were grown on the desert wastes of 20 years ago. We want it to go out to the world that there are many thousands of other desert acres susceptible of the same magical transformation; that Southern California can easily do what the vast State did in 1890—load 2435 cars with dried fruits, 48,700,000 pounds.

The "wise men of the East" have visited us by thousands, quill in hand, and recorded stories more wonderful than the tales of the Arabian Nights, about the size of our pears, the beauty of our apples, the lusciousness of our oranges, grapes and apricots; and other wise men have staid at home, read these tales with an incredulous smile, and charged the exaggerations to the exhilarating effect of our wines. The doubters will be in Chicago en masse, and we all want to be there to see their confusion when they discover that the truth was not half told.

Not only the fruit but its products should be shown to the best advantage. The women of the State are already devising schemes that will call into exercise their ingenuity and artistic taste. A jelly palace, with contributions from every county, and every kind and shade of jelly, from the ruby red guava to the delicate apricot, will be a fitting tribute to the good taste of the women of the farm. Other and more elaborate designs are contemplated and will be carried out if the question of finance does not prove insuperable. The wit of women will serve the State a good purpose at the Columbian Exposition, but in no industry will it be more strikingly displayed than in the arrangement and presentation of our fruits and their products.

Our duty as fruit growers is to make the most of this opportunity that may not present itself again in half a century. Raisins surpassing the Malaga, crystallized fruits rivaling the finest imported confections, marmalades and jellies, fruits dried, preserved and canned, will open the eyes of wondering millions, if men and women work together for the same object.

Every town and village in the State should have its Woman's World's Fair Society, auxiliary to and working in conjunction with the county organization. In some sections of the State women are organized and enthusiastically at work, and there is where you will find the county organization strongest, and there will be found the best and most carefully prepared exhibits.

Since the day that Isabella pledged her jewels to aid Columbus in the discovery of a new world, men have found that the inspiration and help of the queens at their firesides was indispensable to success, and as we celebrate that historic incident, no more fitting tribute could be paid to the memory of the Spanish Queen than a royal exhibition of the finest fruits of this new world, that will win for us Columbian laurels, and teach the nations of the earth that California lesson we so delight to rehearse, that

"The same mild season gives the blooms to blow,
The buds to harden, and the fruits to grow."

THE PUBLIC LANDS.

A Forfeited Land Grant to be Thrown Open.

Many land seekers are deeply interested in the forthcoming order for the opening of a large tract in San Benito and Monterey counties, and the interest has been increased by the action of the Secretary of the Interior in ordering the publication of the legal 30 days' notice of the carrying into effect of the Land Grant Forfeiture Act, as far as the Southern Pacific grant between Tres Pinos and Alcalde is concerned. The fact of the issuance of the order was telegraphed from Washington, Saturday, and Registrar Sheehan of San Francisco expects to receive his official instructions some time next week. Just what these instructions will be he cannot now tell, but if the publication be ordered immediately that portion of the forfeited lands not already occupied will be opened for occupancy about July 15th.

The land in question, comprising about 768,000 acres, was granted to the Southern Pacific Co. by Act of Congress passed in 1866, which gave the company every odd section included within 20 miles on either side of the line of the road which was to be built; and if in this 20-mile limit were found any land previously taken up by settlers, the road could claim in lieu of this land to the same amount within a limit of ten miles farther on either side of the 20-mile limit, thus making the company virtual owner of every odd section not previously claimed in a stretch of territory 60 miles wide and as long as the line of the road. The Government claimed that the company had not fulfilled its contract to complete the projected line of road in several instances, and the Land Grant Forfeiture bill of September, 1890, was based upon this claim. It was the original intention of the Southern Pacific to construct a through road from Hollister and Tres Pinos south by way of Huron and intermediate points. The road, however, has not been constructed beyond Tres Pinos, and there is a big jump across San Benito and Monterey counties to Alcalde, where the road from Huron finds its termination.

It is the 60 mile strip between these two points that the Secretary of the Interior now orders forfeited. The railroad company raised the point that the original grant specified that the land should be its along the line where it intended to build a road and that the Government had no right to pass a law taking away the land simply because the road had not yet been completed between the points named. Pending the final settlement of the question there has naturally been great uneasiness among the many settlers on the land as to the validity of their titles. The forfeiture bill of 1890 was supposed to have settled the question, and a great many new settlers began at once to take possession of the odd sections referred to. The points raised by the road, however, were carefully considered by the Interior Department, and the Secretary has only now seen fit to overrule the company's claim and to promulgate the order of forfeiture.

As a matter of fact, there is not a great deal of desirable land unoccupied in the forfeited sections, so that there will not be another Oklahoma rush when the 30 days' notice shall have expired, but the present settlers will then know what they have to do to establish their claims, and new settlers will have something definite to act upon. Under the provisions of the Forfeiture Act all settlers who were in good faith located upon any of the restored lands at the time of the passage of the Act, September, 1890, and who were otherwise qualified, will have preference of the rights of entry under the homestead law, this right to be exercised within six months from the day of the promulgation of the order of restoring the lands.

Former rejected applications cut no figure under the new conditions, but persons with applications pending will no doubt be notified of the necessity of their making new applications. The Land Office and a good many lawyers have been besieged with inquiries from settlers and intending settlers ever since the passage of the Forfeiture Act, but it has heretofore been impossible for any satisfactory answers to be made, and even now it will be necessary for the Registrar of the Land Office to receive his official instructions from Washington before any further steps can be taken.—San Jose Mercury.

ENTOMOLOGICAL.

A Californian Meets Mr. Koebele in Australia.

MELBOURNE, May 11, 1892.

TO THE EDITOR:—It will doubtless be of interest to many of your readers to learn of the success of Professor Albert Koebele in discovering in this country parasites or beneficial insects preying on our most troublesome fruit tree enemies.

I accidently met him in Sydney, New South Wales, April 27th, and as I knew his mission here, I urged him to show me his specimens, which he did on the following day, and I can assure you they are a welcome sight to those interested in horticulture. I asked him to give me a short account of his work and success, as I had heard conflicting reports in San Francisco and Los Angeles before I left there.

Since he left San Francisco he has been in the Sandwich Islands, New Zealand, Queensland, New South Wales, Victoria, South Australia, and he is now in the Fiji Island or New Caledonia. In all, he has traveled over 16,000 miles, and has prosecuted his work in the driest portions of Australia, as well as in the tropical regions, and in heat of 116° in the shade at one time, experiencing at another time a rainfall of 17 inches in one storm; but in spite of hardships, he looks in good health and is enthusiastic over the value of his discoveries of beneficial insects since he left San Francisco. Up to the time I saw him, he had in all over 60 parasites for our most troublesome scales, and is "positive" that, with their successful introduction, our fruit growers, *in five years' time*, will be saved the trouble and expense of spraying and gasing their fruit orchards, and why should this not be so? The Australian beneficial insects or parasites have enemies in this country which they will not have in California, as they are not indigenous there, and should have their natural increase, which should be like the increase of the "cardinalis," which has proved so valuable for destroying the cottony cushion scale.

The lady-bird, *Orcus Australis*, of which he has specimens, is a *general feeder* on all *scale* and *aphis*, and should prove one of the most beneficial insects. He has found a large variety of enemies to red scale (including one fungus) preying exclusively on it. He has also found many enemies for the San Jose and black scale, and besides the above, many varieties of moths and fungus that live on all our California scale and aphis, and three insects that prey on grasshoppers, but the season was so late when he found the latter that he could not make successful shipments of them.

Several shipments of beneficial insects have already been made by him to California, none of which have been as successful as he desires, but he will continue to forward by steamer duplicate shipments, and with the hearty cooperation of his colaborers, he is confident of their successful introduction. So far, he has not found a parasite for the codlin moth, and is of opinion that it will be found in Europe, as it is a native of that part of the world. There is where he wants to go and look for it, and he should certainly have the opportunity presented to him by the fruit growers of California (if not sent by the Government).

It is to be hoped that he may be spared to the world to carry out his life's work, which has begun so successfully. The trip he is making to New Caledonia is a dangerous one for his health, particularly on account of his enthusiasm, which will expose him where, in ordinary pursuits, there would be but little danger. CHAS. E BLAKE.

DAMAGE BY DESTRUCTIVE LOCUSTS.—Dr. C. V. Riley, U. S. Entomologist, has just issued an important bulletin on the above theme. The season of 1891 was marked by widespread alarm felt at the presence in force of several species of destructive locusts in different parts of the country, and particularly in the Western States. A general summary of these incursions was given in Dr. Riley's annual report for 1891, and in this bulletin are brought together the detailed reports of the agents who were sent into the field and who carefully examined the country from which locusts were reported. Mr. Bruner visited portions of Colorado, Wyoming, the Dakotas, Minnesota, Montana, Idaho and Utah, and also made a short trip into Manitoba; Mr. Coquillet confined his investigations to the State of California, while Professor Osborn visited the State of Kansas only. Professor Osborn's report has previously been printed in *Insect Life*, Volume IV, pp. 49 to 56. We advise all who are interested in this subject to apply for the bulletin to the Secretary of Agriculture Washington D. C.

The Home Circle.

The Tone of Voice.

It is not so much what you say
As the manner in which you say it;
It is not so much the language you use
As the tones in which you convey it.

"Come here!" I sharply said,
And the baby cowered and wept;
"Come here!" I cooed, and he looked and smiled,
And straight to my lap he crept.

The words may be mild and fair,
And the tones may pierce like a dart;
The words may be soft as the summer air,
And the tones may break the heart.

For words come from the mind,
And grow by study and art;
But the tones leap forth from the inner self,
And reveal the state of the heart.

Whether you know it or not—
Whether you mean or care—
Gentleness, kindness, love and hate,
Envy and anger are there.

Then would you quarrels avoid,
And in peace and love rejoice,
Keep anger not only out of your words,
But keep it out of your voice.

—*Youth's Companion.*

What's in the Frying-Pan?

OR

Mattie as Camper's Cook.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

(*Concluded.*)

"A chowder!" Mattie sat bolt upright, all alert. "Could you really tell me how to make a chowder? Why, Tom, when Dr. Allen said he'd better go to the ocean, remarked groutily, he's that discouraged: 'What's the use going to the coast if you can't have a *chowder?* Seashore and chowder go together—always did when I was a boy and lived on the Atlantic coast. But Mattie isn't equal to a chowder, I guess, and you wouldn't let me eat one if I had it.' And the doctor said why of course he could have chowder—anything light and tempting—but to go slow on cakes and pastry and cold lunches; have freshly cooked, wholesome meals. And I just despaired, for I supposed I'd just *have* to have lots of this same 'cake and pastry' and cold-boiled meats, and lunch it along, only making tea and coffee and frying fish, perhaps, if we had any. And can I really make a chowder?"

"Why, goodness me, child, a chowder is a simple affair, first cousin to these scolloped dishes you have such ingenuity about. "Only," Miss Hetty added, "you must be sure and take one of your stove covers along."

"A stove cover!" and Mattie stared as though she thought Miss Hetty was going crazy.

"Yes, certainly, to moderate the heat; don't want to hurry your chowder, burn it on the bottom, do you? I don't see why people are so stupid," Miss Hetty went on, reflectively, "scorch and burn things like the man who thought he could cook on a chafing dish, I read about in a funny paper the other day. You can moderate the heat of a gasoline stove in so many ways. Have Tom get you some pieces of sheet iron that will fit over the stove. Then you can take your toaster along and toast up your stale bread. And if you have your stove protected with pieces of sheet iron, behind and at each end, the blaze won't flare so when the ocean breeze gets into your tent; the heat will be economized and dishes you've cooked will keep nice and warm underneath. But don't forget your stove cover."

"I savee," laughed Mattie; "it is so thick I can do slower cooking."

"That's it. And your deep cast-iron frying pan is just the thing for your chowders, kind you eat with a fork. The old-fashioned kind—I used to call it 'New England' chowder, but I understand they make it down South now more than anywhere else, the kind you can cook separately mostly, then mix, and that you eat with a spoon—why *that* you can make in these tin things. I like the other a little the best, but the beauty of the last is that you can use 'left-overs' for it"——

"That sounds natural," interrupted Mattie. "I haven't heard you say 'left-overs' for a long time. But what must I take for chowders?"

"O, crackers; better have a tin box for them to keep out the moisture, though you can bake them over in your oven—and onions and potatoes, too, though a chowder *with* crackers and *without* potatoes will be better for Tom at first, I think. And your condiments—you ought to get fish and clams down there. I suppose you had better take a little salt pork along. Some chowders are not chowders without it, according to the best authorities."

Here Miss Hetty read Mattie a dozen chowder recipes, talking them over with her till she understood the simple, underlying principles of a chowder, and could "cut according to her cloth," as Miss Hetty phrased it, or as Mattie put it, "make them up out of her head."

"And don't," urged Miss Hetty, "think you must live on stale cake and pies down there, and tire yourself all out stocking up on them before you go. You'll find so much coziness and pleasure, too, getting up appetizing little meals when you get the hang of it, and I know you will, and surprise Tom, too, as you did last year that soup-bone week." And Miss Hetty gave Mattie's hand an encouraging squeeze.

"And now as to the frying I was going to tell you about. The secret of the French style is in having the fat in the pan *hot* so as to brown—crisp—the contents quickly, form a crust on the outside, so that it will not fat-soak. For some things one needs to give the hot pan only the slightest sort of greasing, such as toasting thin slices of potatoes, making them almost as crisp and delicate as 'chips.' There's a 'fowl saute with peas' or 'mushrooms' I'll show you how to do sometime that is delicious. Top of the pot—clarified drippings, and some lard you'd better take; it's better than butter, besides being more economical—way ahead of butter, especially for fish. But where you need only slight greasing, as muffins or toasting potatoes, I use olive oil. It sounds extravagant, but it really takes so little, and one can get the pure oil here in California."

Mattie and her friend talked together till Jack West came along saying Tom had sent him to escort Mattie home. So with many a parting injunction, Miss Hetty bade Mattie "good-night."

In two days' time Tom and his little wife were at the ocean, and had set up housekeeping in Jack West's tent. There they stayed two weeks—an interesting two weeks, bringing their special trials to Mattie, which, like the brave little body she was, she met gracefully; but also bringing plenty of fun and, better than all, renewed life and strength to Tom.

Mattie managed economically, too. And such a reputation as she got as a cook! Mrs. Bailey was quoted among campers out as the authority on seacoast cookery. Tom was soon well enough to begin to fish off the wharf.

Miss Hetty sent down every now and then one of her funny, hastily scribbled little notes, written with pencil on cheap printing paper which she cut in strips for the purpose herself. These Mattie prized and pored over to a degree, that Tom said she acted as though they were the utterances of a Delphic oracle.

"And a sight better than that they are, sir," Mattie would cry, "or than all the temple jargonings put together. And I'd like to know what you'd do without her! Guess you *were* surprised that first time you came and found chowder for dinner. Yes, sir!"

And Tom would laugh to see Mattie "fire up," and offer to shake hands with his "little woman," or propose "three cheers and a tiger for Miss Hetty."

But one day she did surprise them. Some one left at their tent door a big earthen jar containing a bag of salt and some paper parcels. At first they thought it a mistake; but among the parcels they found a little note from Miss Hetty (the parcels contained some of her lovely tarts and famous cake) saying she had heard there was great mackerel fishing down there, and she thought they might like to salt some down for their winter's supply. It was so little trouble, so much better than that bought. She would like some, and advanced salt and jar to be paid for in mackerel, if they put down any. If they didn't want to, she gave the name of some one camping there she knew would like to, and would come and take jar and salt off their hands.

Tom and Mattie hailed the idea with alacrity. It was so simple—just to freshly dress the fish, leaving the heads on, wash in ocean water, and pack down with salt rubbed inside each fish, and liberally sprinkled over each layer in the jar.

They made their own brine. Before they received the note, Tom had had to quit fishing at times, for the mackerel had come in such shoals that he could haul them up hand over hand. Now he fished on delightedly.

He fished for yellow-tail, too, while Mattie did her best to catch bait for him; for this big, white salmon must have bait that is ever on the wriggle, or it will not bite. And Tom actually hooked, and, with plenty of help from enthusiastic neighbors, landed a thirty-pounder. Once he was one of many who landed a "jew fish," which tipped the scale at three hundred and forty pounds. Mattie was quite a fisherwoman, had great luck. Once, by accident, as she was holding Tom's pole one evening for him to pick up his traps, she caught a big "croaker," a fish never known to have been caught off the wharf before. "Or, in fact," as Tom put it, "the blundering old croaker caught himself—they never bite—and you should have seen how surprised Mattie was. 'Why, why, I've caught it on the timbers, I guess.' I thought she'd spoilt my line. But I grasped the pole, and there it was."

Tom was fond of telling stories of their seaside sport on his return from the beach. But there was one particular story he never tired of telling and chuckling over. The way Tom generally was started to telling this—his prize story—was this: One of "the fellows" would say:

"What's this I hear, Bailey, about one of the men off a steamer trying to flirt with your wife?"

And then Tom would "Ha! ha! ha!" and say——

But first I must introduce Tom's story by letting my reader know that, though Tom and Mattie are about the same age, he looks older than she does, and is much taller. Mattie's curly head does not reach his shoulder. "Pretty little Mrs. Bailey" is her *soubriquet*. She is young-looking for her years—petite, graceful. But for all the artless, girlish, impulsive ways she has under certain circumstances, when occasion requires, few women of twice her size have more dignity of presence, or can more readily put on the air with which pure, refined women ward off vulgarities and over familiarities.

And now for Tom's story, which I know I shall not do half justice to, for Tom is a good story-teller, after his own style:

"You see, as I got stronger, I enjoyed the fishing tiptop. Fresh fish, I'd caught myself, tasted good. Yum-yum! And then there was the excitement of hauling in the fish and keeping count with the other fellows. But I went down in such a hurry, feeling so miserable, too, didn't take any clothes to fish in. Told Mattie I wouldn't fish, all I wanted was to be let alone. You know how grip makes a fellow feel. Well, when I got the fishing fever, there I was—one good suit of clothes, and you know how dirty that wharf is. And it wasn't my style, nor Mattie's either, to want to smell of fish all the time. Couldn't get word home right off.

"But Thomas was down there. You know Thomas, eh! *Will* drink and use opium, but most entertaining man to talk with ever was, chock full of information, smartest stenographer in the State once, way up; but now—loafs and fishes and whoops her up mostly—one of the 'has beens'—regular decadence and walking temperance lecture—moral as large as life, and twice as natural. Well, he's about my size—bigger if anything. He's plenty of *old* clothes, you bet, and anxious to do us a favor. Poor old chap, Mattie's made him a cup of tea more than once. He thinks she's as good as you make 'em, and is as gentlemanly to her as can be—old-fashioned, courtly style. One day, what did he do but bring her, over to our tent, an old coat, whole but mighty rusty, a pair of clean but faded overalls, and an Upthegrove hunting-hat, very limpsey in the brim—all, he said, for me to use to fish in. Fish biting like the dickens that day, and we didn't want to hurt his feelings by refusing, so I put them on.

"Now, mind you, I was wearing big-eyed smoked glasses then, for my eyes were yet too weak to stand the sparkle of the sun on the water. Well, I went fishing in *Thomas'* suit and *my* goggles, and that very day a big passenger steamer touched at the wharf—some unpronounceable Spanish name I can't recall, but it came in place of the Eureka, which was disabled. I was fishing on the opposite side of the wharf—lazy, didn't want to stir. Mattie was flitting about—steamer more of a novelty to her than to me. By and by some of the officers began to come on the wharf and hover around in her vicinity. She looked very pretty and girlish, and you know how brash sailors are.

"Finally one of them began to talk to her, ask some general question, feeling his way to see if he couldn't get up a flirtation. Might think, if he'd the common sense you can buy anywhere, two for a nickel, he'd know a lady when he saw one. But no, he keeps on edging around and asking his questions and making his remarks, Mattie polite and indifferent. Finally he up and says, 'Who's that bloke over there?' meaning me. That was a crack! In a flash Mattie knew what was going on and saw what sort of a fellow he was. But she never let on right away, oh, no! She gave him one of her tootsey-wootsey stares, and said sweetly: 'That? Oh, that is my husband.' Then she came over to me and began to coo and purr around me too sweet for anything.

"Ought to have seen one of the other officers near by double up, holding his side, and go around the corner of a car to laugh. As for the one trying to make a mash on my wife, he was phazed sure enough; jaw dropped—watched Mattie and me a little—knew she was telling me all about it—then shot for the gangplank, and that's the last *he* was in sight. Heard afterward the other officers deviled him no end about it."

Aunt Hannah's Signboard.

NO DRESSMAKING DONE HERE.

LOOK OUT FOR THE DOG.

"There, Emilia!" exclaimed Aunt Hannah, bustling into the sitting room, "I guess that'll stop it. Nails ain't jest even," she lamented, holding out the above example of her mechanical skill, "but that sign's going to be put on the front gate. I'm goin' to spike it there myself. And, moreover, I'm jest goin' to toddle ev'ry thread of folderols in the house back home. I am."

"But, Aunt Hannah," Emilia broke in, laughing, "we have no dog."

"Wall, you've got a doghouse and a chain. I can fix 'em. They'll think the dog and bite and weak links are all there. What do you think about it, Samuel?"

Aunt Hannah's face wore a very innocent, respectful expression, but she laid her signboard down that she might hold her sides to keep them from shaking. She had cornered Samuel.

"Well," that worthy drawled, "I'm sorry, but I don't just see how we will get along without Emilia's help."

"Git along!" indignantly burst out Aunt Hannah, "do something yourself. I want to be respectful to my niece's husband, but I've no scruples on account of bein' in yer own house, for it's hers; every board and nail and belonging. She earnt 'em."

Emilia looked up anxiously. Aunt Hannah and Samuel had occasional explosions; and, if the truth be told, she knew some of her energetic relative's moral thrusts were well aimed and did effective work.

"Now, don't you think Emilia had better go home with me for the summer?" Aunt Hannah continued, leisurely dropping into a chair, "and shet up this dressmaker's shop for one year? She's going jest the same, but I'd like to see if I can squeeze a little human kindness out o' yer. She'll die if she tries to work any longer."

Samuel fidgeted. He did not want to waste energy in anger; besides, he knew Aunt Hannah would get the best of the argument if he did. He did not like to work; he had really come to believe he was not able.

"Yes," he at length answered, hesitatingly, "I think she better, but I don't see quite how she can."

"Wall, I do," and Aunt Hannah's eyes blazed.

"Expenses are pretty heavy, just now,' Samuel objected.

"Have you lain awake nights thinkin' what you would do to help pay 'em?"

"I rather guess Emilia and I can pull through together, and she can have a resting spell at home."

"The same kind she's always had? Now, look here, Samuel Weldon, when the Lord made you, I'm purty sure he was in a hurry and forgot some of the seasonin's, especially the saleratus and pepper. You never could rise to an emergency, and as for vim—"

"I'll think over about Emilia," and Samuel left the room.

"Aunt Hannah," Emilia began, seriously, "I must work through this summer. Besides, I want Clarence to go to college, you know."

"Humph! and while he is kicking football and singing college songs, you'll be j'inin' in the psalms up yender. Now, niece, do be reasonable. In the first place, his college course is short. If he can't git his own education he won't be good for nothin' when you push him through. But he can, and will, when he once understands the situation. He's got your blood in him. Now for objection No. 2."

"Work enough in the house for half the summer."

"Take it home."

"People must have their dresses."

"And you be trailin' yours over the golden streets, I s'pose."

"I should enjoy it above all things—to go home with you, but—" Her voice trembled and tears gathered in her eyes.

"And you are goin'. That ends it. Where is my signboard?"

"But you are not going to put it on the gate?"

"I am."

And she did. When the people first saw it they laughed and wondered. When they

learned all it implied they declared Emilia Weldon should not make their dresses anyway, not if she remained at home, for they loved her. And Aunt Hannah had her way. Besides, her home was Emilia's old home, too.

How restful to be taken care of! But what made her so tired, Emilia often wondered. How delightful it was to sit in the daisied fields for hours, drinking in the sunshine, without a care! Many times as she sat dreaming, with a favorite book lying half closed in her lap, she would recall the numerous castles built in her girlhood days, as she roamed over these same daisied fields. She could not find them now. Sometimes she would smile as she thought how in some way they were always associated with bright Harry Gray. Then her conscience would blush, and she would look over her shoulder to the fine white house on the hill, and wonder if its owner's cup of happiness was too full to even remember her.

The days glided peacefully by. Aunt Hannah knew that after the strain was off, reaction must come. But she began to lose faith in her fresh eggs and cream and Cherry hill air. Emilia drooped, though she tried to be cheery.

"We're goin' to the beach to-day," Aunt Hannah announced one morning, as old Dolly and the phaeton were led up to the door, and she appeared with a substantial luncheon.

Emilia's face colored for a moment with pleasure, then turned pale. She was silent most of the way. Her last visit to the sea was so long ago—on the day of her betrothal. What had become of all those happy dreams of memory? The blue waves with their puffs of foam soon beckoned her on to an old favorite haunt—a retired place beneath a cliff. It was there she had promised to be Samuel Weldon's bride. How handsome he looked in his fresh uniform, with those gorgeous shoulder straps! Surely one brave and manly enough to fight for his country would fight, for her, life's battles! But alas! memory slipped from the present to the past. The waves went on singing from her waking dreams to those of sleep. And when Aunt Hannah came to throw a wrap over her, a happy smile rested on the worn features.

"Poor dear," she murmured; "brave little heart," with a quiver of the upper lip. "Her color is fairly good, and she's not so very thin; quite plump; but where is the strength? I am just goin' to make Dr. Milo tell me the whole truth to-morrow mornin'; so there! Am glad we came down or that I thought of it."

The good old doctor shook his wise head as Aunt Hannah eagerly plied him with questions.

"Miss Hill," he said, "it is just like this. Mrs. Weldon has been doing—let me count how many women's work. She has brought up a family of children. To do that well is one woman's work. She has had all the care of the household work, and has done much of it herself, besides acknowledging the claims of society. That makes two women's work. She has carried on a sufficient amount of dress-making to equal two women's work. That makes it 15 years that she has been doing four women's work. And then we men grumble and wonder that a woman breaks down so easily, and wish *they* were stronger! But we physicians learn to detect symptoms of all kinds. She has had to do this without the aid of love and sympathy from the source that should have never failed. She is a lovely woman."

"But she won't die, will she?" Aunt Hannah broke in.

"I have great faith in her constitution, but—"

That night Aunt Hannah posted the following letter:

"MR. SAMUEL WELDON:—Come and view your handiwork. If God put you into the world to mar souls with your cruelty, you can be proud of one result. But He didn't. You'd better come and see what a wreck you've made of the casket containing one whom He cares for.

HANNAH HILL."

Harry and Mabel arrived first.

"It is all right, mother," Harry exclaimed after the greetings were over. "I have secured a position with Mr. Lane and that furnishes the money for my school, later. I rather think I am able to look out for myself," with a proud, manly air. "We are going to take care of you now. We've missed you awfully. Every pretty, cosy thing in the house just spoke right out loud, and told us what they had cost you. We didn't know before."

Then Mabel had her little confidences to tell when she and mamma were alone.

"You know, mamma, I was earning that money just for my own extra fineries and pleasures. I have leave of absence for three months, and have been at home trying to fill a little of your place. And when Frank Holbrook heard it, he declared it was a generous, womanly thing to do. That he did not mean—to like—me very much—because he thought I was heartless; but that he did—not think so any more. And—" She held up a finger with a new ring, and hid her blushes on mamma's neck.

"So young," Mrs. Weldon murmured, returning her daughter's caresses. But of all possible suitors, Frank Holbrook was her choice.

"And it might never have happened," Mabel laughed, "if Aunt Hannah had not brought you here."

In the evening Mr. Weldon came. He, too, had a confession to make before his other boy should come.

"I guess, Emilia, it would have been hard enough for you to live with me, if I had been a little kinder to you. I've been thinking it over. You are of a finer make than I. I can see it now. I have done considerable thinking since you have been away. I do not believe I shall make you furnish half the income any more, while I'm off spending money for pleasure, or playing lazy. And if the children need any more help, I guess I can do it. You have done your share."

Aunt Hannah accidently overheard some of the conversation as she stepped to the door to announce supper.

"It looks as if the Lord had been good enough to put an extra patch of heart onto that organ. Be thankful for small favors and continue askin' for larger ones."

"Circulation better, pulse better, appetite better, everything better," the doctor joyfully announced a week later. "Medicine has something to help it along now."

"Yes," Aunt Hannah declared, "a burden of care, an avalanche of future work have been removed. She has a whole year in which to rest, a lifetime, they all declare."

Aunt Hannah's signboard is preserved as a sacred family relic.—Farm and Home.

YOUNG FOLKS' COLUMN.

Bill Fasset and His Last Moose.

I am going to tell you how Bill Fasset killed his last moose, and I do not believe that any one, no matter who he might be, ever killed a moose in the same way. But first, who is Bill Fasset? Bill is an Englishman, and when seven years old, longing for adventure and disgruntled with his home, he ran away and left his father and mother, neither of whom he has ever seen since. I will pass over Bill's life, full of interest as it is, until the time when he reached Montreal. From there he went to Quebec, and then joined some settlers who were going into the woods to live. These settlers crossed the St. Lawrence and turned their way toward the State of Maine. Bill was one of the most daring of the party, and when they settled down and built houses, he moved on, and, wandering alone, hunting and fishing, became a true denizen of the woods.

When, according to the treaty of 1842, the United States and England caused the boundary line between Canada and Maine to be cut, Bill was employed as one of the head men. One day while working on the boundary, Bill found, near the junction of two rivers, a spot of land which exactly suited his fancy, and he made a vow that some day he would live there. Finally, after many more strange adventures, after wandering almost everywhere in the United States, about 15 years ago Bill obtained the position of "camp watcher" near his "stamping ground," as he calls that favorite spot. So he moved there, and lives there now alone and unaided. All he has to do as "camp watcher" is to see that no one steals the provisions stored in the supply camps of the lumbermen. The position is nominal, so "Mr. Bill," as many call him, has his time at his own disposal, especially in winter, when his camps are full of men and no "camp watcher" is needed. I could tell you much more about Bill and his hunting, but what I am going to tell you about now is his last moose. He killed this one in winter, when the crust was thick, for that is the time when he does most of his shooting. It was the biggest and fiercest moose Bill ever killed, and he has killed a great many.

The day was cold and the sky was clouded over with a thick, gray mist, which threatened every moment to burst into snow, but which all the day only hovered and lowered up and down. Bill had an errand to do some miles away, and hesitated some time before starting out. Finally, summoning his courage, he buckled on his big coat, strapped on his snowshoes, put his tomahawk in his belt, his rifle on his shoulder, and away he went, six miles an hour. About four o'clock in the afternoon he started for home. It was already dark, and the mist had sunk to the earth, and so it was "darker'n tar," as Bill said.

"Well, sirs," I will let Bill tell his own tale, "well, sirs, I was a-boomin' along, follerin' me own trail, when all on a sudden I seed straight ahead o' me th' biggest-lookin' critter ye ever seed, or me n'uther. I could a-just make out as he was a moose. He didna see me, so I hoisted me gun and fired. Lands o' goodness, boys, how he did jump! He whirled right around, got his eye on me, an' afore I knewed as what he was a-goin' te do, I was on th' ground flat on me back, with Mr. Moose a-snortin' an' a-blowin' in me face. With me big snowshoes on I couldna do nothin'; them's the ones over yere, hain't worn 'em since. 'Well,' says I te mesel', 'Bill, ye's done fur naow.' The old moose, he didna know what to do, no more'n me. How long as we would ha' staid yere, I dona know, but in twistin' around I felt me tomahawk; I made a pull at it an' yanked it out. I put it up as high as I could, an' struck at th' old un. I took a piece as big as yer hand out o' his fore thigh. He gave a yell an' sprang aside. Up I hopped as best I could with them snowshoes on, but afore I was on me feet he was at me ag'in an' I was down ag'in. I once more jabbed at 'im, an' this time I hit 'im in th' chest. Afore he could recover I was on me feet an' a-risin' me rifle; I never got it up, sir. Away I went, sir, up in th' air an' landed all in a heap flat on me face, boys, an' that, too, several inches deep into the crust. Mr. Moose was on top o' me ag'in, but he was madder this time, an' he was a-trying to bite me. Now, I never heard tell o' a moose bitin' afore, but sure as ye're born, he was a-tryin' to bite me. Ye look as if ye dona believe me; ye needn't if ye dona want te. I never aix no man to believe me, but I was a-tellin' o' th' truth. He couldna bite me coat much, but soon he got up to me neck; terrible disagreeable that! Well, sir, just then, thank 'im, he stepped on me right snowshoe an' busted it, ye see where. That freed me, an' I began a-strugglin' an' a-kickin'; somehow or rother I got turned over. Then we began it. I was a-slashin' round an' a-kickin' round; the old moose he was a-bitin' round' an' a-stampin' an' stampin' an' a-fightin' an' a-tryin' to get his horns under me. At last I dug me tomahawk into his head, an' that knocked 'im over. Well, then, boys, I was up an' he was down; then I put my tomahawk right through his skull, an' he lay dead, deader'n a boundary post. It was terrible dark naow, an' I was pretty well scarred, one snowshoe an' me rifle broke, too. Well, I started, an' I hadna gone more'n 20 rods but I had te turn round an' see if Mr. Moose was straight dead, fur I was afraid he might be after me ag'in. He was dead an' stiff, sir, as if he'd been yere a week. Next mornin' I went back to get 'im, an' he was yere, sirs, th' biggest one I ever seed. Boys, I never missed a shot in me life," and then Bill's dirty face would kindle into a smile, and his blue eyes roll round as they twinkled, "an' I never fired at a moose but I hit 'im; but somehow I never found th' bullet that I fired at that moose, nor th' spot where it went in, an' I hunted all day for it." Again his old face would grow calm, and shadows of contentment pass over it. "I was terrible scarred, but th' last moose I killed, I killed with that tomahawk."—Samuel Wells, Jr., in June Wide Awake.

Kenneth's Choice.

Every summer Mr. Allen purchases a supply of dry wood sawed into short lengths. Kenneth's work is to split the wood burned in the kitchen and heating stoves during the autumn and winter.

Mr. Allen, being a man of few words, said when he considered "Ken" sufficiently able to prepare this wood for use:

"Mind, son, you are never to leave mamma's wood boxes empty, though you must give up a pleasure to fill them. You may split this wood in a lazy man's way, barely providing enough for one day, or get a quantity which will last for a season. Mamma is not to be annoyed by complaints that the work is not pleasant."

Kenneth was a good boy. He really desired to make easier his loyal mother's hard work, but wood-splitting was detested exercise. For weeks he chose the lazy man's way, an unsatisfactory way all around.

A washday morning dawned upon a careless Ken and an empty wood box.

Mrs. Allen's head ached so sadly that she was forced to leave the wash to Aunt Vi'let and her assistant, a stout colored woman who looked so positive Ken decided "she'd stand no nonsense."

"Aunt Vi'let," snapped Mandy, "dis yer biler ought ter be on de stove dis minute. Dar's no wood. Who prepars it?"

"Mandy," replied Aunt Vi'let, "don't yo' 'sturb Mis' Allen when her haid ache bad. I mostly prepars de wood dat's lackin'. Massa Ken is a good boy, but he's kind o' keerless bout splittin' wood. I reckons you couldn't lop off a stick?"

"No, I cayn't. Forgits de wood, does he? He doesn't forgit to eat. Hit's easy ter forgit 'bout tejus duties. My mammy's been doin' for me 'twel her hands are stiff. I don' calkilate ter forget dat hit's time I commenced payin' her back. I s'pect he's done forgot he owes Mis' Allen anything. Boys don' 'pear ter hab the right onderstandin' dey'd ort ter hab," grumbled Mandy.

Kenneth heard every word. Straight to the woodhouse he went, beginning work in earnest. His cheeks were scarlet when he thought of the lazy man's way, a way that he had adhered to for several weeks, when he knew of the better one, the doing to-day the needed work, instead of delaying until a more convenient season.

When Aunt Vi'let hobbled down to the shed, hoping to find sufficient chips to "bile the kittle," she discovered a boy industriously preparing good stove wood.

There came a day when every stick was neatly piled into convenient rows. The kindling was not forgotten.

"You have done it beautifully," said Mrs. Allen, looking on approvingly, and Ken exultingly turned a handspring, saying:

"I like the sensible way of doing things lots better than the lazy man's way. Father knew I'd get tired of working lazy fashion. I just wish that Mandy could see this wood. She'd know that one boy at least has some consideration for his mother."—Ella Guernsey.

CONGRATULATIONS.—Our most sincere congratulations are extended to Mr. and Mrs. E. P. Segret of Stockton upon their recent marriage. Hosts of readers will join us in this expression when we state that the bride is none other than Ada E. Taylor, so widely known for her contributions to our Home Circle and for other literary work. Mrs. Segret is the daughter of the late John Taylor of Tuolumne county, who for nearly 20 years occupied an honored place among our contributors.

ROSEWOOD.—Many people suppose that rosewood takes its name from its color, but this is a mistake. Rosewood is not red or yellow, but almost black. Its name comes from the fact that when first cut, it exhales a perfume similar to that of the rose; and although the dried rosewood of commerce retains no trace of this early perfume, the name lingers a relic of the early history of the wood.—St. Louis Globe Democrat.

—She—"Will you write to me on your return to college.

He—"Why—er—you know I can't write—"

She—"O, I don't expect you to write brilliantly or amusingly; just write as you talk."

—"Robert, you may give the name of some wild flower," said the teacher in botany. Robert thought awhile, and then said: "Well, I reckon Injun meal comes about as near being wild flour as anything I know of."

—Mrs. Scrimp—"Johnny needs a new pair of shoes, Silas."

Mr. Scrimp—"Good gracious! One would think that that boy was a quadraped!—*Jury.*

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

El Dorado.

AN IMPORTANT REDUCTION.—El Dorado *Republican:* The Sacramento and Placerville Railroad Co. has, without solicitation from the people of this county, made an important reduction on carload lots of fruit that will be of material assistance to our orchardists; and in connection with the reductions that have already been promised by other companies on through rates, it will greatly stimulate fruit production here. Last year the rates per carload were reduced from $50 to $37.50. The present reduction will bring it down to $26 per carload of 20,000 pounds. This abatement of almost one-third of the former rate is a great credit to the railroad company, and indicates that its managers regard their business with a broad and liberal spirit, and endeavor to build up a productive communi y. The General Freight Agent, Mr. C. F. Smurr, in addressing Mr. R. K. Berry, the company's agent at Placerville, says in referring to the matter: "This market reduction is a concession in the interests of fruit growers and for the purpose of stimulating shipments. As you can readily understand, it is clear that the company for this local service will not receive as much money as it would under the old rates, but we think we may derive an indirect benefit from the reduction in the encouragement it will give to growers, showing them that we do take an interest in the movement of fruit from your section and are anxious for further movement." With these new advantages, and a reasonable probability that fruit will b ing good prices in the Eastern market this year, our orchardists will probably make some money. The fruit crop in the country west of Placerville is quite heavy this season.

Fresno.

THE RAISIN QUESTION.—J. H. Harding in *Expositor:* Keep out of the vineyards until the grapes are fit to make raisins, and then what is good and ripe, pick and cure; the rest either leave to the hogs or send them to a winery for wine or brandy. When we get ready to do that, you will hear no more of glutted markets or poor raisins. We have been first rushing into the vineyard from ten days to two weeks too early picking half ripe grapes, and making a quality of raisins that are red, sour and have no weight. Then we keep stripping the vines as long as we can get a color, regardless of the future success or stability of the industry. Every grower knows by experience that at present prices there is not even wages in curing the second crop. Then why persist in trying to make raisins, and throw upon the market such poor trash that only works ultimate ruin?

Kern.

THE BEARDSLEY CANAL.—Bakersfield *Californian:* The new extension is doing its proper work right well and a goodly part of the 25,000 acres that it covers will speedily be brought under cultivation. If that had been the first canal ever built in this valley its completion would now be hailed as a great event, but the irrigated acreage here is of such magnitude that the conversion of a quarter of a hundred thousand acres from an arid state into fertile fields scarcely attracts attention and it does not even cause the least little ripple of excitement.

GRAIN ON UNIRRIGATED LAND.—Bakersfield *Echo:* W. R. Mashmeyer is now harvesting as fine a crop of grain as was ever taken from unirrigated land in this valley. It is on the Weedpatch near the eastern foothills and is yielding about 15 sacks of barley to the acre. The grain is very plump and heavy, the bags averaging about 125 pounds each. His wheat is equally as good. He has a crop of 1400 acres and will make a handsome thing this year. The Weedpatch will yet become the grain field of the San Joaquin valley.

Mendocino.

A DIVERSIFIED FRUIT ORCHARD. — Willits *News:* George Williams is making vast improvements on his fruit ranch. He has at the present time two and one-half acres of strawberries, one-third of an acre of gooseberries, one-half acre of blackberries, one-eighth of an acre of currants, one acre of raspberries, one acre of raisin grapes, 300 peach trees, 100 fig trees, and cherry, quince, prune, plum and pear trees, that an exact estimate would be hard to make. The climate is so mild that he was able to sell strawberries by the 9th of March. Mrs. Geo. Williams deserves credit for the extent in which the fruit ranch has been improved for she did her portion of the work, and also of the supervision.

Modoc.

WHAT THE ASSESSMENT ROLL WILL SHOW. Adin *Argus:* A. A. Smith, county assessor, says his work is about two-thirds done for this year. The assessment list will be considerably increased this year by the number of timber land claims taken within the county, and which are assessed at $5 per acre. This alone will increase the list from $125,000 to $150,000, and as a natural consequence will make a lower tax rate—probably $1.60. In regard to fruit trees, Mr. Smith says there are no more fruit trees reported this year than there were last season. This shows that the interest in planting orchards is dormant, precisely the reverse from what it should be. Fruit-raising is a profitable occupation, and is really of slight trouble, and we cannot understand why the people who can, do not put some of their attention to it instead of continuing to raise grain when there is now no market for what they have. A variety of crops is acknowledged to be more profitable than a crop of only one thing, and the fruit crop has always been the one to be neglected. We believe the money paid Sacramento valley fruit peddlers in one year would purchase fruit trees for every farmer in the county.

Napa.

UPPER NAPA VALLEY ORANGES. — Calistoga *Calistogian:* J. W. Roberts' farm and orchard is located near Calistoga, in the "thermal belt," where frost that will injure orange trees never occurs. He sold a large number of oranges from his orchard the past spring, and realized a fine profit, considering the age and size of his trees. The fruit was far superior to that of similar varieties grown in the southern part of the State, even surpassing many of the Navels shipped from there here. Mr. Roberts has no Mediterranean Sweets or Navels, but he proposes now to pay attention to these varieties and introduce them in his orchard. The trouble heretofore with oranges grown on his farm, and also on Dr. Cole's place adjoining, has been that the fruit was picked before being fully ripe. This was avoided last spring, and the result has been very satisfactory. Growing oranges for profit in this vicinity is something new, and we have believed it almost impossible, but we are now fully convinced that in certain localities on table lands in hills of the surrounding valley it can easily be done.

Orange.

WESTMINSTER CREAMERY.—Cor. Los Angeles *Express:* Probably no one product, unless it be Westminster apples, equals in quality the creamery butter produced by the Farmers' Creamery of this place. This creamery handles 5200 pounds of milk per day, and has a capacity of 10,000 pounds. They make 250 pounds of butter per day, and run six days per week, resting on Sunday; 43 farmers deliver milk, averaging ten cows each. The Babcock test is used and tells immediately the quality of the milk. The patrons get the benefit of this to the extent of enabling them to sell off cows whose milk does not come up to a paying standard; also improves the stock, and in this way benefits the farmer at large. Twenty-four hours after the milk is received, the butter is on the way to market. Los Angeles gets the product and could take much more if it could be had.

San Benito.

THE SQUIRREL BOUNTY.—Hollister *Advance:* Squirrel claims to the amount of $5200 were allowed and ordered paid by the Board of Supervisors. This represents the slaughter of 105,200 squirrels and gophers. Prior to this session the Board has allowed claims for about 121,000 tails. While it may seem to be a heavy drain upon the county treasury, it is considered a wise policy to keep up the bounty for an indefinite period. In April and May the squirrels produce their young, and the vast number slaughtered represent a crop that would have preyed upon the fields this summer. The squirrel bounty falls equally upon all taxpayers and compels the large land-owners, who would otherwise shirk the task, to bear their proper share of the expense. Each squirrel will destroy upon an average a dollar's worth of grain or pasture per annum. Here then we have prevented the destruction of property to the value of nearly a quarter million dollars by the expenditure of $12,000.

San Bernardino.

SUGAR BEET NOTES AROUND CHINO.—Richard Gird in Anaheim *Gazette:* At present I have 450 men on my payroll, and the other farmers are probably working something like 200 more. Our beet crop bids fair to be a great one, even with the short rainfall this season. I hope your enterprise is prospering, and anything I can do for you to assist you in understanding the sugar beet industry, shall be most happy to. There is no such thing as competition or jealousy in this business. The more beet sugar factories started the better. I hope to be connected with you by a railroad, when the two communities will be able to help one another to a vast extent. There is no doubt that the sugar beet business is going to be a great success, and in population and soil you have the best foundation of any community in Southern California. I think a general effort should be made to secure from the Legislature a small bounty for the farmers, such as they are giving in some other Western States, to run for a number of years after the enterprise has been started in a community.

San Diego.

FARMERS' INVENTIVE GENIUS. — Winchester *Recorder:* It is remarkable the number of contrivances that have been originated for harvesting the present crop. Those fortunate enough to have growing grain reasonably thick and high can, of course, get along in the usual way. But many are not so fortunate, and are resorting to all sorts of expedients for harvesting their short grain and hay. After cutting hay with the mower the problem has been how to rake it. The amount left on the ground by the rakes is very considerable. The difficulty has been partially remedied by covering the rake with canvas. But that is only a partial success. The failure of rakes this season to do good work has made the self-raking reaper very popular. In fact, judging from the number in use, it seems to be the most popular of all machines. But even this machine this year requires considerable alteration to make it do excellent work. To meet emergencies, mowers have undergone wonderful changes. Farmers have resorted to various schemes, such as adding platforms, putting plates of sheet iron behind the knife, adding small wheels, having an extra man follow with a rake, etc. Parties owning harvesters and binders have taken off the binding attachment and put on bunching or drop attachments. Nor has the header escaped some new mechanical contrivance. Two of these are at work with drop attachments. Strips of leather or canvas are attached to the fans of the reel in order to sweep the short grain to the draper, and thus prevent it from falling to the ground. The feasibility of sliding the front part of the platform on the ground by the aid of steel runners has also been demonstrated. Although this year will be discouraging to many farmers, yet they will be amply repaid for their skill and ingenuity. There is much fine grain in the valley, and likewise much poor grain, but the farmers of Pleasant valley are equal to the emergency. Hay will be very high and straw will be worth money.

Sacramento.

HOP NOTES.—Sacramento *News:* The vines are fully two weeks late. Growers can only account for this by the remarkably cool spring and summer. There are many yards now where the hills are but just eyeing out, the shoots not having appeared above ground. Some look upon this with some foreboding, while others declare that as long as the shoots come vigorous and strong, even though they are late, the crop will be sure. The theory will work all right, provided the moisture holds out, but the chances are that the hop which is now at the top of the pole, or at least well up, will mature a fine crop, while those coming now will bear short on account of drouth. Flood V. Flint returned yesterday from a trip to the Flint & Raymond ranch, on the Cosumnes river. He reports a discouraging prospect, prima facie, but by investigation discovered the supposed missing hills alive and in apparently vigorous condition. By uncovering the hills, large healthy shoots were found almost as large as asparagus. Mr. Flint believes that on the low bottom lands the backward hops will yet come out and make a good crop. It is now quite certain that there will not be as many hops raised as last year without the deficit is made up by the increase in acreage.

San Joaquin.

AN ORCHARD ON SEDIMENT.—Clements Cor. Sacramento *Record-Union:* Three miles above Clements, on the Mokelume river, Senator Langford has located an orchard upon deep sediment land underlaid by gravel, with water ten feet from the surface. He has 70 acres of peach trees, about six years old, pruned on the vase system and carefully cultivated, that would be hard to beat anywhere in the world. The leaves are rank and green, the trees are symmetrical, and from the drive which leads around the adjoining bluff, it seems as though one could walk upon the tops of the trees from one side of the orchard to the other. One hundred and twenty acres of young prune trees adjoining this orchard were destroyed by grasshoppers last year, but he has an island near by where there are 40 acres of large prune trees looking well. The chief damage done to the older trees was the destruction of the fruit crop for 1891 and most of the fruit buds for 1892. Some damage was done by frost, which was partially averted by burning straw piles during frosty evenings. Fruit so injured turned black at the pit and is now dropping. The crop will be small in number of peaches, but may be average in weight, and promises to be extra in quality. Considering the devastation by the yellows in the East, the prospective demand for peaches, and the quality of the soil, it may be questioned whether an owner has a moral and financial right to plant anything but peaches on such land as this. The operations of the Patent Office are quite extensive already, but it might be some advantage if land so peculiarly adapted to peaches as these sedimentary bottom lands of the Mokelume could be so patented as to be devoted to that product only.

Santa Cruz.

GOOD FOR APPLE ORCHARDS. — Watsonville *Pajaronian:* The horned caterpillar or tussock moth, which did such damage to some apple orchards during the past two years, does not appear to be here this year. The little parasite which made its appearance last year, very effectually cleaned out the horned crawler, and the orchards that were most affected with the pest, and which it was claimed would have to be cut down, are looking well this year and will bear good crops of fruit. The little beetle was all that saved the apple orchards of this valley from destruction by the tussock moth. Many of these beetles have been found at their old feeding grounds, and it has been suggested by an orchardist that they would be a good thing to induce to locate here, and to that end he recommends that strips of hides—on which they would feed—be hung up in orchards. The little fellow should be induced to remain here.

Stanislaus.

CHEESE FACTORY AT NEWMAN.—Selma *Enterprise:* The cheese factory belonging to Sherman & Dixon is in a flourishing condition, and is now turning out 100 pounds of cheeses per day. That this is destined to be one of the leading industries of this great West Side, there is no doubt, says an exchange. They are now milking 52 cows. With average alfalfa land, these 52 cows can be kept on 40 acres. From the milk of these cows, four 25-pound cheeses are manufactured daily, which find a ready market in San Francisco, at from 10 to 16 cents per pound. It will probably average 12 cents the year round. The work is accomplished by two men. T. E. Leonard, an old cheese maker of 15 years' experience, has charge of the factory, and says that with proper handling of the milk there is no better feed for cheese making than alfalfa. The factory, which is 16x32 feet, is a stone structure with 16-inch walls, with a double ceiling overhead, which in summer is as cool as an icehouse. Mr. Sherman says that as fast as he can get his ranch of 240 acres into alfalfa, he will increase the number of cows.

Sonoma.

POULTRY FARM.—Cloverdale *Reveille:* Mrs. Erastus Shelford's flock of 200 healthy, laying hens is a sight worth seeing, and that was the exhibition afforded us at this place. Aside from the old fowls, there was any amount of youngsters nearly ready for the market that will add materially to her bank account when sold. We were told by Mrs. S. that she gathered, on an average, six dozen eggs a day, which is not bad when one considers the number that drops out during the season to raise families. Fowls are certainly a source of much profit when properly managed, and we are satisfied that Mrs. Shelford knows all the ins and outs of taking care and rearing poultry.

PEACH CROP.—Healdsburg *Enterprise:* The peach crop in this neighborhood this year is said to be larger than ever before. The trees have been stripped to a great extent, and some orchardists are thinning the peaches a second time.

LARGE RASPBERRY CROP.—Petaluma *Imprint:* Dorr Hakes of Valley Ford was in town Monday. He has 17 acres in raspberries and he says this year he will have a tremendous crop. He says he will commence picking in about ten days, and then he wants 25 to 30 girls to pick the crop. He contracted with the Sonoma Preserve Company for 100 chests of berries. Mr. Hakes thinks the output of his berries this year will be 500 chests.

Sutter.

GRAIN SHELLED OUT.—Yuba City *Farmer:* Around the Buttes, where the grain crops are somewhat earlier than on the plains, loss is reported from the north wind, which blew quite hard during the latter part of last week. Some varieties, such as Pride of Butte, Proper, Early Harvest, Genesee, and others that ripen early and have an open mesh, were whipped out to some extent by the wind. Fields of Club wheat, or that which had not turned, were not injured at all. Barley was not damaged.

Tulare.

HARVEST AROUND HANFORD.—*Journal:* The grain harvest will soon be moving into the Hanford warehouses. A party who is well posted estimates that at least 50 per cent more grain will be hauled in here this year than last. The market is opening up fair, as the wheat market goes, $1.17½ per cental for No. 1 Sonora being quoted yesterday. This is less than the opening price last year, but more than for several years before that. Barley is also lower.

RAISIN GRAPE NOTES.—Hanford *Journal:* A gentleman of this vicinity, who is well posted on the raisin industry, informs that of all the large vineyards near Hanford which he visited during the past week he found none in which the first crop of raisins would not be heavy. He visited the following vineyards: Peerless, McJunkin's, Gordon, Banner, Grangeville, J. S. Robinson's, Scazighini's and several others. He found the grapes well set, the bunches of good size and well filled, and every indication of a first-class crop—better than that of last year and every indication that it would mature early. He found many grapes the size of buckshot and brought home some to make pies of.

NEVADA.

WHEAT NOTES.—Hawthorne (Esmeralda Co.) *Bulletin:* The acreage of wheat in Mason valley will be much larger than ever before. This is due to the new flouring mill that has been in successful operation for the past six months. Wheat never looked better. Commissioner Wilson arrived from Pine Grove and says there is a larger acreage in wheat this year in Mason valley than ever before, and that the crop is growing finely. He says, however, that the ground rats (or ground hogs) are a terrible pest in that section. The ground seems to be alive with them and they are literally mowing down the growing wheat. Unless some means is devised to exterminate them, these little rodents will utterly destroy the crop.

OREGON.

PROTECT YOUR LAMBS.—Heppner *Gazette:* D. A. Herren constructed large sheds last year for the shelter of his flocks and hay and reports that they stood him in good stead this season during the lambing season, in protection to his ewes and lambs during the stormy weather. Mr. Herren saved 95 per cent of his lambs this year with this protection, while other breeders suffered heavily in loss of lambs from exposure to stormy weather. The matter of protection to young lambs is an economic feature of the sheep business that the really successful raisers would do well to consider.

The Latest Compilation of Election Laws.

Messrs. Armstrong & De Guerre, the well-known stationers and blank-book manufacturers, have just published a popular work upon the law governing elections in this State, including the amendments to the statutes of 1891, which is the best that we have seen. Their brochure is as full of meat as an egg; yet the arrangement of the code sections and the dissertation of the compilers upon the method of voting under the so-called Australian Reform Ballot System is so concise and clear that the most illiterate of voters will readily comprehend all the requirements of the new law, the entire text of which is set forth, together with sample ballot and detailed explanations of much value. We commend this pamphlet to County and State Committees of all parties for general circulation, price being 15 cents each by the hundred. The subjects treated comprise all that is necessary to know in the management of election machinery under the Australian Ballot Law, from which good results are to be expected. If this system is rightfully carried out, fraudulent voting will be an impossibility.

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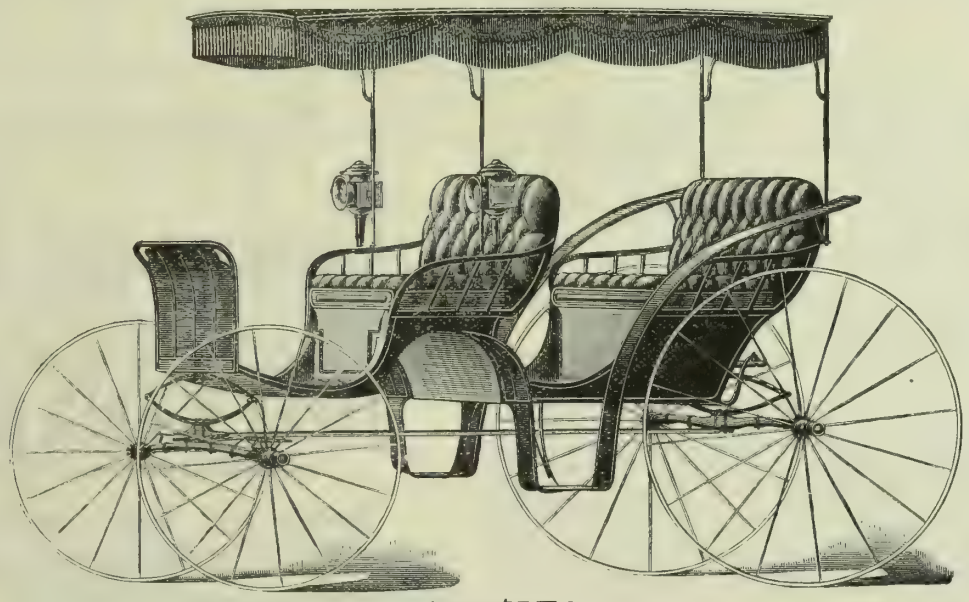
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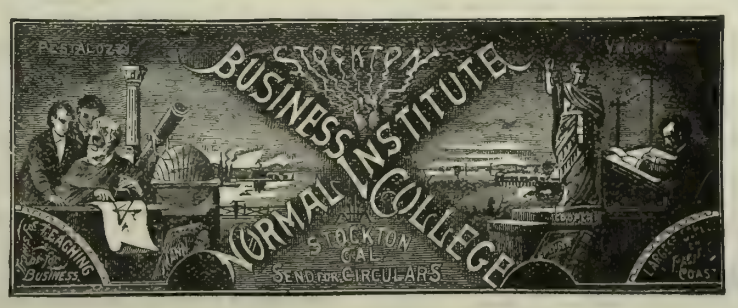
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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

GRANGE INFORMATION.

The Secretary of the State Grange is always ready and willing to furnish all information desired (suitable for publication) which comes to his office from subordinate Granges, State officers and other Grange sources, to any and all reputable newspapers and writers, so far as it can be given without consuming an unreasonable amount of time and research.

We have always maintained that, for the good of the Order, proper information should be as free to obtain by the respectable press as possible. And right here, we are pleased to say further that previous Secretaries of the State Grange (as far as we are informed) have been more reasonable than those of other societies.

STATE GRANGE MEETING.—Interest in the coming session of the State Grange at San Jose is manifested in different quarters. We have every reason to believe that it will be a large and prosperous one. We hope, also, that it will be significantly a counsel of wise and progressive action for the cause. Let us have not only well-prepared speeches and discussions on important subjects, but let those who are able and willing to lead in reform matters have clear and practical plans to start the work which shall lead to the success of all good resolutions which shall be adopted. Who has some thoughtful views and substantial plans for future action to mention in the RURAL for discussion in advance in the subordinate Granges?

San Jose, a large and beautiful city, fortunately possesses one of the ablest and best Granges in the State. There is no doubt that its local committees will do all (and even more than should be) required to make the gathering a notable session of sessions. We hope to receive for our columns such suggestions from San Jose brothers and sisters as will enable Patrons from all over the State to cooperatively labor, in a measure at least, for the pleasures and success of the State Grange session of 1892.

THE PATRONS RELIEF ASSOCIATION should receive special attention between now and the meeting of the State Grange. There are dozens of Granges that should at least have ten members, entitling them to a local director in the P. R. A. Let those who have promised act without delay in this worthy and reliable enterprise.

A. P. MARTIN, P. M. of Two Rock Grange, visited S. F., Monday, on Grange and other business. He informs us that there are very favorable prospects for nearly all kinds of crops this year in his neighborhood.

OVER $600 was saved by members of Two Rock Grange during nine months of last year by Grange Trade Card and other cooperative buying. Two Rock Grange uses a blackboard as a bulletin for registering produce and other articles for sale or exchange between its members. It has proved of much convenience and profit to Patrons from time to time. A much larger saving is being made by the cooperative arrangements of Two Rock Grange this year.

BROTHER MARTIN has done a good deal of active work in reorganizing Petaluma Grange. We trust he will continue to aid its members until the Grange is well built up, with at least double its present membership of 34.

SONOMA COUNTY CHILDREN'S DAY.—Friday, July 8th, is the day set for the principal exercises of the picnic at Dillon's Beach, near Tomales, about 15 miles from Petaluma. It is expected that a large number will attend this picnic, many camping Friday and Saturday nights. The six Granges of Sonoma county invite farmers and friends, generally, to join them in making this Children's Day camp and picnic a glad success.

WATSONVILLE GRANGE will hold its annual picnic and celebrate Children's Day on the 18th of June. We presume the local papers will contain fuller mention of the occasion. Children's days come so seldom, all should do their best to enjoy it with the children and make it a season of great encouragement as well as happiness for the young folks.

AT WORK AGAIN.—A private letter informs us that after illness and disability from "la grippe" last November, Worthy Overseer Roache is now able to work a little in his field. We hope to see evidence of his soon being restored to labor in full strength in both field and Grange.

JOSIE FRENCH is the present Secretary of Watsonville Grange, our correspondent, Bro. Lilliencrantz, an able and conscientious officer, having felt obliged to resign some time since.

TWENTY-THREE is the No. of the reorganized Petaluma Grange. The seal of this Grange was recently found in posession of one of its old members. Who else can give information of the whereabouts of other property of the old organization?

DR. M. F. MUNSON, lately resident physician at Hotel Raymond, Pasadena, will spend the summer months in connection with Monte Vista, the home of Mrs. C. E. Kinney (a well-known writer to Grange readers) at Dutch Flat Station.

PLUMAS GRANGE has recently installed officers, including A. B. Huntley, Master, Addie Sigler, Sec'y. R. A. Heriot, Sec'y *pro tem*, in sending quarterly report, mentions that prospects look a little brighter in that highest altitude of our California Grange field.

ONE OF OUR ABLEST, as well as most faithful, California Patrons, a zealous supporter and stockholder of the *California Patron*, who for several years past has received the RURAL PRESS (a $3 paper in lieu of the *Patron*, a $2 paper), on account of his stock in the *Patron*, writes—and stamps his good faith and appreciation with the coin—as follows: "My five years' patent on the RURAL PRESS expires to-day, and aside from really admiring and desiring it, it would be consummate meanness not to renew after enjoying it so long for al most nothing. Enclosed find $3 for which please credit me for the proper term. I remain fraternally yours, etc."

QUARTERLY REPORTS.—Reports have been received during the year 1892, thus far, from 47 Granges. Taken as a whole there has been a loss of seven in membership in the old Granges noted above. An increase has been made in 23 Granges out of the 47 named, however. Following is a list of those that have increased five or more members: California 8, Dixon 10, Eureka 7, Lodi 12, Merced 7, Pescadero 12, Sebastopol 6, Selma 11, Tulare 7, Yuba City 20. Counting in the charter membership of two new Granges and three reorganized, shows an increase of 129, aside from those afterward admitted in new and reorganized Granges. This number may be either augmented or decreased by the dozen or so of subordinate Grange reports now overdue.

PAYING UP WELL.—Every Grange in the State seemed to willingly pay its 20 cents per capita dues to the State Grange for the quarter ending Dec. 31, 1891. An unusual number has reported promptly and paid the new rate of 15 cents for the quarter ending March 31st.

SONOMA AND THE WORLD'S FAIR.—A specia meeting of Sonoma County Pomona Grange has been called to meet in Santa Rosa at 10 o'clock A. M., June 25th, for the purpose of considering the feasibility of making a county exhibit at the World's Fair.

ODE CARDS.—The State Grange will now furnish, through its Secretary, cards containing the opening, initiatory and closing odes (without music) at two cents per copy, postpaid.

PATRONS AT THE WORLD'S FAIR.—We hope Brother B. F. Walton (whose resolution was adopted at our last State Grange meeting, requesting the National Grange to arrange for cooperation in securing favorable accommodations for Patrons throughout the Union at the coming fair at Chicago) will have something of special interest to report at San Jose in October on this subject.

OREGON STATE GRANGE.

The following officers were elected at the recent meeting: R. P. Boise, M.; John Meddler, O.; H. E. Hayes, L.; J. D. Chitwood, S.; G. L. Stevenson, A. S.; David Eby, C.; J. B. Stump, T.; W. M. Hilleary, S.; J. M. Kees, G. K.; Lillie J. Searcy, Pomona; Annie E. Lacey, Flora; Carrie T. French, L. A. S.; J. C. White, Member Ex. Com.

Master Boise once filled for eight consecutive years or more the Master's chair, and I consider him one of the ablest, brightest and most judicious of Patrons in the Union, and one who will again highly honor his State in the National Grange.

H. E. Hayes, now Lecturer, who has just served four years faithfully and acceptably as Master, was formerly a most successful lecturer.

The Dalles was unanimously selected as the next place of meeting. Resolutions were adopted memorializing Congress for the improvement of Willamette river; favoring woman suffrage; free coinage of silver; amending the Constitution of Oregon, so that the legislature will have power to establish senatorial and representative districts in each county so that the people in each district may elect these members of legislature independently of each other.

Subscriptions are to be solicited for building a permanent home for the State Grange in Salem, to cost not less than $3000.

Idaho was represented for the first time in several years, Lilian Robinson of Charity Grange No. 15 of Grangeville being the delegate. The sister rendered a well written report from her State and Grange.

AN OLD ORGANIZER.—We met recently at Los Angeles, N. W. Garrettson, the National D puty sent to this coast in 1873, who organized many subordinate Granges and the State Granges of California and Oregon. While not at present a member of the Order, he has still a warm heart for his old fraternal companions, and is thoroughly as ever in sympathy with the aims and purposes of the Order. We hope to yet meet the old organizer of our cause at an annual gathering of the State Grange.

AGRICULTURAL REPORTS.—We have on hand duplicate copies of U. S. agricultural reports for years 1881-2 returned from Montezuma Grange, which will be sent to any Grange which will call here for them (or pay transportation) and distribute them to its members. The reports are too valuable to go for waste.

THE LARGEST STATE GRANGE.

The report of the 19th annual session of the New York State Grange is just at hand. The whole membership which paid dues in 1891 was 32,244. Total membership in existing Granges, 33,485. Increase of membership from initiations and the organization and reorganization of Granges was 4144. Total amount of fees and dues received was $12,143.48, which includes receipts from trade houses, under the Trade Card and other systems of cooperation, $887.43. The total amount of Order trade houses as reported for 1890 was $182,961. For the year 1891, $218,961, with a number of Granges yet to hear from (and the Trade Card business) not included, which was many thousands of dollars each year.

H. H. Goff, Secretary, Spencerport, Monroe Co., New York, has made an admirable report from this thoroughly organized and evidently prosperous and progressive Grange State.

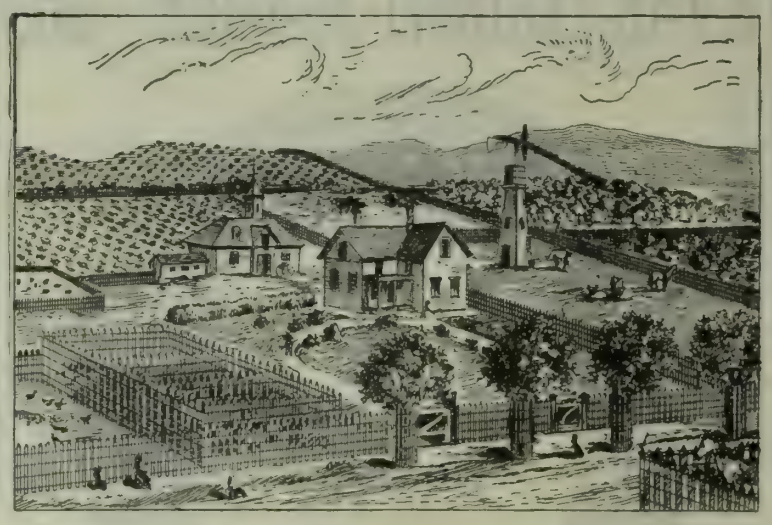
STILL FOR THE CAUSE.—J. W. A. Wright, first Master of the State Grange of California and author of that rarely inspiring document the National Grange Declaration of Purposes, while a prominent teacher in a leading and worthy educational institution of Alabama for the past few years, has also been laboriously studying for the Christian ministry.

He was for years, under the signature of "Ralph Rambler," one of the most interesting correspondents of the RURAL, and his note dated Livingston, Ala., April 23d, will specially interest many old time Patrons, viz.:

"Thanks for State Grange publication received. I am truly glad to see the evidence it bears of fresh life and vim in the greatest of farmers' organizations. Give my very fraternal regards to all our California Patrons, especially those who knew me in the early and lively struggles of our Grange work in California. Though now connected solely with educational and ministerial work, I shall ever feel the most sympathetic interest in the cause of our American farmers and the reforms they seek." Long may such able and noble-souled Patrons live and prosper in their good works.

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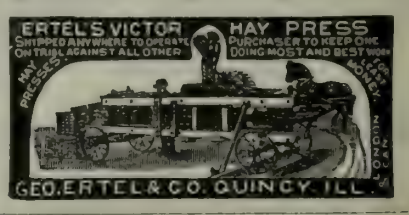
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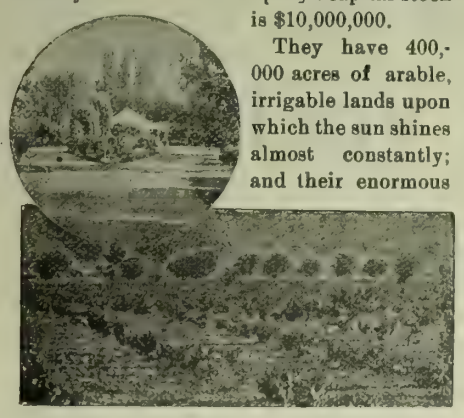
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The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

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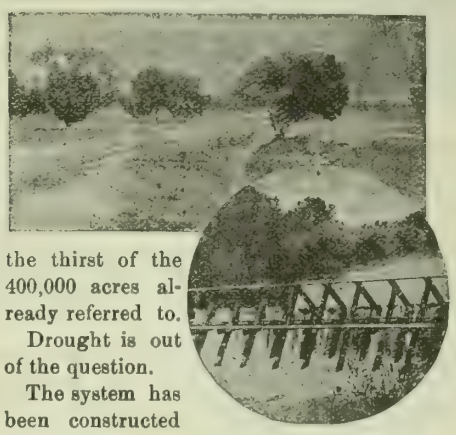
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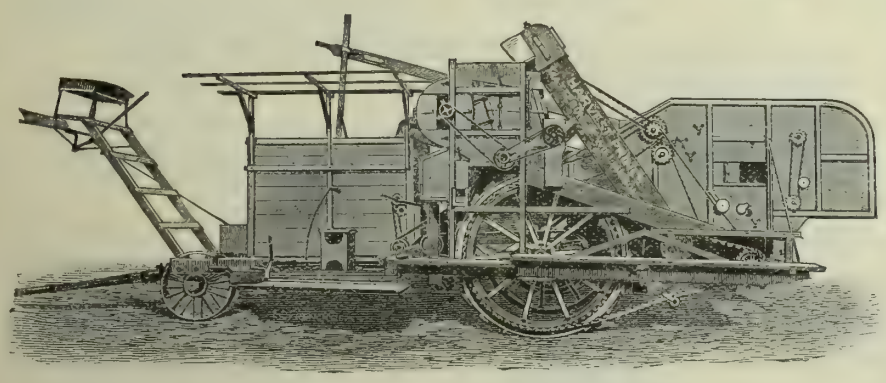
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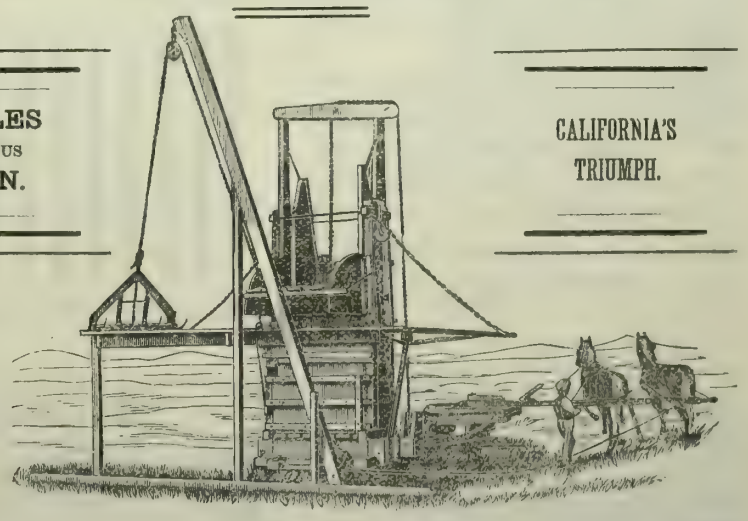
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PIE CRUST.—One heaping teaspoonful of baking powder, two quarts of flour, one teacupful of lard, two teacupfuls of water, a pinch of salt. Mix well, and sift a little flour on the molding board before rolling it out. This will make enough crust for four or five pies.

BAKED TOMATOES. — Having selected those of equal size, fresh and ripe, wash and cut out the hard centres. Place them on an earthen pie dish, and put a little sugar in the core of each as you would for baked apples. Bake in a quick oven for about one hour, or until tender. Grated cracker or bread crumbs could be sprinkled over them, if liked.

RHUBARB PIES.—Cut the young stalks in pieces about half an inch in length. Make a paste, cover the bottom of your pie plate, put in the fruit, with a great deal of sugar, about four tablespoonfuls to each pie; put on a cover and bake them till the fruit is soft.

FRENCH CREAM CANDY.—Half a cup of cream and two cups of powdered sugar, boiled five minutes in a granite kettle, counting from the time it boils all over. Place the kettle in cold water, and beat it until stiff enough to hold candied fruit. Add quarter of a pound of candied fruit, cut fine, and pour the cream into a bread pan, buttered or lined with paraffine paper. The second layer is the same, using in place of the fruit one teaspoonful of vanilla and one small square of chocolate melted. The third layer is colored pink with cochineal and flavored with chopped almonds. The fourth layer is like the first.

CHOCOLATE LAYER CAKE.—Three eggs, the whites; two cups of sugar, one cup of sweet milk, two large tablespoonfuls of butter, three cups of flour, two heaping teaspoonfuls of baking powder. Bake half of the batter in two pans, and to the remaining half add one half cup of grated chocolate. Then bake. When done, p le up the layers alternately, light and dark, spreading chocolate icing between.

POUND CAKE.—One pound of butter, one pound of flour, one pound of sugar, ten eggs, one nutmeg grated, one glass of rose water and brandy mixed. Beat the butter and sugar to a cream, whisk the eggs till they are very light, then add them to the butter and sugar alternately with the flour. Stir in the spice and liquor, and beat the whole very hard for 10 or 15 minutes. Line your pan with two or three thicknesses of paper well buttered, pour in the mixture, and bake it in a moderate oven for about three hours. Two pounds of dried currants may be added to this cake, if you choose.

GRAHAM ROLLS.—Take one pint of pure cold water and mix enough flour with it to make a stiff dough, put this on a kneading board and knead for about half an hour, adding white flour to keep from sticking to the board, and roll the dough with the hands into a slender roll about three-quarters of an inch in diameter. Then cut into pieces about three inches long and bake in a quick oven from 30 to 40 minutes. Place the pan in the upper part of the oven first, and remove to the lower part of the oven after the crust is formed. The quantity of material named will make about 12 rolls.

LEMON CUSTARD PIE.—Two eggs, one cup of granulated sugar, one cup of water, one tablespoonful of butter, one tablespoonful of cornstarch dissolved in water, one lemon. Grate the rind; then peel off the thick, white skin and grate the rest of the lemon, being careful to remove the seeds. Save out one of the whites and beat to a stiff froth with a tablespoonful of sugar; put this on the top after it is baked and return to the oven until it is a delicate brown.

CHICKEN-PIE CRUST.— Take a quart measure full of flour and mix with it four teaspoonfuls of baking powder, a pinch of salt and one cupful of lard. Moisten with sweet milk sufficient to roll. Roll out once, spread with butter, lap it over and roll again. It is then ready to put on the pie.

HAM TOAST.—Slices of toasted bread with the crusts cut off, two eggs, two tablespoonfuls of butter, some cold ham or tongue grated. Put the yolks and whites, well beaten, into a stewpan, with the butter; stir them two minutes over the fire, spread them over the toast and lay over them a sufficient quantity of cold ham or tongue.

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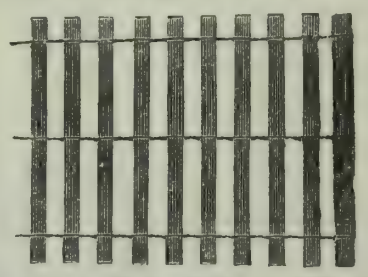
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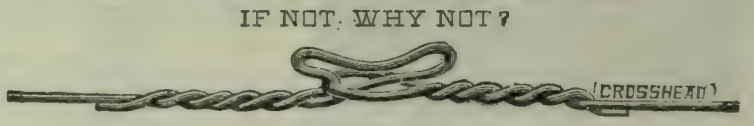
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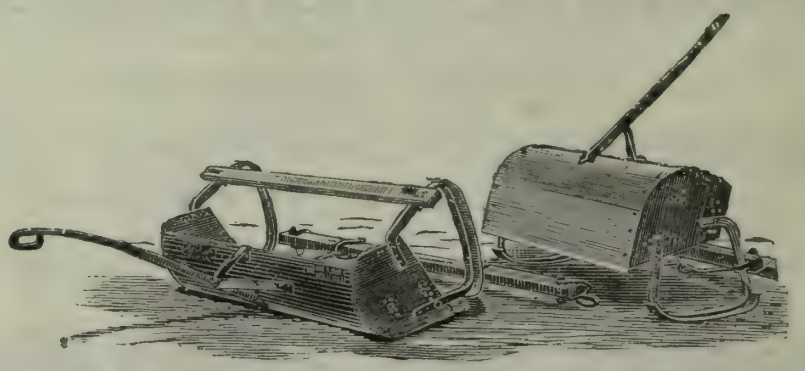
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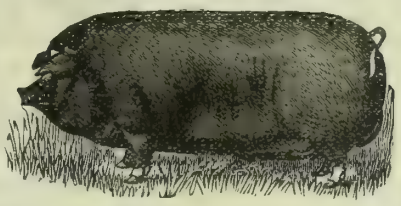
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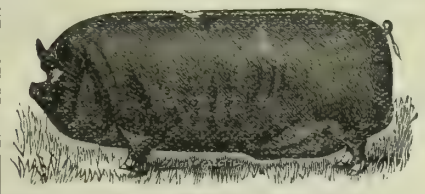
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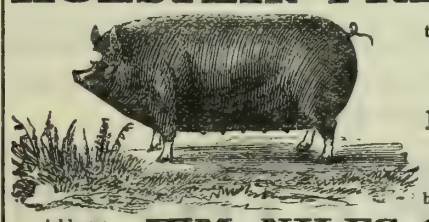
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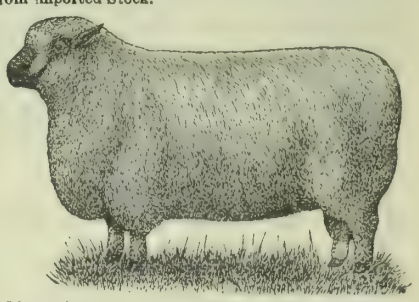
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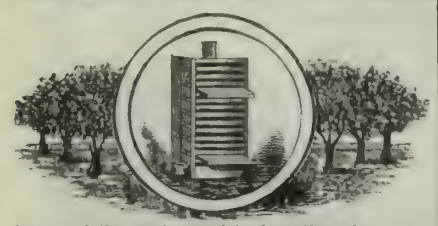
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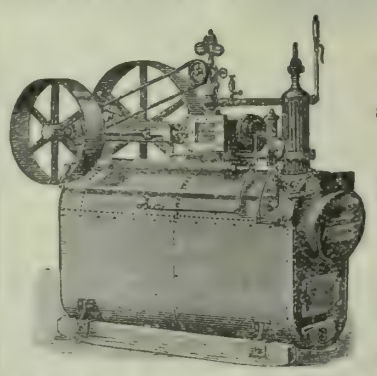
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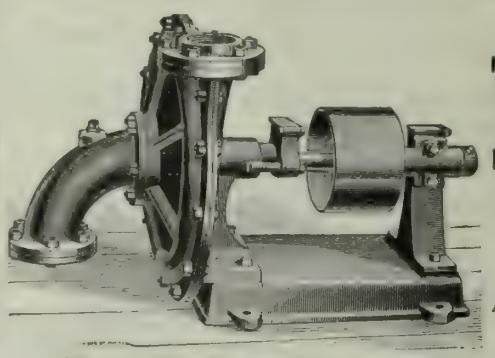
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S. F. Market Report

Market Review.

SAN FRANCISCO, June 15, 1892.

General trade the past week was only fairly active. In farm products the bear pressure heretofore reported is more pronounced in wheat and barley. It looks very much as if a strong combination has been formed to reduce prices for the above two cereals to very low ranges for the purpose of buying the new crop at figures which will net a very handsome profit. In fruits there is an active movement with contract sales made on a slightly higher basis than ruled at this time in 1891. In the local money market the reserve continues very large but there is a spirit of caution with bankers and capitalists which causes them to be offish in making loans, except on call, unless gilt edged security is given, and even then the amount loaned is smaller than obtains when general trade is active and the rate of interest higher.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s10½d	6s10½d	6s11½d	7s00½d	7s00½d
Friday	6s10½d	6s11½d	7s00½d	7s00½d	7s01½d
Saturday	6s09 d	6s09½d	6s11½d	6s11 d	7s03 d
Monday	6s08½d	6s09½d	6s10 d	6s10½	.....
Tuesday	6s09 d	6s09½d	6s09½d	6s10 d	6s10½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	35s3d	35s3d	35s6d	Steady.	Brilliant.
Friday	35s3d	35s6d	35s6d	Slow.	Fine.
Saturday	35s6d	35s6d	35s6d	Depressed.	Local Storms.
Monday	35s3d	35s3d	35s3d	Neglected.	Colder.
Tuesday	35s3d	35s3d	35s3d	Quiet.	Cold.

To-day's cablegram is as follows:

LIVERPOOL, June 15.—Wheat, slow. California spot lots, 7s 2½d; off coast, 35s 3d; just shipped, 35s 3d; nearly due, 35s 3d; cargoes off coast, easier; on passage, neglected and no business doing; Mark Lane wheat, easier; French country markets, steady.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.
Thursday	152	154	155	155⅞
Friday	150½	152	154⅛	154⅝
Saturday	146½	148	148¼	148½
Monday	145	146⅝	146¼	147
Tuesday	142⅝	144⅝	145	145¼

The following are to-days' telegram:

NEW YORK, June 15.—Wheat, 86c for July, 87c for August, 87½c for September, 87⅞c for October, and 90¼c for December.

CHICAGO, June 15.—Wheat, 87½c for July and 87½c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	140½	....	....	....	....
" lowest	140½	....	....	....	....
Friday, highest	141½	....	....	....	141½
" lowest	140½	....	....	....	142
Saturday, highest	139½	....	....	....	141½
" lowest	139½	....	....	....	141
Monday, highest	139½	....	....	142½	....
" lowest	139½	....	....	142½	....
Tuesday, highest	139½	....	....	141⅝	141½
" lowest	138⅝	....	....	141¼	141½

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	94½	....	....	....	....
" lowest	94	....	....	....	....
Friday, highest	93⅞	....	....	....	....
" lowest	93¾	....	....	....	....
Saturday, highest	93½	....	....	....	....
" lowest	93½	....	....	....	....
Monday, highest	93¼	....	....	....	....
" lowest	93¼	....	....	....	....
Tuesday, highest	92½	....	....	....	....
" lowest	9-½	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Informal Session—Wheat—Seller 1892, 500 tons, $1.39½ ₩ ctl. Regular Session—Seller 1892, 100 tons, $1.39½; 1000, $1 39; 800, $1.38½. Buy r December, 100 tons, $1.44½ ₩ ctl. Afternoon Session—Seller 1892, 100 tons, $1.38½ ₩ ctl.

Regular Session—Barley—Seller 1892, new, 200 tons, 93c; 200, 93½c; 100, 93½c. December, 100 tons, 96½c; 100, 97c ₩ ctl. Afternoon Session—Seller 1892, new, 100 tons, 93½c; 200, 95c ₩ ctl,

Markets by Telegraph.

Foreign Grain Review.

LONDON, June 13.—Owing to brilliant weather last week, English wheat sold 6d lower than Whitsuntide rates. Indian and South American also declined. North American was irregular. California was 5s 1d dearer than English. Since last harvest 1,659,230 quarters of wheat flour has been imported, which was half American. Oats and barley are weak and maize dearer. In to-day's market English wheat, foreign white, 6d cheaper; foreign red, 1s cheaper on fortnight. Flour, especially American, sold readily. Barley, firmer.

Grain in Russia.

WASHINGTON, June 11.—The State Department is advised that the Russian Government has issued a ukase authorizing the free exportation of maize, both by sea and by the western continental frontier. This is understood to indicate that the famine is drawing to a close. It is believed a ukase will be issued on July 1st permitting the exportation of all grains except rye. A collapse in the price of grain has taken place, the decline being from 80 to 100 per cent, and the existence of vast quantities hoarded by speculators has been developed.

Wheat Supply.

NEW YORK, June 13.—Special cable advices indicate that the stocks of available wheat in Europe, with the total quantity afloat, aggregated on June 1st 78,469,000 bushels, or quite as much as on January 1st last, while in the United States and Canada the total available stocks have decreased 36,500,000 bushels since January 1st. European afloat and the American available wheat stock on June 1st amounted to 120,170,000 bushels, 30,000,000 bushels more than one year ago, 36,000,000 more than two and 38,000,000 bushels more than three years ago.

Eastern Canned Fruit Markets.

NEW YORK, June 12.—An indifferent attitude continues toward the new pack. The large surplus of good quality of the last crop promotes this feeling among many buyers who have secured supplies from lines on spot and ship at the favorable rates lately quoted. This condition is likely to prevail until the Eastern possibilities of production are more definite in competing fruit. Besides the unusual headings of England are against any chance of a sudden call for repienishment. The past week discloses strong competition for yellow peaches at some of the best Delaware orchards. Shippers of fresh aim to anticipate canners.

First Receipts of Arizona Apricots.

NEW YORK, June 12.—A refrigerator car of Royal apricots from Phoenix, A. T., is due to-morrow. It is the first car ever sent Eastward from there.

Eastern Hop Markets.

NEW YORK, June 13.—Since the brewers have bent prices their orders are more liberal, but middle grades form the main offering in this way. Twenty-five cents was paid for a lot rating close to prime. State or Coast extreme ranges closed at 22@28c, with best Coast 26½c. Options closed weak, June, 23½c asked; October, 20@23c bid and asked. Crop reports here and abroad favor the low side of the market.

California Fruit East.

NEW YORK, June 12.—During the week several cars of Tartarians brought from $1 65 to $2 a box; Biggereau, $1.35@3.20; Black Eagle, $1.65@2.90, and others, 95c@$1 80. Goodsell's car of cherries was in bad order. Biggereau ranged from 55c to $1.85; Tartarian, 70c to $2.05, largely $1.35 to $1.85. A few Governor Woods sold at $2.50.

CHICAGO, June 9.—Two carloads sold as follows: Tartarian cherries brought 90c@$1.35, Biggereaus 95c@$2, Royal apricots $1.50@2.15, peaches $1.20@2, Gurley apricots $2.10.

NEW YORK, June 11.—Carload cherries as follows: Some, poor condition, from 65c to $1 20; good condition, from $1.50 to $1 85, and fancy, $2@2.50 per box.

CHICAGO, June 11.—Two carloads of cherries as follows: Some, poor condition and small, 65@70c; good condition, 90c to $1.15; fancy, $1.95 per box.

CHICAGO, June 13.—Sold San Jose Black Tartarian cherries, in bad order, from 65c to 95c per box; fair condition, $1@1 15. Cherries are arriving in an overripe condition.

NEW YORK, June 13.—Sold Royal apricots at auction at $2@2 40 ₩ crate; Alexander peaches, $1.10 ₩ box

CHICAGO, June 14.—Apricots, moderate sales. Half crates, good, $1.50@1.90; ripe 75c@$1.25. Cherries were steady for fine goods and easy for soft; white, 10-lb boxes, fine large, $1.25@1.50; soft, 75c@$1; black, sound, $1.15@1.50; do. soft, 75c@$1. Peaches sold fairly; half crates, good, $1.25@1.50; small and green, $1. Cherry plums, 10-lb boxes, sold at $1 10.

CHICAGO, June 14.—Sold three carloads. Clyman plums sold at $4; Cherry plums, $2.25@2.30; small boxes, $1.05@1.10; Brill plums, $2.30; Royal apricots, $1 30@1.35; Golden apricots, $1.75; peaches, $1@1.60; Royal Ann cherries, $1.15@1.50; Black Republican cherries, $1.05@1.30.

Eastern Dried Fruit Markets.

NEW YORK, June 13.—Evaporated peaches, prunes and apricots have little wholesale interests. Boxes of the last have sold at 11½@12c. Raisins are running out well at 4@5c for bags, $1 to $1.40 for layers and 95c and $1.20 for loose boxes.

CHICAGO, June 14.—California Dried Fruits—There is nothing like activity, and it is not to be expected. Stocks are well reduced, and the market is cleaning up well of all kinds but raisins. There are fair stocks of these as yet—more than holders would wish they had.

Miscellaneous.

NEW YORK, June 12.—Lima beans are quiet at about the last spot rates. Green stuff now reduces the consumption.

Eastern Wool Markets.

NEW YORK, June 10.—New wools are coming forward more freely, but as they are held above the present market quotations, they are not meeting with a strong demand. Manufacturers, as a rule, have light stocks, but they are adding to them in a very conservative manner. Territory wools are coming along quite freely, and while some are heavy, other lots show improvement over those of last year. New wools from Ohio and Michigan have not come forward to any extent, although some small lots are now on the market. Shearing has not begun in many sections on account of rainy weather. Pulled wools are quiet. Stocks are light, especially in medium grades, and receipts will be very small for the next 60 days. Manufacturers have been buying Australian wools more freely. Many believe that prices at the London sales, which open June 14th, will be higher, and that an advance will be made here. The chances of an advance in London are favorable. About 385,000 bales will be offered, and of these but a small amount will be suitable for this country. It is generally expected that English and continental buyers will be strong competitors. Carpet wools are quiet, but prices are unchanged.

NEW YORK, June 13.—The situation is unchanged at the seaboards since last remarks Stocks are forming, but there is no spot purchasing excitement. Sales at New York, 526 000 domestic. Foreign sold heavily here, mostly of low-grade carpet. There were many buyers from other cities. Boston sold 4,741,500 domestic. Besides this, 636,000 were foreign sold, of which over half was Australian, at 32@41½c. At Philadelphia the trade was in unwashed. New buyers were not urgent.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 7, '92, were as follows:

Flour, qr. sks	63,057	Bran, sks	3,965
Wheat, ctls	11,672	Buckwheat "	....
Barley, "	11,786	Middlings "	747
Rye, "	1,353	Chicory, bbls	120
Oats, "	1,395	Hops, "	....
Corn, "	5,587	Wool, "	1,061
*Butter, "	1,182	Hay, ton	2,184
do bxs	1,093	Straw, "	34
do bbls	10	Wine, gals	184,880
do kegs	97	Brandy, "	60
do tubs	5	Raisins, bxs	3,230
do ½ bxs	505	Honey, cs	25
†Cheese, ctls	1,018	Peanuts, sks	20
do bxs	99	Walnuts "	31
Eggs, doz	28,180	Almonds "	....
do " Eastern	16,500	Mustard "	....
Beans, sks	13,557	Flax "	1,814
Potatoes, sks	17,402	Popcorn "	....
Onions, "	4,481	Broom corn, bbls	....

*Overl'd, ... ctls. †Overland, 257 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to June 13, '91.	July 1, '91 to June 11, '92.
Flour, ½ sks	399,429	468,609
Wheat, ctls	1,404,854	1,299,922
Barley, "	269,912	56,791
Oats, "	366,108	430,278
Wool, bales	8,310	8,913
Hops, "	508	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,048

Cereals.

The cereal year in India begins April. The recently harvested crop is estimated to have been 235,000,000 or just the same as in 1890, though 20,000,000 bushels less than in 1891. The acreage and yield by districts for 1892, according to the London *Miller*, was as follows:

	Acres.	Yield, qrs.
Punjab	6,500 000	6 500,000
Northwest Provinces	5,3 0,000	8,000,000
Centre	3,750,000	4,000,000
Bombay	2,600,000	2,600,000
Berar	850 000	1,000,000
Bengal	1 000,000	875,000
Rajputana	1,500,000	1,875,000
Native Central States	2,500,000	2,500,000
Hyderabad	1,000,000	1,000,000
Mysore	15,000	15,200
Cashmere	500,000	685,000
Total	25,515,000	29,050,000

According to the official returns, the wheat crop of South Australia was only 4 bushels and 9 pounds against 5 bushels and 37 pounds the previous year. The acreage is 1,700,000 and the total production 7,000,000 bushels, against 9,400,000 in 1891 and 4,600,000 bushels in 1890. The export surplus is only about 4,000,000 bushels. The exports from Australia during the first 20 weeks for the present season have been 3,688,000 bushels, against 8,528,000 bushels last year.

The official returns show that 9,860,000 qrs of foreign wheat (including flour reduced to wheat) were consumed in France for the 9 months ending April 30th. On that date there was 1,816,000 qrs of foreign wheat in bond on which the duty has not been paid, and it was estimated that the imports for May would be 1,250,000 qrs, which, added to the quantity in bond, would give a total of over 3,000,000 qrs. As the consumption of the first nine months of the cereal year averaged 1,095,000 qrs per month, there was enough in sight to satisfy the demand for the last three months of the year, or to August 1st. In view of this condition of things, it is not expected that the French people will have any anxiety about food supplies for the present.

London cables June 14 report as follows: Imports into the United Kingdom for the week ending June 11th: Flour bbls, 170,000: Wheat, qrs. 364,000. Amount of wheat and flour on passage June 11: To United Kingdom, 2,905,000 qrs.: to continent, 1,115,000 qrs. Farmers' delivery of wheat for week ending June 11, 63,508 qrs; average price, 30s 8d.

The local wheat market has shaded off only slightly for spot parcels, while futures fell off under cross orders, chiefly, considerably, but not near so much as did the New York market. The strength of our market is due to the large tonnage in port, and confirmed advices that the crop in Oregon and Washington will not be more than four-fifths of what it was in last year. The shortage up north will operate against ships and cause charters to rule in favor of wheat. Referring to the poor crop prospect in Eastern Washington, which is similar to Eastern Oregon, the Colfax *Gazette*, June 10, says: "In some parts of the country, farmers are considerably alarmed over the singular condition of grain. The leaves are turning yellow, apparently from droughts, but as the ground is unusually moist, the majority of people seem to think the condition must be caused by something else than the want of rain. For a while the dry leaves were attributed to the work of a bug, but the little creature has kept safely hidden if he is responsible. The most generally accepted theory now is that frost, succeeded by a day or two of very hot weather, is the cause of the whole thing."

The local barley market shaded off slightly the past week notwithstanding the receipts were light. The strong bear pressure heretofore reported was not only relaxed, but appeared to have gained in strength. Advices received from up north, from the East and also from England indicate that there will be a good demand for shipment which will relieve our market of a large part of the surplus.

Notwithstanding heavy receipts, oats hold to strong prices under a continued good demand and small available supplies of old to draw from. The consumption is large.

Large, yellow corn is lower under free offerings and a light demand. Small, yellow corn and white corn are steady.

Rye is dull and heavy at the decline.

Crop prospects in the State have improved with cool weather. It is now claimed that all kinds of grain will average larger and heavier than was heretofore claimed. Harvest work has been kept back. The only fear now entertained is that the cool weather will be succeeded by hot north winds.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in May were as follows:

Sources.	Butter, lbs.	Cheese, lbs.	Eggs, dez.
California	1,631,200	580,500	206 350
Oregon	10 400	3,200	150
Eastern	71,500	132,200	329,670
Totals	1,713,100	715 900	536,170
January	502 200	476,900	420,345
February	622,550	313,600	200,765
March	1,188 700	574,200	358,756
April	1,793.050	802,900	590,068
Five months	5,819,600	2,883,400	2,166,104

During the first five months of 1891 the receipts were 5,329,300 lbs butter, 2,832,000 lbs cheese and 1,856,692 doz eggs.

Butter advanced, the past week, for choice to gilt-edged dairy and creamery, but, for other grades, the market held barely steady, with liberal supplies to draw from. At the advance for gilt edged, packing fell off, and the demand from dealers has also fallen off, the trade running largely to cheaper grades. Receipts are enlarging, with supplies coming in from all quarters.

Cheese has ruled weak, with prices barely sustained. Receipts and supplies are large. At the lower prices, the demand is said to be fairly large

Eggs advanced, the past week. Supplies are well cleaned up, and the demand has now to rely on daily receipts, which, at this time of the year, owing to hens molting, are small. The better prices will probably induce freer shipments to us from the Central States.

Fruit.

The market for all kinds of fruit, except strawberries, sold lower the past week. The heaviest break was in peaches and apricots. The quality of the former is poor, while apricots were too high for free use. At the lower prices, canners are in the market for currants and cherries. They are also taking apricots when they are of good size and sufficiently cheap to admit of handling. Canners this season discriminate more closely than ever before. The market is said to be well stocked with poor to fairly good canned fruits, but about bare of the better grades. The scarcity of choice grades of canned fruits necessitates canners buying the best fruits, and for which they pay good prices. The following are the prices named: Cherries, black, 4@4½ cts.; white, 5@7; Royal Anne, 7@9; apricots, 1½@1¾; peaches, 1¾@2; plums, 1@1¼; Bartlett pears, 1½@2. Dryers are paying 1½@1¾ cts. for French prunes in the orchard.

The second crop strawberries, it is said, will, like the first crop, be short. Canners are contracting for raspberries and blackberries, but we are not advised what they pay.

Apples from Australia are in the market at $2 per per small box. California apples and pears are still too green for free consumption.

Choice grades of apricots, prunes and raisins are scarce and higher. The poorer grades of all kinds of fruits are about cleaned up.

Cool weather is against the consumption of limes and lemons. Oranges continue a drug. Forced sales this week were made at 50 cts. per box, as is. They had been held for better prices until rotting set in. There are no choice oranges in the market.

The fruit market to-day did not show any change except in currants which were about $2 a chest higher. Strawberries were lower as were blackberries and raspberries.

Sales of oranges "as is" were made the past week as low as 30 cents per box.

Vegetables.

In garden stuff there is a fairly active demand, considering the high prices. Cool weather, while in favor of growing vegetables, is against free receipts. Peas are old and hard to sell. Beans are scarce and very high. Other vegetables have shaded off.

Onions are in oversupply, with the market still in buyers' favor.

Potatoes have held to steady prices, owing to receipts and demand being about equal. Overland shipments continue to be made from Los Angeles, where buyers are accommodated at from 5 to 15 cts. per cental lower than rule here. There is loud complaint of local freight rates being excessive. We were in a commission house on last Monday when a grower was complaining of the freight being 40 cts. per 100 pounds, and the price received for potatoes only averaged about 75 cts. per cental. The shipping point was near by.

Feedstuff.

The market for ground feed has ruled strong, at full figures for bran and middlings, weak for rolled and ground barley, and barely steady for feed meal.

New hay is coming in quite freely, and, under strong selling, prices has shaded off, closing the week weak Old hay has come in fairly freely; prices have held barely steady. At times, concessions had to be made to effect sales. Lower prices are looked for at an early day.

Wool.

Receipts have been large, with both Oregon and Washington large contributors. All desirable clips have been quickly taken up by buyers, with at times a shade advance paid. Scourers continue to run to full capacity. Many growers are having their clips graded and scoured. Better results are said to follow. The Eastern markets are reported fairly active, but with no material advance reported. The tone at the East is firmer.

Live Stock.

The market is weak, with some shading in bullocks, owing to free offerings. Mutton sheep are fairly steady; better prices are expected in the near future. Hogs are steady, as are calves.

Miscellaneous.

Poultry weakened for hens, roosters and small chickens, but strengthened for turkeys. Receipts of Eastern broke the market on the former. Choice stock is scarce.

Hops are firm at 18@20 cts. contract price for new crop. Old is scarce.

Beans are in liberal supply, but prices do not shade off.

Honey is scarce, but the demand is light.

Hams and bacon are higher.

The poultry market to-day was steadier and slightly higher for choice well conditioned hens, sales going as high as $9 for selected. Young chickens were weak and in oversupply.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	266,129	344,323	*151,774	51,878
San Diego	18,578	23,160	1,152	.....
San Pedro	8,383	14,624	....	
Oregon	35,152	28 476	19,822	16,657
Puget Sound	31,156	23,506	.....	
Totals	359,398	434,089	178,932	76.132

*Engaged for wheat, 1892, 21,687; 1891, 23,986 †For new crop loading, 1892, 16,879; 1891, 17,715,

The statistics of produce exports from this port from July 1st to June 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,729,955	13,519,267
Flour, bbls	1,031,957	1,126,952
Barley, ctls	1,109,174	307,165

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, June 15, 1892.

BEANS AND PEAS.

Bayo, ctl	2 00 @ 2 15
Butter	2 50 @ 3 05
Pea	2 20 @ 2 70
Red	2 00 @ 2 20
Pink	2 00 @ 2 10
Small White	2 20 @ 2 55
Large White	2 20 @ 2 45
Lima	1 95 @ 2 35
Pid Peas, bik eye	3 00 @ 3 30
Do green	1 50 @ 2 75
Do Nlles	1 30 @ 1 40
Split	4 50 @ 5 50

BUTTER.

Cal. Poor to fair, lb	15 @ —
Do good to choice	17 @ —
Do Giltedged	— @ 21
Do Creamery rolls	— @ 20
Do do Giltedge	— @ 22
Eastern	— @ —

CHEESE.

Cal. choice mild	7½@ —
Do fair to good	6½ @ —
Do gilt edged	— @ 8½
Young America	— @ 10

EGGS.

Cal. ranch, doz	20 @ —
Do do selected	— @ 26
Do store	18 @ —
Eastern	18 @ 21

FEED

Bran, ton	17 50 @18 50
Feedmeal	26 50 @29 00
Gr'd Barley	21 50 @23 00
Middlings	20 00 @21 50
Oil Cake Meal	— @25 00
Manhattan Food ₩ cwt.	7 50

HAY.

Wheat, per ton	11 00 @ —
Do choice	— @14 00
Wheat and Oats	10 00 @12 00
Wild Oats	10 00 @ —
Cultivated do	10 00 @—
Barley	10 00 @12 00
Alfalfa	8 00 @10 00
Clover	— @ —
New Hay	7 @ 10
Straw bale	45 @ 60

GRAIN, ETC.

Barley, feed, ctl.	90 @ —
Do Choice	95 @ —
Do Brewing	1 02½@ —
Do do Choice	1 07½@ —
Do do Giltedge	1 10 @ —
Do Chevalier	1 05 @ 1 40
Do do Giltedge	1 45 @ 1 50
Buckwheat	— @ —
Corn, White	1 35 @— —
Yellow, large	1 30 @— —
Do small	1 35 @— —
Oats, milling	1 50 @ —
Feed, Choice	1 47½@ —
Do good	1 41½@ —
Do fair	1 35 @ —
Surprise	1 55 @ —
Black Cal	— @ —
Do Oregon	1 32½@ —
Gray	1 32½@ —
Rye	1 20 @ —
Wheat, milling. Gilt edged	1 47½@ —
Do Choice	1 45 @ —
Do fair to good	1 41½@ —
Shipping, cho'ce	1 40 @ —
Do good	1 38½@ —
Do fair	1 36½@ —
Common	1 33½@ —
Sonora	1 33½@ 1 40

HOPS.

1891 Choice to Ex.	25 @ —
Fair to Good	22 @ —

FLOUR.

Extra, City Mills	4 65 @ 4 75
Do Country Mills	4 50 @ 4 75
Superfine	2 75 @ 3 10

NUTS—JOBBING.

Walnuts, Cal. lb	4 @ —
Do Choice	6 @ —
Do paper shell	7 @ —
Almonds, sft shl.	10 @ —
Paper shell	12 @ —
Hard Shell	6 @ 7½
Brazil,	6½@ 8
Pecans small	11 @ 13
Do large	14½@ 16
Peanuts	1½@ 3
Filberts	10½@ 12½
Hickory	7 @ 8
Chestnuts	11½@ 16

ONIONS.

New Reds	30 @ 35
do Silverskin	50 @ 75

POTATOES.

Early Rose, ctl.	50 @ 75
Do do in boxes	60 @ 1 25
Peerless	60 @ 70
Garnet Chilies	50 @ 55

POULTRY.

Hens, doz	7 00 @ 8 00
Roosters, old	6 50 @ 7 50
Do young	9 00 @12 00
Broilers, small	2 00 @ 3 50
Do large	4 00 @ 5 50
Fryers	6 00 @ 7 00
Ducks	5 00 @ 7 00
Geese, pair	1 25 @ 1 50
Goslings	1 25 @ 1 75
Turkeys, Gobl'r.	18 @ 20
Turkeys, Hens	15 @ 18
Manhattan Egg Food ₩ cwt	11 50 @ —

PROVISIONS.

Cal. Bacon, he'vy, lb	10 @ —
Medium	11 @ —
Light	12½@ —
Lard	9 @ 11
Cal. Sm'k'd Beef	11½@ —
Hams, Cal salt'd	11 @ —
do Eastern	14 @ —

SEEDS.

Alfalfa	9 @ 12½
Clover, Red	14 @ 15
White	20 @ —
Flaxseed	2 00 @ 2 25
Hemp	3½@ 4
Mustard, yellow	3½@ 4
do Brown	3 @ 3½

WOOL.

SPRING, 1892.

Humb't & Men'cino	17 @ 21
Sac'to valley	16 @ —
S Joaquin valley	11 @ 16
Cala'v & F'th'l.	16 @ 21
Oregon Eastern.	12½ @ 19
do valley	18 @ 23
So'n Coast, def.	10 @ 12
Nevada (State)	15 @ 19

HONEY.—1892 CROP.

White Comb, 2-lb	8 @ 11
do do 1-lb frame	10 @ 13
White extract'd	6½@ 7
Amber do	5½@ 6
Beeswax, lb	25 @ 28

Live Stock.

BEEF.

Stall fed	5½@ —
Grass fed, extra	5½@ —
First quality	5 @ —
Second quality	4½@ —
Third quality	4 @ —
Bulls and thin Cows	2 @ —

VEAL.

Range, heavy	6 @ —
Do light	7 @ —
Dairy	7 @ —

MUTTON.

Wethers	7 @—
Ewes	6½@—
Do Spring	8 @—

HOGS.

Light, ₩ lb, cents	5 @ —
Heavy	4½@ —
Feeders	3½ @ —
Stock Hogs	4 @ —

Continued on next page.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 15, 1892.

Limes, Mex	4 00 @ 4 50	Figs, Arizona, lb	— @ —
Do Cal	— @ —	Apricots,	
Lemons, box	1 50 @ 5 50	Royal, pr box	50 @ 75
Do Sicily	6 00 @ 6 50	Cherries, box	
Oranges, Seedlings		Black	40 @ 50
Redlands	2 00 @ 2 50	Royal Ann	70 @ 90
Riverside	1 50 @ 2 00	White	35 @ 60
Los Angeles	1 25 @ 1 75	Beets, sk	— @ 1 00
Do Navels—		Carrots, sk	50 @ —
Real nds	— @ 4 00	Okra, dry, lb	15 @ —
Los Angeles	— @ 2 50	Parsnips, ctl	— @ 1 25
Riverside	— @ 3 00	Peppers, dry, lb	10 @ —
Duarte	— @ 3 00	Do green	10 @ 15
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Turnips, ctl	50 @ —
		Cabbage, 100 lbs	45 @ —
		Garlic, lb	2 @ 4
Strawberries, per chest—		Squash, Sum, bx	50 @ 1 25
Longworth	10 00 @12 00	Tomatoes, box	1 00 @ 1 50
Sharpless	6 00 @ 7 00	Asparagus, box	1 00 @ 3 00
Gooseberries, lbs	3 @ 05	Peas, green, sk	50 @ 1 00
Oregon Imp	6 @ 7	Rhubarb, box	50 @ 1 35
do English	7 @ 8	String Beans	5 @ 6
Raspberries, ch	7 00 @10 00	Do do wax	5 @ 6
Currants chest	5 50 @ 7 00	Do Refugee	6 @ 7
Peaches, box	50 @ 75	Cucumbers, doz	20 @ 50
Cherry Plum, dr	45 @ 65	Mushrooms	10 @ 30
		Egg Plant, lb	17½@ 20
		Green Corn, sk	1 00 @ 1 50

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.	
Sun-dried, ¼'s, com'on	2½@ 3½
Do do prime	3½@ 4
Do do choice	4 @ 4½
Do sliced, common	3½@ 4
Do do prime	4 @ 4½
Do do choice	4½@ 5½
Evap. bleached, ring. 50-lb boxes	7 @ 8
APRICOTS.	
Sun-dried, unbl. com.	2½@ 4
Do do prime	5 @ 5½
Do do choice	6 @ 6½
Do bleached, prime	7 @—
Do do choice	7½ @—
Do do fancy	8½@ 9½
Evap. choice, in boxes	9½@10
Do fancy, do	10 @10½
FIGS.	
Sun-dried, black	4 @ 5
Do white	5 @ 6
Do do washed	— @—
Do do fancy	— @—
Do do pressed	7 @ 8
Smyrna boxes	10 @14
Do sacks	— @—
GRAPES.	
Sun-dried, stemless	3 @ 4
Do unstemmed	1½@ 2½
NECTARINES.	
Red, sun-dried	3½@ 5
Do Evap., in boxes	5 @ 6
White, sun-dried	4 @ 6
Do evaporated	6 @ 7
PEACHES.	
Sun-dried, unpeeled, common, bleached	4 @—
Do do prime, do	5½ @—
Do do choice, do	6½@—
Do do fancy	7½@—
Evap, unpe'l'd, choice	7½@—
Do do fancy	8½@—
Evap, peeled, choice	10 @—
Do do fancy	12 @—
Sun-dried, quarters	3 @ 4½
Do sliced	4 @ 5
Evap, sliced, in boxes	6 @ 8
Do ring do	10½@—
PLUMS.	
Pitted, sun-dried	5 @—
Do evap. boxes, choice	— @—
Do do do fancy	— @—
Unpitted	2½@ 3
PRUNES.	
Cal. French, ungraded	5½@—
Do graded, 60 to 100	6 @—
Do do 40 to 60	8 @—
Fancy sell for more money.	
RAISINS.	
London Layers, choice ⅌ bx	$1 50@ —
Do fancy, do	1 75@ —
Layers, ⅌ bx	80@1 00
Loose Muscatels, common, ⅌ bx	60@ —
Do choice, do	1 20@ —
Do fancy, do	1 50@ —
Unstem'd Muscatels, in sacks, ⅌ lb	4@ 5
Stemmed do do	5@ 5½
Seedless do do	6@ —
Do do ⅌ 20-lb bx	1 15@ —
Sultanas, unbl, bxs	1 15@1 40
Do bleached, in bxs	1 30@1 60

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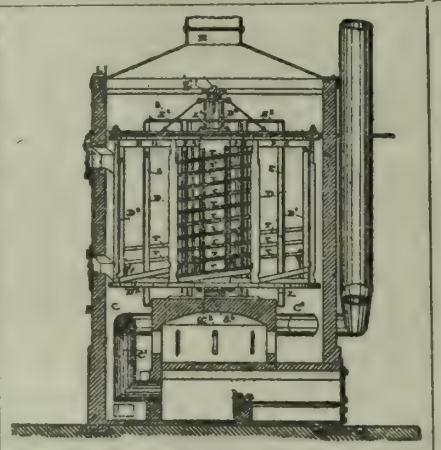
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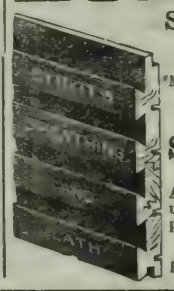
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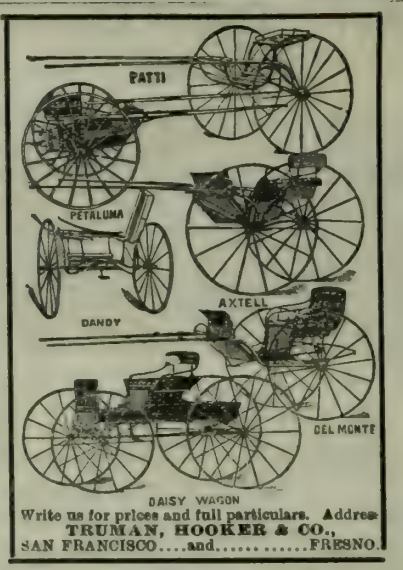
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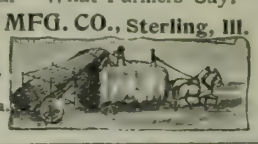
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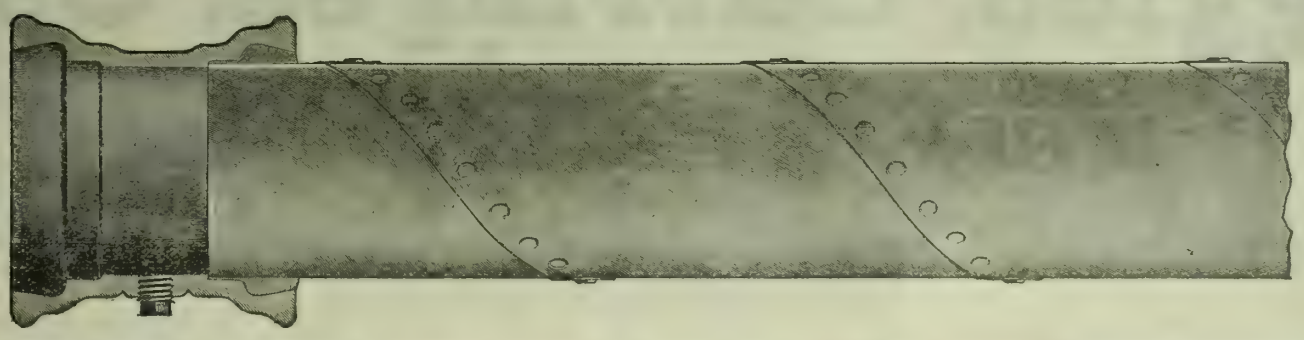
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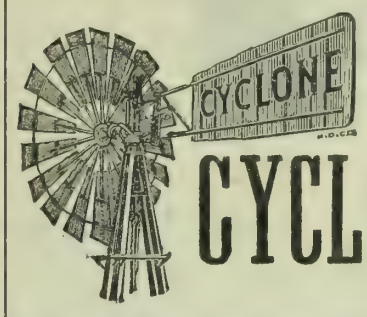
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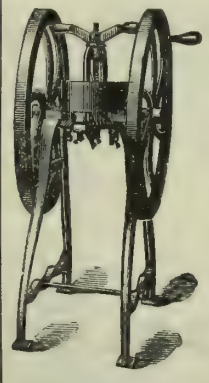
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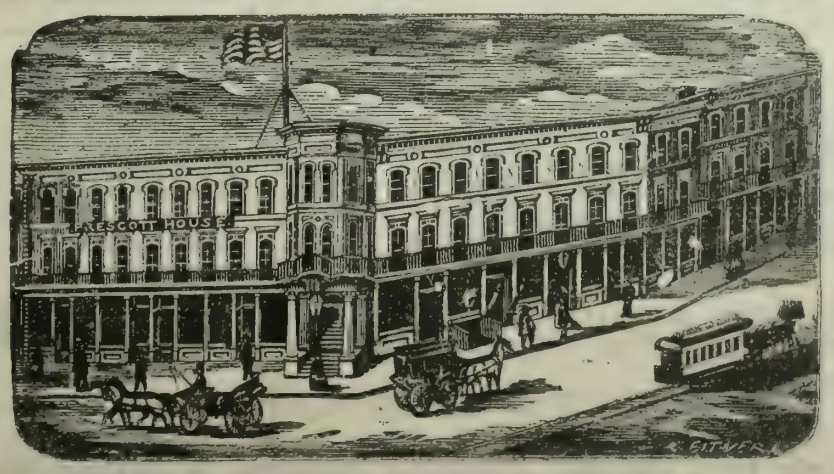
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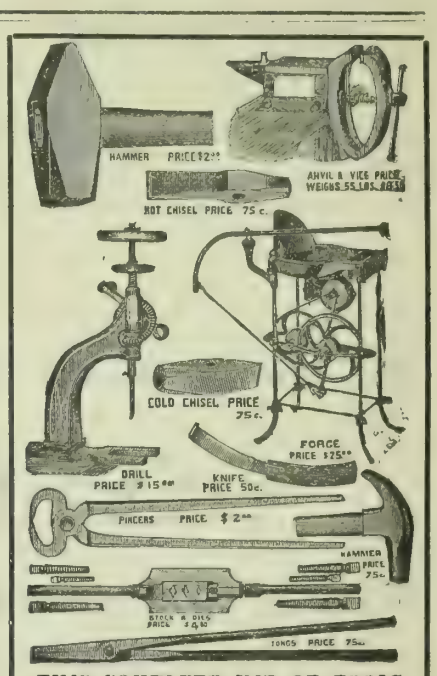
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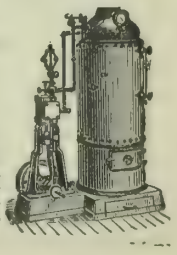
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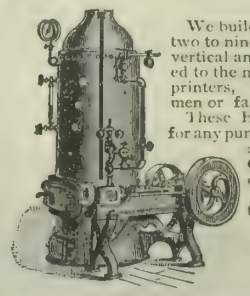
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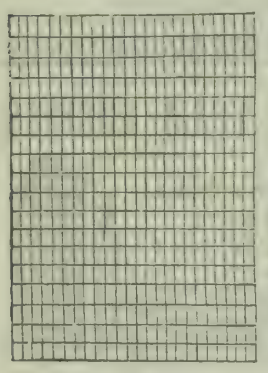
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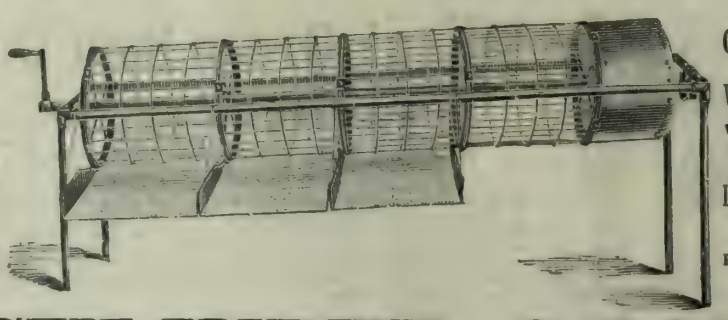
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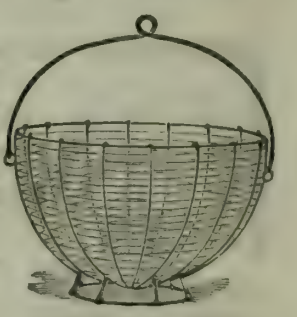


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Is the most rapid working machine for GRADING PRUNES, BOTH GREEN AND DRIED, that has ever been introduced. Wherever it was used last season it gave perfect satisfaction, both in the quantity of fruit graded and the way it did the work. The capacity is practically unlimited, as it will grade the fruit perfectly as fast as it can be fed to the machine.

I make all sizes of this Grader, from the large 30-inch cylinder down to a small hand machine for the use of growers whose crops are small. I furnish the Grader mounted complete, or the Cylinder alone, if, as is often the case, the purchaser prefers to mount it to suit himself.

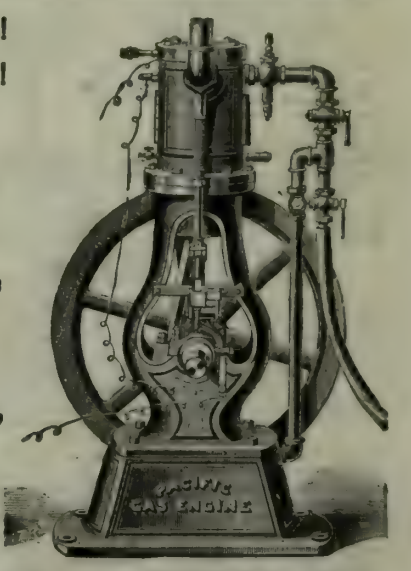
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PACIFIC RURAL PRESS

Vol. XLIII. No. 26. SAN FRANCISCO, SATURDAY, JUNE 25, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

From Wilderness to Garden.

The greatest delight of the amateur horticulturist and the greatest encouragement to labor and investment on the part of the commercial orchardist or vineyardist is the rapidity with which results can be produced in California. Nor is it difficult to explain this marked advantage which this State has over most other regions of the temperate zone. When growth starts in February and proceeds until November, or even later, it is not wonderful that plant energy is able to accomplish great extension. The fact is, that the valley and foothill portions of California have from once and a half to twice the length of growing season which can be relied upon in other regions lying under the same parallels of latitude, and where moisture is adequate to allow the plant to turn to its own account all the degrees of temperature which are furnished it, the growth and development of the plant is commensurate with the growing season which it enjoys. Hence our wonderfully rapid attainment of size in tree and vine; hence also the earlier year of bearing for trees which have practically made two years' growth in one. If distant readers in other climes will bear this point in mind, they will not be so startled with the records of growth and early fruiting which are sent them from this State, nor will they hesitate to believe reports which are honestly put forth. As corollaries to this proposition may be mentioned the facts that some deciduous trees become evergreen, that some annuals become perennial, that sometimes nurseries have to be re-located to get places where the leaves will fall before the time for digging and selling trees, that some deciduous fruit trees and vines sometimes put forth a second and even a third bloom and mature two and three crops, which, though as a rule undesirable, testify to the salubrity of the climate and to the stimulus which it gives to plant growth.







SIX MONTHS' DEVELOPMENT OF A HOME IN THE ROSEDALE COLONY, SAN JOAQUIN VALLEY.

With these things in mind, it is not wonderful that even in a portion of a year it is possible to transform a waste of arid land into a promise of golden-like verdure. Such a transformation is suggested by the photo-engravings which appear upon this page. They represent three points of time within the first six months after a colonist in the Rosedale Colony in Kern county had erected his humble habitation. The first view shows the cottage with its vines just putting forth leaf enough to show the rows; the second after two or three months of growth, and the third or lowest picture shows the vines nearly covering the ground and the trees having made good bushy tops. During the following winter the colonist will probably do as others do and plant shade trees and ornamental vines around his building, and a picture a year later would show the hastily-made dwelling embowered with leaf and bloom.

What is being done in Rosedale Colony, as shown by these engravings, is a reproduction of the earlier achievements in the earlier settlements of California valley and foothill regions and is suggestive of what will be accomplished in many other situations as the settlement of the State advances.

Discriminating in Eggs.

Dealers in eggs state that consumers are discriminating more in favor of large eggs. This demand causes the retail trade to watch the size more closely, for by getting large and attractive eggs they are assured of quicker sales, even when an advance in the price is demanded over that asked for the smaller. This is reflected by the trade of wholesale commission merchants, for with them small eggs are hard to sell, even at a decided reduction from the price of large and attractive eggs. Not only the size, but the quality also is given more attention. Eggs gathered and marketed daily command, if of good, average size, from three to six per cent more than do eggs "as is," and which are also of unequal or varying sizes. "Ranch eggs" do not now have the significance they formerly had, for now eggs sell on merit and not on name. The experienced handler can tell at a glance, or by handling, which are over two or three days old, and pays accordingly. By reference to our commercial department, the range in prices speaks more plainly than do words the exaction of trade in conforming to closer discriminating consumers. The eggs should be white, for the bulk of the Eastern eggs sold in our market are dark. To secure hens that lay large-sized, white eggs should be the chief aim of the farmer, and probably no better breed can be had than the Houdan Black Spanish. By breeding a pen of Black Spanish hens to a Houdan cock, hens are secured which are non-setters and which are layers of large, white eggs. Besides, the fowls have the large, juicy breast of the Houdan and the large limb of the Black Spanish, both excellent attractions to consumers.

ANGORA GOAT SKINS.—A circular letter from Washington has been received by Collector Phelps concerning Angora goatskins and the Treasury Department states that from an investigation it appears that the practice at the several ports in the ascertainment of the dutiable quantity of hair on Angora goatskins is not uniform, and for the purpose of securing such uniformity as may be practicable the Wharf examiner shall be directed to carefully examine all goatskins, and when any Angora goatskins are found in any mark or range of skins, 10 per cent of such mark or range shall be ordered to the Public store for examination.

FIRST CANNED GOODS EASTWARD.—The first shipment of the pack of 1892 went from the Golden Gate Cannery, San Jose, in two car-loads of canned peas to New York, containing more than thirty tons.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.*; *Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half Inch (1 square	1.00	2.50	6.50	22.00
One Inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 25, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Loans Negotiated—C. H. Dwinelle, Oakland.
Commission Merchants—W. C. Price & Co.
Fireman's Fund Ins. Co.
Dividend—S. F. Savings Union.
Pecos Valley Land Co., Eddy, N. M.

☞ *See Advertising Columns.*

The Week.

This week's RURAL closes the first volume of the year. The index, which may be found upon the last page of this issue, has been prepared with care, so as to successfully guide those readers who keep the current issues, to articles which may be of value to them for reference. We have many testimonials to the acceptability of the changes in style and contents which have been introduced during the last half year. If we have succeeded in pleasing thus far in the new lines marked out, the future will be even more abundant, and the evolution of a first-class farm and family journal on this coast and for this coast will keep pace with the progress of the rich regions to whose advancement it is devated.

The week has been peculiar out of doors, as our detailed weather-crop report on another page will show. Fortunately no serious injury has followed either showers or hot waves, though both could have been dispensed with. Work is pressing forward, shipments are large, and, on the whole, a generous draft of money from distant consumers seems assured.

New Crop Dried Apricots.

It is now given out that new crop dried apricots have been offered in the New York market for July shipment at around ten cents a pound. This is an advance on last year's opening prices, but it is not any more than it should be when the quality of the fruit is taken into consideration. Apricots this year, and, as for that, all California fruits, are firmer and more fruity than they were in last year, and therefore when dried they will, with all else being equal, be of much better quality. Besides the improved quality, driers are reported to be selecting the larger-sized fruit, for experience has taught that the size has very much to do with the dried product meeting with quick sales in the distribution markets. The weather in nearly all fruit-growing districts is quite favorable for drying, and therefore another advantage is secured this year. If signs do not fail, we feel justified in claiming for California's 1892 dried fruit, better selected fruit for drying, better curing and better packing than ever before. In saying this, it must not be inferred that there will not be faulty packs, but what is intended to be conveyed is that the pack will, in all respects, average better than ever before.

Where Shall the Clod be?

We overheard a discussion the other day conerning the place of a clod in agriculture or perhaps, more accurately expressed, the life, character and public services of a clod We do not speak figuratively. We do not mean by a clod a social or political or industrial obstruction—an old fogy, a Silurian. We do not mean by a clod an embodiment of boorishness and ignorance—a clodhopper. We mean simply an indurated, dessicated aggregation of earthy particles. In its highest uses it serves to hold down the ashes of heroes and in poetical language we read of such dust resting "beneath the clods of the valley." But it is not even the patriotic, hero-crushing clod of which we write. It is the clod without metaphor, without sentiment—a mere dirt hunk—hard, hateful and harassing to the horticulturist. Now, where should such a clod be?

In the discussion to which we refer one speaker expressed a doubt as to whether his notions of fine pulverization of the earth's surface were after all desirable for some one had told him that if there were a good layer of clods upon the surface and fine earth below, the clods would shade the fine earth, and as the clods become harder and more hateful the fine earth below would retain its moisture better than if sun and wind played directly upon it. This clod philosophy set us to thinking and it did not take us long to decide that the speaker had heard a half-truth, which, like other half-truths, is more dangerous than a falsehood because it seems to "stand to reason" and is beguiling. It is true that if one is content to have his soil cloddy every clod should be on top. This is not merely to make him ashamed of his slovenly cultivation every time a neighbor comes to visit him, but because a clod on the surface can do very much less harm than a clod buried in fine earth just below the surface. A deeply-buried clod may be inert and innocent but a clod with one end in the air or but little covered acts energetically in drawing moisture from the surrounding soil and giving it off to the air—thus acting as a powerful agent in drying out the soil to a far greater depth than loose fine earth would dry in sun and wind. If one is content then to have clods at all, let them all be on the surface and let the fine earth below be absolutely clear of them. Then if this layer of fine soil be deep enough it will stop capillary draft of water to the surface and will retain moisture below. What then is the service of the clod on surface and its benign shade?

It may act slightly, but by no means to the same extent, that the same amount of dirt finely pulverized would act. In short, if the clods were pulverized and spread upon the surface, the dust resulting would serve to retain moisture incalculably better than all the clod-shadow in the universe. Where, then, should the clod be? We answer, nature abhors a clod. If she cannot disintegrate it with rain and frost and pelting hail, she will hide it with leaves and will set worms to boring into it until it loses its hateful arrogance and sinks back upon the bosom of mother earth restful and repentant. There should be no clod.

But whence come clods? From ill-timed or insufficient cultivation. There are, of course, times and seasons in which all due diligence on the part of the farmer who has refractory soil to deal with cannot bring the earth to the condition he approves. This is the exception to the rule, and it worries the diligent farmer as much as anything which comes in his line. We do not intend to reflect blame upon such aspects of the clod question.

More clods come from unwisely conducted irrigation than from any single cause. A man who has a baking, soil should handle water as carefully as he would fire. Many cases there are, no doubt, where a retentive soil can, by fine surface pulverization, be wholly lifted from the necessity of summer irrigation. Even where natural rainfall is light, the growth of deciduous trees on deep retentive soil can be well maintained by winter irrigation and summer pulverization, and where this policy is adopted and cultivation is done with the splendid implements which are now available, there should be no clods.

We have seen places where summer irrigation by flooding heavy soil and neglect to get in the cultivator at the right moment has produced a shameful condition of clods—clods so hard and large that little short of sledge and anvil would reduce them, and so heavy that in case of a riot the populace would not miss the absence of paving stones. Wherever such soil has to be summer irrigated the greatest care should be taken not to flood a square yard of it. Flooding of land for cultivated crops should never be thought of except on land which is so leachy that lateral percolation from ditches or furrows is so slight that the soil can only be thoroughly moistened by spreading the water in a sheet over the whole surface of it. Fortunately, such soils are of limited area and of such a character that clods do not readily form.

Irrigation of orchard or vineyard or cultivated field crops by flooding has been abandoned, wherever it is possible to carry water in small furrows and to distribute it by lateral as well as vertical percolation therefrom. On soil likely to clod then we should never wet a foot of surface that we could avoid. We would rely upon winter irrigation and rainfall, and upon fine summer cultivation for every growth which such treatment will satisfy. If there are growths of small fruits or nursery stock or citrus fruits which need summer irrigation, let the water be run long and carefully in small furrows, instead of a rush of water over and upon the surface. Just as soon as the soil reached by the water will not puddle by the teeth, run the cultivator and leveler and mix the dry soil of the furrow edges with the moist soil of the furrow bottom, thoroughly stir the whole surface. The moisture is safely stored below where it will do most good, and the clods are—on the next farm, and may the owner have joy with them.

Neighborhood Clubs.

There is an organization flourishing in the Niles region, in the lower part of Alameda county, which is worthy of commendation. We presume there are others somewhat like it in other neighborhoods, but there should be hundreds of them. The idea is to gather together once a month at the houses of members for the purpose of discussing, in an informal manner, the various topics which directly relate to the chief local industries, the details of every-day work and the methods and policies which secure best results. The meetings are held on Saturday evenings, when the chance of an extra hour or two in bed on a Sunday morning does not make early retiring a necessity. There is a president, a secretary-treasurer and a simple code of by-laws—just machinery enough to give the club necessary coherence. At a recent meeting which the writer had the pleasure of attending, there was a gathering of about a dozen ladies and gentlemen around the large dining table of one of the members, the board groaning not with a feast, but with specimens of fruit and plant beridden with insect and disease, which those present were examining with the aid of several microscopes, which had been brought together for the occasion. After a diversion of this kind the chairs were drawn back and free discussions were held upon methods of cultivation, the desirability of irrigation in the locality, the prices now being paid for fruit and the fruit supplies not only of the locality, but of the State and of the Eastern States. In such discourse as this, two hours and a half were pleasantly and profitably passed and the members bid good night to host and hostess and wheeled away over the excellent roads of the district to their several homes.

There was nothing burdensome about the meeting. There was no collation, which wearies the housewife and is too often a burden. There was no formality about the proceedings; all were cordially welcomed and a spirit of cordiality and sympathy prevailed. Such meetings afford most excellent opportunity for the comparison of views; they enable each member to learn by the experience of all the others upon any subject which may press upon him; they afford opportunity for discussion of the local value of new tools and practices, and for review of all published statements in the light of local experience and conditions. Such clubs are a vast improvement upon the dialogue in the fence corner, or over the buggy wheel, or in the village store, which are time-honored means of communication between farmers. Such clubs do not interfere with the work of more formal agricultural societies; in fact, they rather stimulate and improve such societies. We trust the idea will commend itself to neighborhoods of RURAL readers everywhere, and that such simple efforts at conference and sociability will multiply.

Adulterated Cheese.

It is claimed that the sale of skim cheese has grown to large proportions on this coast, but we dare say that there are few persons who deal in them, let alone the consumers, who are aware how they are made. On this coast, skim cheese is manufactured of emulsion of refined lard and skim milk. At the East, a large proportion is made of emulsion of refined lard and potatoes, no milk being used. How the emulsion of refined lard is prepared is a secret, but it cannot be very expensive, for skim cheese sell in our market, in jobbing lots, at around five cents a pound, while at the East they are sold for still less money. The manufacturer and also the dealer in oleomargarine and butterine are liable by law to severe punishment if they sell either without proper notice to purchasers, yet cheese made chiefly of hog fat or cotton-seed oil is sold to unsuspecting persons as cheese made from milk. Its consumption in quantity undermines health, even if it does not entail death, yet the person or persons who are instrumental in this health-destroying business go unpunished.

Organized farmers, who did so much to have laws passed defining oleomargarine and visiting with severe punishment those who manufacture and also those who deal in it without proper safeguard for the general public, would do well to have similar laws passed about skim cheese.

From an Independent Standpoint.

As we write (on Tuesday) the National Democratic Convention in Chicago is in the early stages of organization. There have been three days of the usual preliminary bedlam, in which the friends and enemies of Mr. Cleveland have fought out their battle. Mr. Cleveland has won, and there is not a doubt of his nomination by a vote practically unanimous. The Democratic party is to be congratulated upon this result, for it shows that its better element is in control. The country at large is to be congratulated, for the nomination of Cleveland by the Democrats, taken in connection with the nomination of Harrison by the Republicans, assures a legitimate campaign upon broad principles of national policy, with the further comfortable assurance that whichever ticket may win, the Government will be in clean, able and safe hands. If ever there was a time when the election of a Republican, as such, or of a Democrat, as such, would have menaced the integrity of the Government, that time is now past. Those who read rightly the signs of the times and whose interest in politics rests solely upon regard for the welfare of the country, know that it is not Democratic or Republican success that is to be dreaded, but the success of bad Democrats or bad Republicans. The election of a Democrat under the spell and subject to the influence of the New York Tammany Society, and of such spoilsmen as Gorman of Maryland, Brice of Ohio, and it is with regret that we must include that brilliant man, Watterson of Kentucky, would, indeed, be a national misfortune; but no more a misfortune than would be the election of a Republican directed by such "practical" politicians as Platt of New York, Clarkson of Iowa, Quay of Pennsylvania and De Young of California. It is, indeed, a satisfactory and wholesome situation when each party can write a clean and honest name upon its banner, put its worst element to the rear, and go into battle upon questions of governmental policy concerning which honest and patriotic men may fairly differ.

The victory of Mr. Cleveland has not been so lightly won as to rob it of highest significance. Four months ago the loudest voices in the party proclaimed him "out of the race," and, indeed, it so appeared, for the professional and spoils-seeking politicians were all arrayed against him. There was Tammany and its bad idol, David B. Hill; there was Mr. Gorman, whose political standards and methods are precisely those of Platt, Quay, Clarkson, et al.; there was Brice of Ohio and New York; there was an office-hungry element represented by Watterson, and there were a few others like Carlisle of Kentucky, of better character but overawed by the managers. All these forces united in opposition to Cleveland, but not so much against him as against the better sort of politics for which he stands, came valiant and hopeful to Chicago. But they have been beaten by the overwhelming and irresistible force of the decent Democratic sentiment of the country at large, represented by the delegates from those States which have not sunk under the domination of party bosses. The result has the character, therefore, of a triumph of the people over the politicians.

The patience with which the American people have endured the "practical politician," and his continued existence as a factor in our politics, is due to a mistaken belief that he is a necessary evil. "Somebody," it is said, "must run the primaries and manage the game." True enough, but the "practical politician" never does this successfully for any long-continued period. Mr. Platt has never succeeded in winning an important election in New York; Mr. Quay found Pennsylvania overwhelmingly Republican and has succeeded only in giving it over to the Democrats; Iowa was the banner Republican State before Mr. Clarkson became its dictator, and so the story goes. Coming to the Pacific coast, who does not remember when Oregon, before her Republicans submitted to a "boss," was a sure Republican State? For six years she has had a Democratic governor. The interests of a party are never so successfully looked after as when its members stand upon the level of general equality. The truth is, and the parties are beginning to see it, that a "boss" is a source of weakness. He brings to a party arrogance and greed, and he robs it of patriotic motive and moral strength. "Practical politicians" have heretofore been powerful in conventions but never powerful in elections. It would seem now that they have lost their grip even in the conventions. Their day is passing—and so much the better for American politics.

The two great parties now stand face to face for the struggle of 1892. It will not be notable in its spectacular features because there are happily no issues that appeal strongly to popular passion, and there is nothing in the personality of either candidate to excite enthusiasm. The two men stand, each manfully and respectably, for ideas of public policy, and between these two classes of ideas the great mass of voters will choose. The silver question, which promised to dwarf all other issues, is out of the way. Both Harrison and Cleveland are committed to the gold standard, so, as between Republicans and Democrats, there can be no controversy, the situation amounting practically to a truce. Mr. Harrison stands for the protective principle as modified by reciprocity, for immediate and forcible protection to the negro voter in the South, and in a general way for radicalism in the government. Mr. Cleveland, on the other hand, stands for reform of the tariff on a revenue basis, with elimination of the protective idea, for a Southern policy that will allow time and education to work out their own ends, and in a general way for conservatism in the government. Both have sat in the presidential chair and both have the respect of the country. Neither in any sense stands for any one of the reforms which during the past three years have won many earnest supporters in the South and West among the farming and trades-union classes. If the People's party, at its Omaha meeting next month, puts forth a presidential ticket, as it undoubtedly will, there will be a large falling off in the regular Republican and Democratic votes. There is no means of judging what this falling off will be or which of the old parties will be the chief loser.

The old passions have gone out of politics and upon a good half of the American people the party tie rests lightly. It was this new spirit which wrought the defeat of the bosses at Minneapolis and Chicago and it is this spirit which gives point and interest to the coming People's party convention at Omaha. It is beyond question that vast numbers of voters have lost faith in both the old parties, feeling that the spirit of each is aristocratic rather than democratic, and that neither has the power within itself to expel its corruptions, escape from its traditions and meet without prejudice the immediate issues of the time. Whoever doubts that there are many voters in this frame of mind needs only to read the reports of the Farmers' Alliance meetings in California and elsewhere, or talk with members of the trades-unions; and whoever doubts that this feeling is strong enough to manifest itself at the polls, needs only to read the returns of the recent election in Oregon. If the delegates at Omaha will temper enthusiasm with a modicum of policy, if they keep within bounds of reasonable moderation, and if they will name candidates of approved character, they will attract a multitude of independent voters and will give their party permanent identity. It is the common fault of reform conventions to go too far—to repel the conservative and to frighten the wavering. This is a fact which the Omaha delegates, if they would establish the People's party in the political field, must not fail to heed.

Although the National Prohibition party is growing old in defeat, it is still buoyant with hope, illustrating again the vitality of that sort of politics which has its motive in conviction based on moral principle. Overtures looking to alliance with the People's party have been declined, and this year, as heretofore, a regular Prohibition ticket will be in the field. The convention will be held at Cincinnati on the 29th inst.—next Wednesday—in the hall where Hayes was nominated in 1880, and Mr. Dickie, Chairman of the National Committee, reports that every State in the Union will be represented. The rank and file will demand that St. John be again the presidential candidate, but he is disinclined to make the campaign, and will urge upon the convention the policy of putting forward a new man. Among the possible nominees, if Mr St. John positively declines to run, are: H. Clay Bascom, of Troy; W. J. Demorest, of New York; General John Bidwell, of California; Walter B. Hill, of Macon, Ga.; J. B. Hobbs, of Chicago; Sam Small, of Georgia; Geo. W. Bain, of Kentucky; A. A. Stevens, of Pennsylvania; A. G. Wolfanburger, of Nebraska; Dr. D. G. Kelley, of Tennessee, and Colonel Ely F. Ritter of Indiana. If St. John should accept the nomination, then Gen. Bidwell of California will probably be named for the Vice-Presidency.

The most prominent and popular Republican in New York and one of the brightest men of this or any other country, is Mr. Chauncey M. Depew who, it is reported, has been or will be, offered the Secretaryship of State, recently vacated by Mr. Blaine. Mr. Depew's talents are fully equal to the place and he is perhaps the one available man who could step into Mr. Blaine's shoes without being made the victim of unpleasant comparison. His appointment would be a popular one in New York and might gain some strength in that State for Mr. Harrison in the coming campaign. But Mr. Depew is the president of the Vanderbilt system of railroads, has all his life been a railroad lawyer and is socially and otherwise related to the money interests of the country. And this being the fact, he ought not to be appointed Secretary of State. Mr. Depew's integrity is unquestioned—he is an honest man—but honesty of purpose is no security for soundness of judgment. The fatal objection to Mr. Depew is that by long association and affiliation with corporation and capitalistic interests he has come to stand—to honestly stand—for the rich man's view of things and against the poor man's view of things. The Republican masses of the country, respecting Mr. Depew as they do for his fine talents and for many manly traits of character, nevertheless see in him a man essentially and naturally opposed to principles which they hold to be vital for the best interests of all the people. As a mere matter of politics, apart from the higher consideration which ought to control the President in his choice, Mr. Depew's appointment would be a mistake, for it would be accepted in many quarters as confirmation of the charge that the Republican party is the party of the corporations.

Emmons, the eldest son of Mr. Blaine, died at Chicago on last Saturday. He had been sick but a day, and only for a few minutes before his death was his condition known to be serious. It was a sudden and awful stroke, the more sad as it followed within a year the death of a sister and a brother. The young man was a conspicuous figure at the Minneapolis convention and took seriously to heart the failure of that occasion, and it is believed that his death resulted from nervous reaction. He was an attractive and lovable man, aged 35, a husband of three years and very recently a father. In a career apart from the political life of his family he was notably successful, and he was the pride and hope of his father, now in many ways sadly bereft. The heart of the country has gone out to his family in a grief for which there is no balm. In the first session of the National Democratic Convention, on Tuesday—a convention met to combat the political principles of the great Republican leader, and in which there was no political friend of his—somebody moved a vote of sympathy with Mr. Blaine. Every man in the hall rose in approval. The chairman declared the resolution unanimously carried. Tears came as men grasped hands, and the great building rocked with the thunder of their cheers. Truly, the old passions of politics are passing away—thank God for it!

Just as we go to press late Wednesday night, the telegraph brings the news that Mr. Cleveland has been nominated for the Presidency by the Democratic Convention. The result was accomplished on the first ballot, which gave Cleveland 627 votes, Hill of New York 110 and Boies of Iowa 101. The nominations for Vice-President will not be made until to-morrow. We can only speak briefly of the platform. It is longer than the Republican platform, and contains two general arguments, one supporting the declaration against the Force bill and another supporting the tariff resolution which declares that whenever a tax is unnecessary it is unjustifiable, and that the only basis for taxation is revenue. The McKinley law is denounced as the culminating atrocity of class legislation, and the working men of the country are invited to view the dullness of the times in the labor market and the low price of commodities as some of its bad consequences. The silver resolution is, if possible, more artfully drawn than the corresponding plank in the Republican platform. "We hold," it declares, "to the use of both gold aud silver as standard money of the country and to the coinage of both gold and silver without discriminating against either metal on charge for mintage to the dollar unit. Coinage of both metals must be of equal intrinsic value, * * * with equal power of every dollar at all times in the markets and in the payments of debts." This is, of course, designed to mean free coinage to silver men and gold standard to gold standard men, or, taken in connection with the nomination of Mr. Cleveland, who stands solidly for a gold standard, it means just this and nothing more or less. Reciprocity is approved; trusts and combines are denounced; there is the usual condemnation of the Republican management of public lands; public office is declared to be a public trust, and the Civil Service Law is warmly endorsed; there is the usual declaration against the emigration of paupers and criminals from Europe; the present administration of the Pension Office is denounced as incompetent, corrupt, disgraceful and dishonest; the party renews its expression of appreciation of the patriotism of the soldiers and sailors, and favors just and liberal pensions; the importance of the Nicaragua Canal is "recognized;" liberal appropriations for public schools are recommended for the several States; there is the usual sop to the struggling Irish, the usual three lines of opposition to sumptuary laws, and the usual plank devoted to aimless approval of labor legislation. There is no declaration relating in any direct way to the agricultural classes of the country. The convention is still in session, but it will no doubt finish its labors to-morrow.

Weather and Crops for Week Ending June 19th.

The following crop reports are for the week ending Monday, the 19th of June, and were furnished by James A. Barwick, Director of the California Weather Service, viz.:

HUMBOLDT COUNTY.—*Mad River*—Crops look well and are growing fast. *Blocksburg*—Rainfall .12 of an inch. Highest and lowest temperatures, 87 and 40, which was of great benefit to growing crops. *Dyersville*—Fruit trees making fine showing; grain rusting slightly, owing to excessive moisture.

LAKE COUNTY.—*McTel Vineyard, Upper Lake*—Rainfall .29 of an inch; which has retarded haying and necessitated extra cultivation of vineyards and orchards. It has done no damage to fruits, and has helped the second growth of alfalfa. Grain is ripening fast, and will be a large crop.

SHASTA COUNTY.—*Redding*—Weather favorable for crops. Fruit of all kinds late, but the yield will be good. Haying about completed, with an average yield; but little grain will be harvested in this vicinity, it having been cut for hay. Highest and lowest temperatures, 92 and 53. *Anderson*—Highest and lowest temperatures, 94 and 60, which has been beneficial to hay-making. Fruit is coming on fast. Reports from all parts of the county are good.

TEHAMA COUNTY.—*Red Bluff*—The reported dropping of the grape is not so bad as first reported. The grain is suffering but slightly from rust. Apricot-picking and cutting commenced, and quality good. Grasshoppers not numerous enough to do any injury. Prospects for all crops quite favorable.

BUTTE COUNTY.—*Chico*—A trace of rain first part of week; the latter part warm and sunshiny. Haying mostly finished and somewhat damaged by the rain of the preceding week. Barley and grain yield good. Fruit crop very light. Apricots, prunes and plums almost a failure. Pears about half a crop. Peaches streaked, and the probable yield about one-fourth of a crop. *Palermo*—Harvesting will begin the coming week. Barley is unusually good and heavy. Early peaches are being shipped, and their quality is good.

YUBA COUNTY.—*Wheatland*—The weather has continued very favorable for grain; no damage has been reported from the north in this vicinity. Hops continue to do well. Peach crop good; apricots, pears and prunes will be light.

NEVADA COUNTY.—*Nevada City*—First part of week cooler than usual; the latter part has been much warmer and more beneficial to growing crops and curing hay, the temperature being 95° at 2 P. M., Sunday, the 19th. A trace of rain on Tuesday, the 14th; slight damage to cut hay by the rain of previous week.

SACRAMENTO COUNTY.—*Elk Grove*—Crops being harvested and yield good. *Franklin*—Haying about finished and crop good. Barley harvesting begun. *Sacramento*—Haying about finished, and it is being baled, stacked or barned, and the crop is a most excellent one in quality and quantity over the entire county. Harvesting is being rapidly pushed forward with the prospect of at least an average yield of good quality. Hops continue to improve under the warm weather. The temperature during the week has been for the first four days from one to six degrees cooler than the average, while the last three days have averaged from two to ten degrees above the normal; a trace of rain during the nights of the 13th and 14th. The warm wave and constant sunshine, with heavy dews at night, have been beneficial to all vegetation. The sunshine and extra warmth are bringing the hops forward quite rapidly; they are at least from two weeks to 20 days later than last year, consequently they do not look so prosperous now as they did at the same date last season, which causes some small hop growers to be rather disheartened; but no doubt there will be a shorter crop than last year, but do not think it will be below the yield of 1891 as much as the one-third of a crop. The hop reports from Washington, Oregon, Wisconsin and New York are not of a very flattering nature, although they are reported as doing well in New York. The lice is doing but slight, if any, damage in Oregon and Washington.

AMADOR COUNTY.—*Oleta*—There is a large crop of volunteer and grain hay; summerfallow grain, fair; winter-sown not so well filled.

YOLO COUNTY.—*Briggs' Vineyard near Davisville*—The weather has been unusually pleasant for harvesting. The highest and lowest temperatures were 92 and 54. *Rumsey*—Haying is well under way. Crop good. First fruit shipment last week and the fruit is of fine quality. Labor in great demand and is quite scarce.

NAPA COUNTY.—*Veterans' Home near Yountville*—The temperature and sunshine have been apparently above the normal the latter part of the week and have materially benefited the fruit and grape crop.

SOLANO COUNTY.—*Vacaville*—Weather warming up, which is the one thing needed for maturing crops. A continuation of it is what is most needed and desired. All crops are looking and doing well under the increased warmth.

SONOMA COUNTY.—Haying about finished and the crop is light. Peaches promise well. The grape crop in some localities will be a light one. Apricots, plums, prunes and pears are below the average yield. *Forestville*—Haying is progressing slowly on account of cool, foggy weather. Fruit growers do not complain. Corn is now taking a fair start. Highest and lowest temperatures 79 and 36. *Healdsburg*—Cool nights and foggy mornings have been the rule—it being too cool for corn, which is a poor crop so far; the cut and wire worms have necessitated resetting by hand and the stand is very uneven.

SUTTER COUNTY.—*Yuba City*—Average weather cooler, which is good for grain and fruit. Harvesting in progress and fruit shippers active.

GLENN COUNTY.—*Willows*—Prospects for an immense wheat crop still favorable. Highest and lowest temperatures 102 and 43.

COLUSA COUNTY.—*Williams*—Conditions continue favorable. Warm wave began on the 19th, but no damage anticipated.

SAN JOAQUIN COUNTY.—*Lodi*—Highest and lowest temperatures 88 and 48. Barley ripe and harvesting will begin to-morrow, the 20th. Wheat ripening rapidly; rust has appeared in some fields and is likely to pinch it. Apricots coming into market. The warm weather has greatly improved the watermelons, which are unusually late. *Stockton*—The cool weather and absence of wind have all been favorable to grain. Flattering reports come in from all directions. The week has been a perfect one for the maturing of grain. Harvesting is well under way.

STANISLAUS COUNTY.—*Modesto*—Harvesting begun and an average crop is claimed by the farmers. Fruit will be late on account of continued cool weather in the spring. *Turlock*—The weather has been beneficial to all crops. Highest temperature 100 on the 19th (Sunday). Rye-harvesting well advanced, while the harvesting of wheat and barley has just begun.

TULARE COUNTY.—*Visalia*—All crops will be about an average and are doing well. Highest temperature 90.

ALAMEDA COUNTY.—*Livermore*—Haying nearly over and in fine condition, but prices exceedingly low. Harvesting progressing, but the crop is not up to expectations, but the quality is good.

FRESNO COUNTY.—*Selma*—Harvesting is well under way and the promise of the crop is above the average. Grapes have suffered somewhat from a blight to the fruit, causing dropping of the first crop which will somewhat reduce the total output.

SANTA CLARA COUNTY.—*Santa Clara*—The weather has been beneficial to the gathering of the cherry crop, and also to other crops, generally. *Gilroy*—Rainfall on Tuesday, the 14th, .05 of an inch. Hay slightly damaged by the rains of Monday and Tuesday in some places. Weather remarkably cool during the greater portion of the week, which has tended to help grain and retard fruit.

SANTA CRUZ COUNTY.—*Watsonville*—The weather has been cloudy, foggy and cold. Haying is being delayed on account of the heavy fogs, and there is some danger of rust in the wheat from the same cause. Warmer weather is needed to bring forward late sown grain, beans and sugar beets.

MONTEREY COUNTY.—*San Ardo*—Weather favorable to the filling out and ripening of grain. Haying all finished and the yield is a light one.

CONTRA COSTA COUNTY.—*Hyde Ranch near Cornwall*—Harvesting well under way. Barley cut. Haying finished. A trace of rain on Tuesday, the 14th.

SAN LUIS OBISPO COUNTY.—*San Luis Obispo*—The weather has been all one could wish for, with no winds and fogs during the evening and southerly breezes and light fog in the mornings. Fruit and all green crops doing well.

VENTURA COUNTY.—*Hueneme*—The high winds of the past week will cause some beans to be replanted. Corn is looking well; heading is in full operation.

LOS ANGELES COUNTY.—*Lancaster*—Rain fell on the 7th amounting to one-fourth to one-half inch, according to locality. Considerable hay was wet, but dried in most cases before being much injured. Growing grain derived some benefit from the rain. *Rodeo de los Aguas Ranch*—Sugar beets are taking in sugar very fast; farmers are hopeful of a factory by next year, as beet raising is a success in the Cahuenga valley. Barley is very plump; corn is growing finely. *Los Angeles City*—The weather was generally fair during the week, but cooler than the seasonal average. High westerly winds prevailed on the 9th causing some injury to fruit. *Duarte*—Crops are looking well. A trace of rain followed by strong southwest winds blew off some apricots on the 9th. The weather has been clear and warm.

SAN BERNARDINO COUNTY.—*South Riverside*—Hay and grain is being saved in good shape. Fruit is doing finely.

ORANGE COUNTY.—*Anaheim*—The light shower of rain the forepart of last week nor the high wind following did any damage. Haying is completed, and heading now commences.

SAN DIEGO COUNTY.—*Vineyard*—Light rain fell on the 9th doing no damage. Late wheat has a light touch of rust, but the grain is too far advanced to be injured. Headers will commence on barley next week. No drying winds have occured. *National City*—Crops are growing and looking well. Ripe home grown apricots are in the market.

Sugar Experiments Promised.

It is reported from Washington that the House Committee on Agriculture has agreed to report a bill appropriating $20,000 for experiments in sugar culture. The proviso offered by Representative Caminetti has been adopted as follows:

PROVIDED, that so much thereof as may be necessary shall be expended in investigations and preparations to carry on experiments next year in sugar cane productions on reclaimed swamp lands in some suitable place in the San Joaquin or Sacramento valleys of California.

The Agricultural Department has agreed to ship to California the machinery now being used in Louisiana, as the season in Louisiana will soon be over. Professor Wiley is of the opinion that sugar culture in the San Joaquin and Sacramento valleys can be carried on, and will prove as successful as in the most favored sugar section of Florida. The recent experiments in the last-named State have been highly satisfactory. Sugar land in Louisiana has been very profitable, some acres netting as high as $350, and it is expected to soon have this great industry under way in California.

A Peculiar Season.

LOWER LAKE, June 14, 1892.

TO THE EDITOR:—Thus far this season has been a peculiar one. At first the clerk seemed to put April in the place of March, and then the June "hot spell" came in May, and now the "May showers" are coming in the middle of June. The most of the time it has been cold and windy, now almost to the summer solstice clouds and winds predominate. Some anomalous effects in plant growth have appeared. Some sweet corn I planted very early was killed down two or three times by the frost. It is now perfect in form with ear, silk and tassel, but miniature in size 10 to 14 inches high. I notice some fresh apple blooms on trees, with apples nearly half grown, also blackberry briers blooming fresh on new wood.

The first grape buds that started were mostly frost-bitten, but now, though late, a most wonderful growth of fruit stems from dormant buds are rapidly coming forward, as well as a great many suckers. C. P. SCRANTON.

ROPING TREES.—Heavily laden trees, which, in spite of proper pruning and thinning, are likely to spread apart and split down by the weight of their crop, can often be adequately sustained by the use of rope instead of props. In many cases, a bale-rope or other light rope, passed completely around the tree at a proper height, and caught here and there over a twig so as to prevent slipping down, will afford all the help needed to enable the tree to stand up well with a good load. Of course, as the pressure is downward and outward on all parts of the branches, each side of the tree pulls against an opposite side, and none can droop if the rope is strong and unyielding. Another way to use rope is to pass it back and forth through the center of the tree, so that each branch is balanced against an opposite one, but probably the encircling rope properly placed is best, for it not only sustains the vertical strain, but, to a certain extent, acts laterally also, and helps the whole tree in a strong wind.

RIVER TRAFFIC.—It is pleasant to learn from the Marysville *Democrat* that an examination of Feather river made last week shows that the river is in fit condition for freight boat and barges, and that such craft can probably run all summer. The building of new barges will proceed forthwith, and the prospect is that much produce, including grain, hay and fruit, will move down the valley to selling points by water. The result will be short hauls for the teams and low freights for the producers. This is an excellent piece of news. It demonstrates the value of keeping the rivers in good condition, and should suggest to many valley regions the desirability of improving the natural channels and of supplementing them with canals for navigation. This is one of the most important matters in many valley situations.

NEW FIRM.—W. C. Price, who is well and favorably known as a produce commission merchant, has disposed of his interest in the Price Berlin Company on Front street, and opened a store at 219 and 221 Davis street, where he will continue a general produce and commission business under the firm name of W. C. Price & Co.

Experiments in Manufacturing Olive Oil and Pickles.

Read before Farmers' Institute at Pomona by C. L. Loud.

The past ten years have marked a very large increase in the olive industry of this State. With the enormous acreage planted during the past season and the outlook for the next, it is fair to presume that it will soon rival the orange or prune industry in point of value. I have had occasion during the past two years to experiment a little in pickling olives and making olive oil. Although the means have been simple and cheap, they will demonstrate what can be done by those who, in the future, expect to handle their own olives. The making of pickles has been largely confined to the grower, it being a simple process and quite readily picked up, and with a little experience carried on successfully. The process generally used is known as the lye process, the bitterness being extracted from the olive by means of a strong solution of lye; one pound of lye to ten gallons of olives. It takes from 36 to 50 hours to extract the bitterness. The lye is then extracted by means of fresh water, changing from six to eight times during the first day and twice a day thereafter until freshened, requiring about eight days. The olives are then put into cold brine for a couple of days, and afterward into boiled brine, applied when cold, after which they are ready for market. In my work I have used 50 gallon casks for handling olives, but think troughs for extracting the bitterness and lye are much more convenient and cheaper when one expects to use them every year. The troughs save barrels, which are quite an item, cooperage being very high. It is a very difficult matter to give any rule to follow in picking olives, as they do not all work alike. I have found that nearly all rules that are printed in the papers, like signs in dry weather, fail. The best rule is care and watchfulness.

In making olive oil the same rule applies, with the addition of perfect cleanliness. My experience in making oil has been short and only in an experimental way, having made a short time ago about five gallons. The press used was an ordinary cider press with crusher attached. The machine being light, all the oil could not be extracted; but it served to show that it did not require a large outlay of capital and machinery to handle a few thousand gallons of olives. I am inclined to think a lever press, something that gives a constant and steady pressure, will be the best and more cheaply gotten up. With five or six such presses, a good crusher and a cool place to store the oil, one man can handle a great many olives. In pressing out the olives the liquid is put into a galvanized iron tank holding about 20 gallons. As the oil rises to the top it is skimmed into pans and skimmed from there into the filter. I used druggist's filtering paper, it being cheaper than anything else and answering the purpose as well. The points outlined in this short paper are not based on theory, but actual practice. There are many more things which might be said, but as my experience consists only of experiments in a small way, I do not wish to assert that which I do not know.

That Forfeited Land Grant.

Readers of the RURAL who desire to take a hand in making homes upon the forfeited railroad land grant in San Benito county should send to the publisher of the *Free Lance* at Hollister for a copy of his paper of June 17th. It contains the full official announcement of the opening of this grant for settlement. The lands lie between Tres Pinos and Alcalde. There are less than a million acres in the grant, six hundred and forty thousand of which are situated in San Benito county. The date set for the opening is Wednesday, July 27, 1892.

All persons who were actual settlers in good faith on any of these lands on September 29, 1890, and who were otherwise qualified, and who have not lost their rights in the meantime, will have preference rights of entry under the homestead law, this act to be exercised within six months from the date of the notice. These lands are subject to entry only under the homestead law and to disposal under Section 3 of the Forfeiture Act.

All persons who have heretofore offered to enter any of said lands, whether said rejected offers have been appealed from or not, have had no right conferred on them by such offer, and the lands so offered to be filed on will be opened to entry under the provisions of the Forfeiture Act without regard to such applications. All such applicants will have an opportunity of presenting new applications.

All persons who intend to claim the right of purchase under Section 3 of the Forfeiture must file in the Land Office in San Francisco a statement of their claims, properly describing the lands intended to be claimed by them within 60 days of the date of the notice. The filing of such claims will not bar homestead entry of the lands described, subject to perfection of the right of purchase.

The San Francisco Land Office is on Commercial St., No. 610.

Southern California at the World's Fair.

LOS ANGELES, June 21.—The committee appointed to receive applications for space at the World's Fair, have held a session. The result of their deliberations is given below: Agricultural department, 3000 square feet; Horticultural department, 3300; Mines and Mining department, 1300; Department H, 50; Department M, 300. These applications are independent of all individual applications for counties of Southern California. Department L goes under the head of State applications. San Bernardino county telegraphs that she will take 500 feet in the agricultural, horticultural and mining departments. Ventura takes 200 feet in the agricultural department. San Diego sends 60 applications for 5000 square feet in several departments.

HORTICULTURE.

Killing Morning Glory.

Although our older readers are well-informed on the morning glory problem and have read the numerous records of experience we have given on the subject, it will enlighten our newer subscribers and interest all to read the following very excellent review of the subject which A. Guillou of Ventura county writes for the Hueneme *Herald*:

Our morning glory is a root-stock plant, it grows not only from seed but from underground branches. The nodes on these root-stocks are from one to two inches apart and every node has in it the possibility and potency of a new plant. It is this characteristic which makes it spread so rapidly, exhaust moisture so early and renders it so difficult of destruction. If one node of the 50 or 60 on a single plant be left alive, the next season there results a new plant with its own 50 or 60 nodes. Hence, any method of extermination to be satisfactory must be extremely thorough, and the difficulty lies in securing complete work in a general and inexpensive way. All methods of killing vegetation may be divided into three classes: (a), by thirst, absence of moisture; (b), by smothering, absence of light and air; (c), by poison, introducing into the plant's circulation a substance which destroys its life.

Death by thirst results from either the absence of soil moisture or the inability of the roots through disease to absorb moisture when present. Death by smothering is due either to some covering of the soil surface through which the plant cannot live to penetrate, or by the cutting off of all growth above the soil by means of hoes, cultivators, plows, grasshoppers, potato bugs, pigs or any other sufficient instrument. Death by poison generally occurs from the presence of some noxious substance in the soil, black alkali, brine, oil or the like.

The conclusions of one who has done some systematic work in the matter and has investigated the problem with care may be of value, at least as suggestions.

Killing morning glory by thirst I do not consider practical. I have found the roots at a depth of 15 inches and am told they have been followed down two feet. To dry out the soil to such a depth would be too expensive and it is doubtful whether some nodes would not retain vitality until the next winter's rains. Nor can I learn of any crop which will so exhaust moisture as to kill it. It grows well under heavy alfalfa or unusually heavy barley, and even if such a plant could be found there would be the same risk of its surviving the summer drought.

To kill by smothering, both by mulching and also by cutting off continuously, is practical.

The mulch, in the former case, must be very thick and of a substance sufficiently compact. Straw will not do to a depth of three feet. I have seen the weed grow up through such a mulch, and I am told that it will penetrate bean straw to the same depth. Heavy manure, if deep enough, works well. Mr. Donlon seems to have checked it by a manure mulch about two and a half feet deep and of about the same depth has worked well in other cases. This method, however, would require 750 loads to the acre and manifestly is adapted only to very small patches. For larger areas the process of cutting down is less expensive and quite as effective.

The plan of feeding hungry hogs on the land and using their eagerness for food as a means of compelling them to root all through the soil and keep it fed down below the surface, is theoretically good, but practically it is very severe on the hogs, and I should think they would require very close and careful watching to prevent starving to death. It also requires a water supply and often injures the soil greatly.

Of tool work, all hand work must be set away as too expensive and the choice is of horse tools. Plows are objectionable both because they rarely bury everything and also because they turn up to the surface, moist soil full of nodes to grow forthwith; almost as important an objection is that after two or three plowings, the purchase for the land-slide is lost in loose soil and the share simply scoops a deep groove. Thus far, I have found a knife cultivator very satisfactory. If the knives lap sufficiently and the machine is carefully driven it covers every inch of the field and they can be run so deep that after two or three cuttings there is formed a dry mulch of top soil five or six inches deep, through which the weed must push to reach the light. The chief difficulty with the knife cultivator is the trashy soil in which morning glory is usually found. After a seven-inch plowing I found it impossible to run the knives, as they clogged and could not make a clean cut, and the ground was then plowed 14 inches deep. This turned the brush down, there was some little clogging the first time but now the knives run smoothly at a depth of five or six inches. The important elements in this method are to cover every square inch of the field and to run the cultivator before the least green blade appears. I have found that near Hueneme in a loamy soil, and cultivating five inches deep, one cannot safely allow more than five days to elapse between cultivations. As to the length of time required to kill the weed in this way I am in doubt. Professor Hilgard, at Berkeley, I believe, eradicated it in about a year; the character of his soil I do not know. Probably the same length of time would suffice across the river or on Las Posas, but the weed is of such a vigorous growth near Hueneme that I am inclined to think a longer time will be required. Although a summer weed, it often starts as early as February and grows into October, and the cultivation must, therefore, be practically constant. With sufficient stock and careful driving, the cultivation in this way costs about 35 cents an acre each time.

Killing by poison is accomplished by putting salt, oil or other noxious substances on the land so heavily as to kill the weed. The serious objection to this method is that it kills all other vegetation as well, and by reason of small rainfall and absence of frost on the ground, ruins the soil for many years to come. As yet no antidote for such poison is known, other than leaching out the harmful substance.

I think that the most satisfactory and least expensive methods are those of mulching for small patches and constant knife cultivation for larger areas. The mulch must be dense and deep; the cultivation frequent, before any greenness shows, and the deeper the better, by making a natural mulch to assist. Both must be completely thorough covering every inch of the ground and affecting every sprouting joint, and I am inclined to think that every disappointment with these methods has been due to carelessness, either careless driving or allowing the green sprouts to appear between cultivations, or not continuing the cultivation until an examination shows the root-stocks dead and withered.

FRUIT PRESERVATION.

Fruit-Drying in Southern California.

An address delivered before the Farmers' Institute at Pomona, May 27, 1892, by D. EDSON SMITH, of Santa Ana, Cal.

The subject of fruit-drying is one of special importance to us of Southern California, because our soil and climate are so peculiarly adapted to growing choice fruit, that our prosperity, to a large extent, depends upon our ability to put our dried products upon the market of the world in a condition that will keep indefinitely; will retain a large per cent of the aroma and flavor of the ripened fruit; also present an attractive appearance to the eye. Much time and money have been spent in this country, during the past 20 years, in trying to secure all these desirable qualities in the cheapest and still most perfect manner.

So far as sun-dried fruit is concerned, Southern California can excel the world, because of our exceptionally clear, dry atmosphere. But even here we are liable to have fogs or rains, especially in drying our late-ripening fruits, which at times is a very serious drawback to the most desirable results. But let the weather be never so perfect, there are other serious drawbacks to the sun-drying process.

A great amount of space and time must necessarily be consumed in this process, which means expense. Then, a large portion of the best flavor and aroma, the spiritual or electrical part of the fruit, if I may be permitted to use such expressions, is more or less dissipated during the long exposure of the cut surface of the fruit to the air and sunshine.

Next comes the moth and lays her eggs upon the fruit, which in time, to the great disgust of the buyer, results in a lot of wormy fruit, unless more expense is finally added by putting all the fruit through a steam bath, and redrying and resacking.

And last, but by no means least, the cut fruit, like peaches, apricots, apples, etc., has become so discolored by exposure to the air, that it is almost worthless in the market. But this last-mentioned evil has been overcome by a still greater evil. I refer to the sulphuring process. But the consumer is rapidly finding out that sulphured fruit is very undesirable in several respects; and I think it will be but a short time when such fruit will find no market whatever. Besides the experience of the consumers, Prof. Hilgard and other able writers are rapidly convincing the public of the undesirability of sulphured fruit. While the sulphur and molasses that I used to be filled with every morning before breakfast, during a part of my boyhood days, may have done a good work in killing parasites, still I can find no possible good that sulphur does to our fruit-drying, excepting to make it more attractive to the eye. But I long since became convinced that this catering to the joys of vision was far more than counteracted by the unattractiveness of sulphured fruit to the organs of taste. The fumes from the burning sulphur unite with the surface of the fruit, producing a chemical change, causing a tiny drop of the most intense acid to be deposited on each piece of fruit, which can never be eradicated or fully covered up by the addition of any amount of sugar. Therefore, for our home use of dried fruit, we long ago gave up the use of sulphur in its preparation.

Ten years ago, soon after I came to Southern California, a man came to Santa Ana and for several days displayed in the lobby of the postoffice, to our delighted eyes, the most desirable and attractive dried fruit imaginable, and he told us of his new drier, and the benefits its use would bestow upon the fruit growing of this vicinity. But we had no bearing orchards of any size about Santa Ana at that time, and consequently no sales were made. But my interest in the subject of driers was greatly aroused, for I saw how it might be possible to use them in preference to sun drying under any circumstances.

And from that time to the present I have taken a great interest in fruit-drying. Many kinds of fruit driers have been put up and used in Southern California during the past ten years, but most of them were so defective in one way or another that I do not know of any that have become popular.

Seven years ago I saw in the transactions of the American Horticultural Society a strong recommendation for the "Common Sense Fruit Drier," made in Ohio. The next year I learned that Leonard Coates, a prominent citizen and nurseryman of Napa, this State, owned the patents for these driers for this State. I sent to Mr. Coates for a small size to use on our cook stove to dry the fruit we wished to use in our family. While we found some mechanical defects about the machine, yet we considered it perfectly satisfactory for the price. We found that with this drier our fruit could be dried, ready to sack, in a few hours, and that it retained the pure flavor and juices of all fruit to a marked degree above sun or hot air dried fruit, and that there was also a large additional weight in the product over all other known methods, and that the fruit was entirely free from insects, worms, dust or dirt. I began writing out my experience with this drier for the *Rural Californian*, and inquiries began coming in as to where these driers could be obtained. But I found that Mr. Coates was so taken up with other projects that he did not care to go into the manufacture of these driers, but would like to sell his interest in the patent. But I never heard of his doing so.

Some months ago I heard that a similar drier to the one I had been so satisfactorily using was being made by a company in Los Angeles. And the first time thereafter that I had business in Los Angeles I called at the company's office and found that they were prepared to build any number or any size of the same kind of a steam drier that I had been using, excepting that they held the original patents of the machine, and were making a much better machine than the one I had been using.

Up to last season our nicely sulphured sundried fruit, no matter how little of fruity flavor it had, or how acid or dusty it was, or wormy it might become, would bring the highest market price. But it will be impossible to deceive the consumer of our dried fruits any longer by false appearance. And upon examination I found that the increased weight of the steam dried fruit and the saving of so much handling of the fruit, as unavoidably accompanied sun-drying, would pay me a large interest of the investment in a steam drier for market use, saying nothing about the superior quality of the dried fruit; and that it is dried so quickly in a dark compartment that it is equally as attractive to the eye as the sulphured sun-dried fruit, I immediately ordered a drier built for my orchard use the coming season. It has been built, set up, and is now ready for inspection and business. The special points of merit of this machine are:

1st. Uniform radiated steam heat. Never above 212 degrees.
2d. No changing of fruit or trays while drying.
3d. Evaporated fruit gains 20 per cent in weight over sun-dried or hot air dried.
4th. The quality of the evaporated fruit is 30 per cent greater than sun-dried or hot air dried.
5th. Each piece of fruit is subjected to the *same* uniform heat.
6th. Each separate piece of fruit is subjected to a *strong current of hot air*, which removes *all* moisture as fast as the steam heat forces it out.
7th. Heat is controlled from 10 to 212 degress at will.
8th. The evaporating being done in a dark chamber, the fruit is *clear* and *bright*, no sulphurous bleaching being needed.
9th. Absence of dust, dirt or the attack of insects.
10th. Can be run night and day with no danger of exploding or burning up.
11th. From 3 to 25 evaporators can be operated by steam taken from one pipe from a stationary boiler under pressure by crosspipes connecting each evaporator.
12th. Each evaporator is encased with wood, thus retaining all the heat.
13th. No climbing up and down stairs to put the fruit trays on and off these evaporators, seven (6) feet being the limit in height.

Dry hot air will not evaporate. Steam-radiated heat, with *strong*, *rapidly moving* currents of *hot air*, will evaporate and *dry* perfectly, carrying off all moisture rapidly, retaining in the fruit all the essential qualities—juice, syrup, nutritious properties and flavor intact.

With this machine steam is passed through steam-tight shelves both over and under each tray of fruit, and by a peculiar device the hot air is saturated with moisture from the water in the fruit, and is *rapidly carried out* of the *machine*. The steam-heat is so *intense*, and the air saturated with moisture is so *quickly* removed, that the drying is *exceedingly* rapid.

The cost for fuel is very slight. It takes but little to keep a large volume of boiling water at the boiling point where the boiler is perfectly protected on all sides from radiating its heat. I have so constructed the furnace to my dryer as to enable me to utilize all my tree trimmings.

But where one has a large orchard, or where several small orchardists combine, a large drier or several small ones can be run by the steam from a stationary boiler at a mere nominal cost for fuel.

I believe this practical drier will give a new incentive to the fruit-growing industry of Southern California, especially of the fig industry. No locality in the world can compete with us in quality of fruit, and when it is put upon the market in the every way desirable shape that it comes from this World Beater Evaporator, it will be eagerly sought after, and will command a good price.

Paper for Drying Fruit.

RUTHERFORD, NAPA CO., June 12, 1892.

TO THE EDITOR:—Now that our fruits are beginning to ripen, I desire to publish a few ideas about drying, as my success was greater than the neighbors who used other methods and means. After carefully looking over the different trays and figuring the cost and labor of handling, my judgment led me to buy the standard black P & B paper of the Paraffine Paint Co., 116 Battery St., taking whole rolls, without cutting, 112 yards long. After cutting off the projecting canes of the grape vines, and harrowing and rolling the ground between the rows to make a smooth, even surface, being careful to select ground having a good slope (level surface would not do at all) this paper was laid and unrolled only as fast as the grapes were picked and ready to lay upon it, being sure to keep it perfectly straight. When the fruit is two-thirds dry, take a wooden hoe with a blade about four inches wide and two feet long, and draw the grapes from one side toward the other past the center, then reverse, and with the hoe push apart and separate the winrow thus formed in the center; this operation will turn most of the fruit and loosen it so drying will soon be complete. If rain comes before two-thirds dry, the water will run off and do no harm, but after that it is well to hoe the fruit to one side and then fold over the paper the same as the hemming of a piece of cloth; a few rocks along the edge will keep it there, and protect it from the wind. This can be done much quicker than trays can be piled up, and the work is not lost as the grapes are now turned. The reason for laying the paper perfectly straight is that it may not tear by turning over the hem, but if not straight then

turn up the concave side so as not to strain the edge and tear. The black surface draws and holds the heat when on the ground so there is no circulation of air underneath and at times was so hot the hand could not hold it. In our Napa Valley where many say grape-drying is not a success, I dried three lots on the same paper in the one season, and with reasonable care, the paper is good for three seasons, perhaps more. R. E. Wood.

A Warning to the Public on the "Cold Process."

Prof. E. W. Hilgard, Director of the University Experiment Stations, has issued the following special circular concerning the so-called "Ohio Fruit Co.'s California Cold Process for Preserving Fruits, Vegetables and Liquids:"

It seems that a quiet but active canvass is being made in this State and probably elsewhere under the above caption, and the circular is headed by a notice that "any one printing or selling directions not obtained from us will be prosecuted to the full extent of the law." "Compound Extract of Salyx" is the sonorous name under which the alleged new nostrum is advertised.

The name of this "Compound Extract" is incautiously suggestive of salicylic acid. An examination of the sample fruit distributed by the canvassers accordingly shows, in the liquid around the fruit, one-third of one per cent of salicylic acid, which of course is well known to preserve fruit, as well as other vegetable and animal matter, but is better adapted to the preparation of show specimens than to preserve for human consumption. Doubtless there are persons who may for some time take such doses of the well-known preservative with impunity; there are others with whom its use would, in a short time, create very serious disorders of the digestion, and there are those whose digestion is stopped, point blank, when such "preserves" are eaten.

Any one is at liberty to take his choice as to which of the above classes he considers himself as belonging, and may take his dose of medicine with his dessert if he chooses. But should any one desire to do so, it is quite unnecessary for him to pay the "Ohio Fruit Company" at the rate of eight dollars a pound for what he can get at retail for one dollar and a half. Nor need he be alarmed about the fruit company's threat of prosecution. The use of salicylic acid (elsewhere forbidden by sanitary regulations) is guarded by no patent, and never has been; that of "Coffee C" sugar prescribed by the company certainly is not. All are therefore at liberty to sweeten their fruit according to taste, and to spice it with the antiseptic acid, without asking leave of anybody. E. W. Hilgard.

This is the substance which we repudiated on page 495 of the Rural of May 28th. It is a good thing to let alone.

The Field.

Handling and Marketing Grain.

Read by J. O. Courtright at a Farmers' Institute held at Garfield, Washington, under the auspices of the Washington State Agricultural College.

We will attempt to notice briefly several questions pertaining to the marketing of grain, but more particularly wheat.

The first thing is to see that the grain is properly harvested and threshed, and particularly to see that the wheat is not cracked in threshing. There is nothing more destructive than this, as the broken grain can only be used for feed and causes a direct loss.

We will next notice the question of sacking grain. It is generally conceded that it is cheaper and more convenient to sack the grain at the machine as it is threshed, and this is doubtless true as long as we follow the present ruinous practice of selling and shipping our wheat without cleaning. But when the practice becomes universal of cleaning our wheat, at the shipping point or terminal elevators, it will be far better and cheaper to have granaries on the farm to receive the wheat as threshed, and deliver it loose to the warehouses or elevators.

By comparing the cost you will find that granaries can be constructed of common lumber that will last several years, to cost less than the sacks would cost for a single crop, and they could be so constructed that an elevator could be attached to the thresher and the grain carried directly into the granary and drawn out into wagon boxes, without any of the hard labor of lifting and handling sacked grain. It is sometimes argued that our roads are so rough that the grain would spill out, but extra sideboards on the wagon boxes would prevent that.

Recent experiments in shipping wheat to Europe have proved that wheat can be shipped in bulk, and when the Nicaragua canal is completed we may expect to see the larger portion of the wheat exported from the United States shipped from the Pacific coast ports.

The question of cleaning our wheat for market is a very important one in several respects. It is often urged, and is at present in a great measure true, that our prices are based on what is called Walla Walla wheat, which means just as it is threshed, without recleaning, and that if we should clean it, we would not receive any better price and would lose just the amount cleaned out. That would only apply at all to Portland and Puget Sound markets; and there is no good reason why, with a careful selection of the best varieties of seed wheat and the practice of cleaning being universal, that our wheat should not grade with Willamette valley wheat in the market, and in our local and Eastern markets it would make a very material difference. In one instance coming under our notice, by docking from one-half pound to one pound per bushel, the grade was raised from seven to eight cents per bushel.

We believe the best place for cleaning grain to be shipped is at the shipping point, where the grain is being delivered to the elevators, thereby saving quite an item of freight and insuring a more uniform grade, and thus avoiding the pretext for rejecting.

And right here we would urge the necessity for State weighers and inspectors. Our experience has taught us that exporters, left to do their own inspecting, manage to enlarge their profits at will at the expense of the farmers by grading too low. With State inspection and weighing, a farmer could feel perfectly safe in consigning his wheat to a responsible commission merchant for sale.

The plan of cooperation in storing and selling grain is of great value to the farmers, inasmuch as it gives them the advantage of knowing just what their grain is worth on the market, and enables them to obtain full market value, besides the saving in storing and handling charges. We hear and read a great deal about gambling in grain, and a bill has lately been introduced in Congress to correct the abuses of Board of Trade dealings, and we hope such laws may be passed that will effectually prevent speculators selling large quantities of grain which they do not own nor expect to deliver, thereby depressing prices to the farmers until they get the larger portion of crops in their possession and then raising the prices to consumers, thus robbing the farmer on the one hand and largely the poor laborer on the other.

The question which probably perplexes the farmer more than anything else is the time to sell. Even before the crop is planted the intelligent farmer begins to look ahead to see, if possible, what the prospects are for prices for the coming crop; whether the outlook justifies a larger or smaller area of the different varieties of grain. Here we see the need of a bureau of information separate and distinct from that given by the Boards of Trade and speculators.

This the agricultural department of our Government is intended to accomplish, but at present the knowledge to be obtained from there is not sufficiently published. Bulletins should be published monthly at least in all the leading newspapers, that both the farmer and consumer may know all the facts appertaining to crops and probable prices, at different periods during the year. Until we are able to obtain such information, we will have to depend on such knowledge as we can obtain and our own best judgment.

One thing that is highly advisable, as a rule, is not to borrow money at a high rate of interest to hold grain. In certain cases it might pay to hold, as when prices are reduced by too much grain being offered; but in a great many cases it is akin to gambling.

Potato-Growing at the South.

Potato growers in all parts of the State will be interested in the following review of the southern situation as traced by the Los Angeles *Times*:

For a short period during the spring, Southern California can ship early potatoes East at a good profit, as they arrive there before any others are in the market, and consequently command high prices. The season generally extends from middle of May to end of July. After that, potatoes begin to arrive in St. Louis and Chicago from Arkansas, southern Missouri and Tennessee, and in New York and other Atlantic coast cities from Florida. Shipments of this character from Southern California have been made during the past four years. This year the land along the Mississippi, where early potatoes are grown, has been flooded, which will make the Eastern crop later than usual. At the same time the Southern California crop is late. Unfortunately the early potatoes shipped so far this season encountered the short hot spell and were "cooked" before they started, arriving in bad condition.

Last year was also a late season in Southern California, in consequence of which the later shipments came into competition with the early Eastern potatoes and the shippers failed to make money. As a result of this there was the usual reaction and this year will not see more than one-tenth as many potatoes harvested as were grown in 1891, the benefit accruing to those who had the courage to plant.

Last winter, during the cold spell, some potatoes planted in low lands were frosted, but most of them were replanted and will come in later.

It is the general impression that the potato business is largely in the hands of Chinamen, but this is an error. Probably not more than 20 per cent of the shipments from Los Angeles are made by Chinamen. The report that there is a combination among Chinese growers to ship direct to eastern points is also baseless, being founded on the fact that one Chinese firm ships direct to its representatives in Chicago and St. Louis.

Those who desire to make money by growing potatoes in Southern California should note the following points:

Suitable land should be selected which is not subject to severe frosts. Upon such land two crops a year may be grown in the following manner. The first crop should be planted in January or February. It will come into market in the early part of May, in time for the first Eastern shipments. Care should be taken that the potatoes are thoroughly mature and the skin firm when shipped, or they will turn black and heat on the road. The second crop may be planted in May or June. This crop takes longer to ripen, the tubers growing more slowly during the hot weather. It will be ready in September or October for local consumption, when the Los Angeles market is bare and potatoes are being shipped in from the north.

Scarcely less important than the question of when to plant is that of what variety of seed to select. It is a curious fact, which has been fully proved, that local seed gives out after the first year, so that, in order to grow fine, large potatoes, the seed potatoes must be imported from the north. Possibly the home seed may produce a fair crop the second year, but after that it is sure to deteriorate and yield small tubers. Lack of knowledge of this fact has led to much loss on part of some growers. As a fine variety of large potatoes, grown from imported seed, will always command at least 15 cents a hundred pounds more in the market, it is evident that the small difference per acre in cost of seed should not be considered.

The varieties recommended in this section are, for the first planting, Early Rose and Burbanks, which command the highest prices in the Eastern markets, and for the second planting Burbanks, which are good keepers.

Commission men say that the Chinese who are in the potato business are, as a rule, more successful than their white neighbors, as they study the market closely and do not hesitate after they have made up their minds. They pay the market price for seed and get their crop in early, while many white men lose a profitable market by haggling and waiting for a drop in the price of seed.

The potato market just now is glutted, on account of the rejection at Chicago of forty carloads, which were shipped from Los Angeles in a too green condition, and encountering a warm spell, as mentioned above, became heated and spoiled. Plenty of potatoes may now be had at 45 cents a hundred pounds, in carload lots, but this condition of affairs is only temporary.

As to the yield and profits of potatoes, a great variety of figures might be given, depending on soil, time of planting, variety, market and other circumstances. A good average yield is 125 sacks to the acre, averaging 110 pounds to the sack or 13,750 pounds, which should bring an average price of 75 cents a sack, or $107.25 per acre gross, for one crop, and $214.50 for two crops. The cost of production should not be over half of this, leaving the gross receipts for one crop as net profit. Land in every way suitable for potatoes can be had, within 20 miles of Los Angeles, at from $100 to $150 per acre.

Some potatoes are being dug in this section by a machine which costs $225 and saves the labor of seven men.

At Westminster, in the remarkable peat soil section, they have a variety of potato known as the "Early Blush," which yields from 225 to 250 sacks to the acre. This variety has, however, a very deep eye, causing much waste in peeling, and is therefore not very popular with consumers.

The trouble is that there is too little system in the business. A high price one year sets every one to planting spuds, and the next year there is, of course, a glut. Those who study the market and plant the right variety at the right time will, barring accidents, always make money. Potatoes, which are now selling at 45 cents, have been up as high as $1.40 this season, and will, in all probability, soon be there again.

Track and Farm.

District Horse-Breeding.

In another article we have drawn attention to the fact that there is practically no supply of the stylish, heavy draft teams, for which such a brisk demand at high prices exists in large cities like Chicago. In that article the cause for this lack of supply is alluded to, and we shall now briefly suggest a remedy. We are of the opinion that the time has arrived for systematic work in the breeding of draft horses. There has, up to this era of the horse-breeding industry, been a sad lack of system and persistency. Lack of discrimination, want of faith, and a desire for new things, has led to a vascillating policy among owners of mares, the consequence being that there is scarcely one district where a buyer may always confidently count on finding horses of the type and blood he requires. The push of the stallion importers has placed horses of different breeds in almost every village throughout the West, and these horses have been used indiscriminately in succession as they arrived on the breeding ground. Had each locality stuck to the improved breed first used therein, to-day would have found a stock of high-graded horses for which the demand was constant and remunerative. As it is, however, a race of much-mixed mongrels and misfits has been produced with which the market is glutted, and for which the demand and prices are indifferent. The time has arrived, as we have said, for systematic breeding that shall counteract the faults of the past and bring about real progress in the future.

In every horse-breeding locality an association of breeders should be formed. A vote of the members should be taken to determine the most popular breed. A stallion purchase-fund should be subscribed and a committee appointed to select and buy the best horse of the desired breed that can be obtained for the money in hand. The stallion so purchased should then be used exclusively among the mares of the members at a stipulated fee sufficiently large to pay expenses and a good rate of interest on the original investment. If there are a sufficient number of mares among the members, no outside business will need to be done, but if not, a few selected mares may be bred for outside parties at the usual service fees. It would be a better plan if, as in Europe, a stallion could be hired by the association for the season, and we are coming to that just as surely as the plan has been found necessary abroad. In order to make the latter plan feasible, it would be necessary to hold a district or State stallion show each spring, at which the delegates from each breeding society could choose a stallion for the season's breeding. In Europe the stallions are hired in this way: A premium of say $500 is paid for the use of the horse in the district wanting him, and over and above this, the owner is guaranteed a certain number of mares to be bred at a stipulated fee at time of service and another when proof of pregnancy is complete. The result of this plan of breeding has been remarkably satisfactory. Each district has sought to procure the best horse; each member has been led to breed continuously in line to the same breed, and to-day the progeny are, as a rule, of very high class and value. There is nothing to prevent the success of a similar plan of breeding in this country, and such a plan would seem to be absolutely necessary in view of the present condition of affairs. Indiscriminate breeding should cease at once; breeding in line should be introduced and persisted in. The result will be a wonderful improvement in our horse stock, and each district becoming known as a place where a certain class of stock can be found, will be visited by buyers who will give remunerative prices for good stock. When one man in a district is carrying on breeding operations alone, he finds it difficult to match his horses, and a single good horse does not bring its real value in the market. Where a community is engaged in the breeding of one class of stock, it is a comparatively easy matter to match teams, obtain the full value and divide the proceeds.

Farmers throughout the country have wasted long years of work in trying every new horse that entered their district. The time has come for each district, or township even, to decide once for all which breed they will favor, and this done, stick to it and breed up until a steady supply of really good horses of one type and quality has been produced. This matter demands earnest consideration at the hands of all interested in the breeding of horses.—*Farmers' Review.*

The article referred to deals with the subject of the small supply of first-class draft horses in the Chicago market, that is, of horses with weight and quality combined, and goes on to speak of the great difficulty there is in buying well-matched teams of horses weighing 1600 and upward, that are perfectly sound, with good style, action and symmetrical form, such teams selling readily for from $400 to $600 and upward.

The same difficulties obtain in the San Francisco market, so do something like the same prices; but here as there the supply of horses that do not come up to the above standard are plentiful enough, while those of still smaller size and inferior quality are so plentiful that they injure the market for the fairly good quality of draft horse,

and thus have an ultimate effect in depressing prices for a still higher grade.

For this state of things, breeders are to blame, in a great measure, for not breeding better horses all round, and fewer of them, which latter would be fully compensated for by the higher price obtained for each animal.

Two fairly good ones are at any time worth three inferior animals, while one that is well-bred, well-fed and consequently well-developed and symmetrical in all his parts will generally sell for more money than three or four of the inferior sorts will bring, coupled also with the advantage of less cost in both feed and trouble. Let it be remembered, however, that it requires good feeding to keep the best breeds of horses from degenerating.

The *Review* sums up the whole matter by concluding as follows:

The market is glutted with indifferent draft horses lacking weight and quality. Prices, consequently, are kept constantly low, and will remain permanently so while this class of stock constitutes the supply. Breeders have themselves to blame for this unhappy state of affairs. They have lacked persistence in breeding; have commenced with native mares, crossed them with a pure-bred draft horse one year, and, like as not, next year have bred to a coacher, a trotter or a draft horse of some other breed. In short, they have been experimenting, and, as a rule, are no further advanced than they were at the start. They have sold the females of the first draft cross, instead of keeping them and breeding continuously to the original breed. We repeat with confidence that profit is assured to any community of intelligent farmers who will commence breeding their mares to a first-class heavy-draft-stallion and stick to the business. The fillies should be retained and bred again to the same breed. A good stallion should be kept in the district and changed whenever necessary. The colts should be properly fed from the start, so as to give them the necessary size and weight at marketable age. They should be broken in matched teams and sold always at a stated age when looking their best. It costs little more to raise a good horse than it does to feed a steer. The profits are greater in raising the horse, but many farmers miss it by not feeding the horse well, while they glut the steer.

RURAL IMPROVEMENT.

The City of the Angels—Climate, Progress.

Products and Wealth of Southern California.

LOS ANGELES, June 15, 1892.

TO THE EDITOR:—When, in 1780, the Jesuit priests, traveling north from San Diego in search of suitable sights for towns and Missions, came to the spot where stands now the city of Los Angeles, so favorably were they impressed with the beauty of the scenery, the richness of the soil, and the excellence of the climate that they made a halt, determined to found here a city, planting also a Mission near by. Usually a new settlement of this kind was called a *pueblo*, meaning a town or village, but upon this was bestowed the more dignified term *ciudad* (city), it being thought that it would, because of its great natural advantages, soon reach metropolitan proportions. So paradisiacal, indeed, seemed the place and its surroundings to these holy men, that they did, in the first instance, call the town *ciudad de la Reina de los Angeles*—the city of the Queen of the Angels! and although this title required a little *razeeing* to adapt it for practical use, how supremely lovely, how almost divine, must everything here have appeared to have caused these somber and prosaic monks to confer on the new city a name of such beatific significance! True, this drawing on the angelic host for a name may to some savor of profanation, yet to one who has long lived in this delectable land such act seems not irreverent, nor does this singular name seem farfetched or grandiloquent! The climatic conditions on "the other side" may be superior to those that here obtain, though I don't see any need for it.

And how little, after all, did these Spanish Padres comprehend the resources of this region or divine its future. Of these they remained all through the era of Mission rule almost as ignorant as the aborigines themselves, nor did these resources become more than partially apparent to our own people until many years after they had taken possession of the country. Only after much experimentation, made with care and distrust, did the thrifty and practical American come to find out the capabilities of this soil and climate. The olive and the vine, including a few other fruits and the more common cereals and vegetables, comprised about all that was grown by the pioneer inhabitants of this Southern California, for the successful cultivation of these irrigation being deemed necessary. But gradually were sowing and planting extended from the alluvial bottoms and the naturally moist soils to the higher lands, and finally the dry mesas, and even into the mountains themselves, for many localities there are in the latter where both orchards and vineyards do well.

And, just as they have enlarged the area of land adapted for tillage, so have the soil products been added to until they cover now as wide a range, perhaps, as in any other country on the earth. In growing and maturing the apple, the plum, the mango and the banana, as has been done here, the extremes of the vegetable kingdom would seem to have been brought very near together; nor in raising and perfecting the products of zones so far apart need one be very particular in the choice of localities, so extreme elevation be avoided. The pineapple ripens almost anywhere here, while on the beach at Redondo stands a full-bearing banana tree, with the ocean spray well nigh dashing over it.

As the material resources of this county have thus been multiplied, so have its economic pursuits been increased in number and varied in kind. Besides fruit and grain-growing in all their branches, many special industries have sprung up, and, although the most of these are yet in embryo, the major part of them promises to reach large proportions in the early future. Indeed, this people seem animated with a purpose of doing nearly everything in a large way! Their ambition is of the expansive kind!

They plant the sugar beet by the thousand acres, and set out fruit trees by the million, and ship away oranges by the hundreds of carloads. The vineyards, the wineries, the apiaries and the dairies are apt to be large, some of the grain fields being of imperial dimensions. On the Domingo Ranch there were raised last year 120,000 sacks of grain. This being one of the few places in California where Indian corn grows well, great quantities of that cereal are raised here annually. Wool is here a great staple, the vast flocks of sheep being mostly of the better grades. Neat cattle and horses are numerous, many of these being also blood animals. The increase of wealth here has of late years been very rapid. The property valuation of Los Angeles amounts now to over $70,000,000, there being only two counties in the State—San Francisco and Alameda—that outrank it in this respect.

By reason of these diversified crops and multiform industries, there has come to be here a perpetual ingathering, one harvest succeeding another the whole year round. Most vegetables are always in season, growing equally well winter and summer. In the spring come on the earlier fruits and berries, then the hay followed by the grain harvest, with the later fruits and berries all through the summer; then the work of the vintager, the gathering of the sugar beets, the olives, etc., the citrus fruits being picked in the winter.

Not by any means do the branches of business above enumerated comprise all that have here obtained a foothold. There are twice as many others, some of them, such as the petroleum, mining and lumber interests, being of great importance. And of the industries most advanced, none have as yet reached their full growth or anything like it. There is, in fact, even for these, room for great expansion. There exist in Los Angeles thousands of acres of tillable land that have never been disturbed by the plow share. As for her mineral resources, these remain comparatively virgin. When, as will happen in the future, all the life-sustaining capabilities of this county shall come to be utilized, it will be able to subsist more than a million inhabitants in health and comfort.

There prevails an opinion that the material progress of this county received two or three years since a general and disastrous check. This, however, was the case with only the city of Los Angeles, which, having for a while grown too fast, met with a considerable setback. From this the place has now nearly recovered. Building is again active, and the prices of real estate have of late undergone much improvement, while the volume of general business transacted seems to be larger than ever before. The value of the buildings erected in this city last year amounted to nearly a million and a half dollars. The shipments East by rail exceeded half a million tons, there being included in this 17,000 tons of potatoes and other vegetables. The overland travel has been greatly increased; also traffic coastwise, the imports by steamship having been last year for the first time larger at the new port of Redondo than at San Pedro, the former having already absorbed a large portion of the shipping trade that before went to San Pedro.

Of all the towns that have lately sprung up in this south country, none has had such quick and solid growth as Redondo. Though hardly more than three years old, the place contains one of the finest hotels on the Pacific coast, both as regards size, equipment and location. Occupying a height with gentle declivity, it looks out on the ocean to the west and eastward on a vast expanse of low, undulating hills, dotted with villas, vineyards, gardens, orchards and dreams of woods. Though so young, it has first-class water works, with church, school, and other public buildings, stately and costly. Capacious and substantial wharves have been built here, with water so deep that the largest ocean-going craft can, at all stages of tide, lie up to them; also two railroads connecting the town with Los Angeles, 18 miles distant to the east. Coast steamers and sailing vessels from all parts of the world put in here to discharge and take on cargo, which can be done with safety every day in the year. The place is growing rapidly in both business and population, a considerable percentage of the latter consisting of guests at the hotel, which is filled with visitors both winter and summer. In the elegance and completeness of its appointments this hostelry is not surpassed by any like establishment in the world. The beach in front of this hotel affords the finest salt water bathing, the air here being, for three-fourths of the year, clear, warm and balmy and the sea ever halcyon.

It has been sneeringly said that the land owners of Southern California, when negotiating a trade, sell the *climate* and throw the land in! And why not? Certainly the thing sold has been what the buyer most stood in need of, and worth all he has paid for it! What should a climate like this be worth to the invalids of other lands who come here seeking escape from death? What to the inhabitants of storm-swept Kansas and other sections of the Central West who venture from their cyclone cellars only long enough to bury their dead? Seeing the extent to which human life is elsewhere imperiled through exposure to tornadoes, floods, tempests, etc., it seems strange that more persons are not moved to come to this country through considerations of personal safety.

H. DEGROOT.

Mendocino County Notes.

TO THE EDITOR:—In a recent three weeks' trip through Mendocino county, the writer took occasion to look into its horticultural and dairy resources, with a view to furnishing a few notes for your readers. In forming general estimates on these subjects I have been greatly assisted by your sometime correspondent, Mr. Carl Purdy of Ukiah, whose quaint courtesy was unfailing. This gentleman is brimful of interesting facts which he has literally dug from the soil during years of practical experimenting in this picturesque region. As is well known, Mr. Purdy's special hobby is the collecting and propagating of native bulbs and plants, in which he has been phenomenally successful. His extensive exportation of bulbs, especially of the numerous varieties of calochortus, has made him the source of supply of all our large city florists, who in turn ship them East and to Europe.

The leading horticultural industry of Mendocino is the growing of hops. In fact, this county is only second to Sacramento in the output of this crop, while in quality the hops raised along the Russian river are given precedence to any produced on the Pacific coast. An acre of vines in Ukiah valley will annually produce a ton of dried hops, and the average price received during the last 15 years is 22½ cents per pound.

There are 600 acres of hops in the vicinity of Ukiah, and 18 kilns scattered about the mellow bottom lands of the river. This season is very backward, owing to heavy spring storms. In the last week in May there were only a few of the vines sufficiently advanced to start up the poles.

In late years many of the hop growers of Ukiah have added small orchards to their plantations, the majority of the trees planted being prunes and Bartlett pears. The kilns are utilized for the drying of the surplus fruit, thus making an appreciable saving in the labor and expense of handling the crop. With the exception of apples and pears, a great deal of fruit has heretofore been brought into this valley from adjacent counties. The thrifty young orchards now coming into bearing will do away with this necessity in the future.

Five years ago several of the older residents, among them Judge McGarvey, set out a number of acres to prunes which have since proved so profitable that others have followed their example. The prune and Bartlett pear are the only fruits raised here with a view to shipment. They are undoubtedly peculiarly adapted to the soil and climate conditions of Ukiah valley. On the other hand, apples raised in the valleys following the Russian river are liable to sun bake which seriously impairs their keeping quality and thus materially lessens their marketable value.

In the redwood belt of Mendocino, on secluded clearings and in high mountain nooks, the peach, nectarine, cherry and apple, attain a perfection of flavor not possible to the same fruit grown in lower altitudes. In August of last year while spending a memorable day in the heart of the redwoods a few miles beyond Orr Springs, I remember stumbling upon a small home-orchard which bore the most delicious strawberry perches I ever ate. Speaking of peach growing in Mendocino, Mr. Jerry Donohoe says:

"There is any amount of high, uncleared land where the soil is black and covered with the white thorn that if one has the patience to grub it out and plant to fruit, especially peaches, it will produce the finest varieties. All these ridges a few miles out from Ukiah can be had for ten dollars an acre, and the timber will pay for the clearing. I would rather have this bench land for orchard purposes than the best of our river bottom at a hundred dollars an acre."

The apricot cannot be raised in this section of the State, but there are mountain localities where the fig and olive thrive, and in certain foothill districts exceptionally good grapes are grown. The owner of one small vineyard a few miles from Ukiah sells 6000 gallons of wine annually, and boasts that he never parted with a gallon short of his regular price of 75 cents. One of his best customers is a San Francisco priest, who ordered 350 gallons of wine from this vineyard last season.

Striking across to the coast from Ukiah, the southern route traverses Anderson valley, one of the loveliest portions of the county. The Navarro river runs the entire 17 miles of its length, and every foot of the soil is rich with cultivated fields and orchards. This narrow valley is hemmed in by colossal mountain chains whose primeval forests have thus far escaped the devastation of lumber corporations, and even the tan-bark hunter finds a market too remote for him to ply his vocation other than in a desultory, half-hearted way.

The people of Anderson valley, while trusting to the wealth of their forests to bring them a railroad in the near future, have shown their enterprise by erecting evaporators to dispose of their extra fruit. Their nearest point of shipment is Cloverdale, 30 miles from their central town of Boonville. Large quantities of the produce raised hereabout are also teamed direct to the Greenwood Mills on the coast, where hundreds of men are employed in taking out the redwoods.

South of Greenwood the entire Pt. Arena country is given over to dairying. For miles following the abrupt and rugged seawall, the high green country billows back to the pine-steepled range fronting the broad Pacific. All this intervening land furnishes an unrivaled pasture throughout the greater portion of the year. The heavy fogs and cool winds keep the grass green far into the summer, when the vast fields of Belgian carrots and mangel-wurzel beets are then fed out to the contented cows. These cattle are mostly of the Jersey breed.

Various processes of butter-making are employed at these Pt. Arena dairies, but the majority make use of the latest inventions in machinery for separating the cream, the skim milk being afterward fed to droves of fattening hogs. The business is almost wholly in the hands of Americans, there being but few Swiss and other foreigners engaged in butter-making there. Last year's shipment of butter from Pt. Arena to San Francisco reached as high as 150 tons, while immense quantities were also sold to the lumber camps up and down the coast.

A few miles back from the sea fruit is grown, the apple pear, plum and cherry doing better than other varieties. As for small fruits, I have never seen such rank, productive growths of wild raspberries, blackberries, huckleberries and currants as cover miles of these Pt. Arena foothills. This unlimited berry field is yearly thronged with campers from the interior, who pick and can on the grounds their winter's supply of berries.

NINETTA EAMES.

OLIVE OIL PRODUCT.—The largest output of olive oil from any one orchard in the State is from that of F. A. Kimball of National City. Last year from 12,000 to 14,000 gallons were pressed at this establishment. Twelve tons of pickled olives had been put up at Mr. Kimball's works when the season closed, about the middle of April. Mr. Kimball has sent his foreman, Mr. Gaddi, to Italy to get further information on olive oil making and pickling, and he will be absent until October.

THE HOME CIRCLE.

Good-by, God Bless You!

I like the Anglo-Saxon speech
With its direct revealings;
It takes a hold and seems to reach
Far down into your feelings.
That some folks deem it rude, I know,
And therefore they abuse it;
But I have never found it so—
Before all else I choose it.
I don't object that men should air
The Gaelic they have paid for,
With "Au revoir," "Adieu, ma chere,"
For that's what French was made for;
But when a crony takes your hand
At parting to address you,
He drops all foreign lingo and
He says, "Good-by, God bless you!"

This seems to be a sacred phrase
With reverence impassioned—
A thing come down from righteous days
Quaintly but nobly fashioned.
It well becomes an honest face,
A voice that's round and cheerful;
It stays the sturdy in his place,
And soothes the weak and fearful.
Into the porches of the ears
It steals with subtle unction,
And in your heart of hearts appears
To work its gracious function;
And all day long with pleading song
It lingers to caress you.
I'm sure no human heart goes wrong
That's told, "Good-by, God bless you!"

—Eugene Field.

A Waiting.

Written for the RURAL PRESS by MARY E. BAMFORD.

A white artist had planted his easel at one end of the little Chinese fishing village, and he was beset by jabbering Chinamen, who looked over his shoulders and talked about his efforts. Outside the barbed-wire fence, upon the rocks beside the water, Miss Agnes sat drawing, too, in her sketchbook.

She looked up. Between her and the woods, on the road at a distance from the beach, passed a Spaniard on horseback, his red neckerchief, his blue shirt, his old hat, his ancient, large-sized stirrups showing plainly enough from this point of view.

Miss Agnes hummed as she sharpened her pencil. She would have hummed in Chinese, in order to be in sympathy with her surroundings, if she had known anything of that language. As it was, she hummed the only Spanish couplet she could think of at the moment—

"A wight of might
Is Don Money, the knight."

"*Poderoso caba'lero*
Es Don Dinero."

She pressed her pencil against a rock and reduced the lead to a mere point, as she hummed Francisco Gomez' couplet again and again.

A burst of Chinese syllables came to her over the barbed-wire fence and the roofs of the huts. She stood on tiptoe on top of the rocks and looked. The Chinamen around the artist were jabbering vigorously and gesticulating. Evidently ideas of art were being stirred in their minds, but whether the Chinamen admired the artist's picture or not it was impossible to tell. Miss Agnes was glad that they did not know that she was sketching, too. She sat down again in her rocky corner, and began her work once more.

"*Poderoso caballero*
Es Don Dinero,"

she hummed in unison with the splash of waves. She turned in her seat and looked back. Along the path by the rocks came a woman, walking slowly. Her hair was white, but her eyes were brown and vivacious still, in spite of their eighty years. Grandma Eaton would always be young.

"How do you do?" Agnes called.

The traveler halted and looked up.

"Well, well!" she said. "Is that you, Agnes?"

The younger woman held out her hand and helped the older one to a place among the rocks where the sun shone down warmly.

"How do you do?" asked Agnes, again.

"I'm well, well, thank you," said the old lady, cheerfully. "I don't see but I'm as strong as I was ten years ago. I didn't know anything all night. It's such a blessing to sleep so. Go to bed; no pain; no ache; nothing to worry me. My Heavenly Father's good to me. I remember when my daughter first come out here to California and found me, she wrote back to the folks East, 'Mother's all packed up and ready to go to heaven any time.' But I'm here yet."

"I hope you'll be here a good while yet," said Agnes, softly.

The old lady laughed a little.

"That's what they all tell me," she said, in her happy voice. "They make me think of that verse—

'Blest be the tie that binds
Our hearts in Christian love;
The fellowship of kindred—'

How does that go?"

"'The fellowship of kindred minds
Is like to that above,'"

repeated Agnes.

"Yes," said Mrs. Eaton, "that's it. I keep all those verses in my mind, ready to think of them."

There was a moment's silence. The splash of the water on the beach came to their ears. Some Chinese children went down on the sand to lie there and hunt for shells.

"I haven't brought any work with me," said Mrs. Eaton. "I always was a steamer to knit, but I guess I'll have to talk instead. It always comes so handy for me to talk when I've any one to talk to."

Agnes laughed. The boat with its crane was growing beneath her fingers. Some of the odd roofs of the Chinese shanties and some of the strings of fish showed in the background.

"Your daughter must have been glad to come to you," she said. "You and she always seem to think everything of each other."

"Oh, well, a mother's pride is very innocent," said Mrs. Eaton. "That's what I always used to tell my husband when he and I thought too much of Percy. "Yes, a mother's pride is very innocent."

"Who is Percy?" asked Agnes. "I don't think I ever heard you speak of him."

"He was my boy," said the old lady. "He was a beautiful, black-eyed, little fellow, just one of these children you read about, too good to live. But he was beautiful. Everybody noticed him."

Agnes, looking down at the old lady's face, more than ordinarily comely still, could well believe in the beauty of the little boy.

"When we come to California we were in the lumbering regions," went on Mrs. Eaton, "and one day Percy went to the mill and they thougbt he got a piece of bark in his throat. He came running to me kind of choking."

"Well, after that he seemed to be better; but all the time I was certain there was something the matter with his breathing. And it worried me so, and got to be so bad, that finally I took him on the stage to go to a hotel where the surgeons were to be. Well, that child"—the old lady paused to clear her throat—"that child would draw in his breath and sing. Everybody on the stage thought he was such a fine boy, and they said, 'O, it's such a pity for anything to be the matter with a boy like that.' He had learned to sing of his sister 'Jillie,' as he always called her. 'Ma,' he'd say to me, 'I learn best when I look Jillie right in her eye.' Well, I took him to the hotel and gave him to the surgeons. They were going to cut into his throat and remove the bark, you know."

"O!" said Agnes, horrified.

She stopped drawing and sat looking down at the face below her. She knew the old lady was living the scene all over again. She "gave him to the surgeons" once more.

Mrs. Eaton's voice recommenced.

"'Now,' I said to them, 'I suppose you don't want me.'

"'No,' they said.'

"Percy looked up at me.

"'Ma,' he said, 'where you go?'

"Well, I hurried the length of the hotel to my room, and there I lay on the bed in the awfulest agony that ever was. I knew I shouldn't ever see that child again just as well as I knew it afterward.

"By and by one of the doctors came and knocked on the door. I went to it and I said, 'Doctor, I know that child's dead just as well as if you told me.'

"'Yes,' he said, 'he's dead.'"

The old lady's voice stopped a moment, but she did not cry at all. There might have been the faintest quiver of the firm mouth, but it was the girl on the upper rock before whose eyes the white sands and the blue waters blurred. The clear brown eyes below had shed all their tears years ago.

"The surgeon had cut into his throat, and his breath just left him," the voice went on. "The surgeon cut in and blew just as hard as he could, so as to bring back his breath, but he never breathed again."

"O!" said Agnes. "O, you *poor* thing!"

Mrs. Eaton looked at the girl.

"There I was," went on the old lady, "with no friends in the hotel, no one I knew but the doctor. But the landlady was kind to me. I came into the room, and 'Oh, my child!' I began, and she come to me and took me right away. Wouldn't let me stay there."

The waves splashed upon the rocks behind the two. Sounds of Chinese jargon came from the little fishing hamlet before them.

"Well," said the old lady, "it seemed as if I couldn't stand it anyway in the world, but I determined I wouldn't go crazy. We had a little house where we lived, with a quilt hung up to hide the bed and such things, rough, the way they used to build in old times. The mill hands used to all come to our house to eat, and one man had a lot of these California canaries in a cage—beautiful they were—and I says to him, 'What you going to do with those birds? The mother bird won't feed them much longer? He says: 'I'll give them to you.'

"We'll, I couldn't set still, and I used to go round gathering grasshoppers by the hour for those birds, just to take up my mind so I wouldn't think of Percy."

There was a little pause.

"And then," the old lady went on, "a man brought along a puppy. He wasn't much account. We wouldn't have thought much of him in Illinois, but puppies were scarce out here, and law! I paid him five dollars for that puppy. I hadn't ever had pets, but I wanted something to take up my mind, and I gave Jillie that puppy. She missed Percy so. There wasn't but a few years between them, and she'd always taken care of him. We called the puppy 'Sport,' and we had a kitten, and—you ever seen a kitten and a puppy play? Well, we had such sport. He'd chase the kitten, and I'd catch the puppy and say, 'You! Sport, you!' and I'd throw him as fast as I could, and he'd lie still, pretending he was dead."

The old lady chuckled at the recollection, and Agnes, looking at her, marveled at the vivacious manner that treated the years as if they were nothing.

"Well," said Mrs. Eaton, with a little laugh, "next Mr. Eaton bought a pig for a hundred dollars, and there were so many little pigs that there was one she couldn't tend to, and he brought it in and I took care of it. It was the cleanest little thing, little white pig. We washed it, and the men used to come up evenings. We had a long board table, and they'd sit around it, and such fun as the men had with that pig! They hadn't anything else to amuse themselves with, and they named it 'Betty,' just to plague me, because that was my name.

"'Here, Betty! Betty!' they'd call, and the pig'd come. The men'd shove up the window and throw the pig out in the snow, just to see me go after it. It used to follow me everywhere I went, and the neighbors would say, 'Here comes Mrs. Eaton and her pig.'

"By and by the creature got so it would root, and then it had to go outdoors. I wouldn't keep it in the house after that. She'd go outdoors for sugar. Pigs are very fond of sugar. I'd say, 'Betty, go outdoors,' and the creature'd go down on her knees and smack her lips, so."

Mrs. Eaton made a noise, putting her lips together.

"She'd go if I gave her sugar," said the old lady with a little laugh.

The cheery face was alive with the recollections of past years. Presently it sobered a little.

"And so," she said, rising with a half sigh, "and so such things took up my mind, and the time went along. I try to be reconciled."

Agnes looked at the cheerful face that never seemed to have sorrow with which to sadden others. It all must have happened thirty or more years before, perhaps forty, and yet it was all fresh in the mother-heart still, as if it had been only a few days. The sharp pain of the first was over, but she missed her little dark-eyed boy still.

"You will see him again before so very many years," Agnes said softly.

"Yes," said Mrs. Eaton cheerfully, "yes."

Her eyes were on the splashing waves, but her thoughts were elsewhere.

"What must it be to be there?" she said.

Some Humane Hints.

Written for the RURAL PRESS by CLARA S. BROWN.

Are you sure that all the domestic creatures about your premises have access to plenty of water these warm days? Dogs, cats, chickens and birds drink frequently when they have the opportunity, which too often is not given them. There is a coal oil can sunk under a hydrant in our back yard which is kept full of fresh water, and many animals besides those belonging to us appreciate it. Tired dogs drink their fill, and it is a pleasure to watch the birds chirping around it and dipping into it. Sometimes, after dark, toads come out from their hiding places and take a bath in it. I saw one once immersed to his neck and hanging on to the edge of the can with his forelegs, looking as if the height (in this case the *depth*) of earthly bliss were reached. Don't forget to keep the water dish full.

Is it necessary, do any of my readers think, to shoot every strange cat that comes on the place? I know persons who are in the habit of doing so, and I have just been deprived of my special pet for the last three years in this manner. I know how annoying cats can be sometimes, but I should never think of killing one not my own. A cat or dog is property as much as a horse or cow is, and I maintain that no person has a right to shoot them, even on his own premises. My great gray Tom had been so treated that he was nearly human. His company and affection were worth a great deal to a lonely woman. I hope the young man who took him from me will never feel so badly over the loss of any of his possessions as he has caused me to feel, and I doubt if he ever can—his heart cannot be tender.

Why is it that parents do not more universally suppress the cruel streak which is visible in many children, especially in boys? It might be educated out of them if they were early trained to be humane. It seems to me that I could not bear to have a boy robbing bird's nests, tormenting cats, firing stones at dogs, hooting at Chinamen or anyone else, and that if I did not get such propensities out of him it would not be from lack of endeavor.

Oh, I know "boys will be boys," and we don't want them to be "sissies." They do not stop to realize what they are doing, and their parents do not appear to give any heed to it. Inhumanity should be explained to them, and the responsibility that God gave us when he made dumb creatures subject to us. In babyhood this teaching should begin, in degrees suited to the developing mind. I do not know why it is, but childless people often see these things when parents do not give them a thought. They are told by impatient mothers that they wouldn't do any better themselves, and they don't know what they are talking about, but the spirit of maternity is not always the strongest in those who bear children, and neither is the feeling of humanity gauged in that way.

There is a two-year-old girl in this city who has a mania for crushing little chickens in her hands, and the child's mother gets one of the downy things every day for her cruel amusement. Why cannot that mother see that she is fostering brutality in her child and laying up trouble for herself, even if she feel no pity for the poor chicken? Some day this murderous instinct may show itself in a terrible manner.

I heard another mother say that she wanted to get a kitten "for the baby to mawl around," and in the same house a puppy had just been done to death by childish hands, and the mother laughed when she told of it.

A nine-year-old boy with a "B. B." gun shot out one of our little dog's eyes a few months ago, and has killed no end of birds. If parents give their children such implements of destruction, I think they should forbid their being used to destroy or injure innocent life.

Last week the Los Angeles papers reported "the most ferocious fight on record" between two dogs, set at each other by "eight young men," who watched the contest in a state of "terrific excitement" and with "bated breath." Which were the most brutish, the dogs or the men? I certainly respect the dogs the most, for they did the best they knew how. A good dog is a more worthy friend than such libels on real manhood can be. If I were a society girl I would make it my business to find out the names of those "swell" young men, and if they proved to be acquaintances of mine I would quietly assure them that I did not associate with persons of that calibre.

Hold yourselves above coarseness and inhumanity, girls, and you will help to raise the social standard. Cock fights are another "amusement" that the "sports" of Los Angeles indulge in behind lonely barns. A writer, whose name you would recognize if I should repeat it, said, in my hearing, that she would rather go to a bull fight than to the best opera that ever was written. She knew what bull fights were, for she had lived in Mexico. Let us think a little more of the barbarity in our own country when the need of missionary work in foreign lands is urged. It is bad enough for responsible beings to pummel each other until they are nearly dead, and shameful enough for crowds of civilized (?) people to enthusiastically witness the bloody sight, and for thousands more to eagerly read columns of description in the newspapers. The worst brutality is reached, however, when speechless creatures, dependent upon man, are made to tear each other in pieces while "superior beings" revel in "terrific excitement" thereat.

San Francisco Fashion Letter.

SAN FRANCISCO, June 15, 1892.

DEAR DAISY:—This month has shown nothing strikingly new in the cut of dresses and jackets, but some of the new summer goods are original and beautiful. The newest ginghams have silk stripes woven in with the cotton, or even an entire silk facing, the patterns generally being crossbars of various colors. One pretty gingham has a pale gray ground traversed with a darker gray stripe of silk, across which runs a narrow crimson silk stripe. Another combination of colors that sounds gorgeous, but is really most artistic, is a ground of pale electric blue gingham, with a narrow chocolate colored stripe crossed by silk stripes of shrimp pink. These striped ginghams, plentifully trimmed with ribbon to match one or more of the prevailing colors, have a very rich effect. Another novelty in ginghams is a white lace pattern, figured on a delicately tinted ground of pink or pearl gray.

Some of the new cotton crapes are as pretty and more dainty than the ginghams. They are shown both plain and embroidered. As for the sateens, it is almost impossible to tell many of them from silk.

Old-fashioned gauzy-looking stuffs are much used, and silk grenadines in black and colors are shown with small and large patterns. The new light cloths are most artistic; some are figured, as for instance a light gray cloth dotted with Japanese fans in gold and silver thread, or a fawn cloth with sprays of chocolate colored flowers. Other cloths of one color have corded stripes or present a wrinkled, crapy appearance. Indeed, there is no end to the variety of charming materials that are now being shown in the stores.

A new fashion, and not a very clean one for the street, is not only to make the dress with a sweeping train, but also to wear the silk petticoat as long. The dress is held up for walking and the skirt displayed. These petticoats are made in the most delicate colors to harmonize with the dress, and one sees, at every step, ladies trailing one or two feet of pale blue, crushed strawberry or heliotrope silk through the dust. Sometimes the streamers worn from the belt, or the point of the Watteau fold, are as long as the train, and float for a couple of yards in the breeze, entangling the passers-by.

The Watteau fold is beginning to be much worn for street dresses. It usually starts from the yoke, or it may commence several inches below the waist and be finished off by a bow and streamers.

Bell skirts are as popular as ever, and for the street are made a little longer and more skimpy than last month. These skirts may be trimmed in endless ways, a band of passementrie being as new as anything. Seamless waists are still the most fashionable; for the Russian blouse they are generally made with a yoke.

For outdoor wear the Eaton jacket promises to become popular. It is a short jacket, not reaching the waist at the back, and cut square at the waist in front in imitation of the jacket worn by the boys at Eaton school. With the exception of the Eaton, jackets are worn quite long. A writer in a French magazine gives us the following hints upon lengthening a jacket that is too short to be fashionable:

A band of cloth, velvet or Ottoman silk may be used to lengthen a jacket; this band should be cut on the bias and turned up the front to form a sort of vest. Instead of having the edge of the jacket straight, it may be cut in scollops or points, but we must be very careful to see that the two sides correspond; indeed, it is better to make a paper model first, tack it on to one side of the jacket, and cut the two sides together. When the scollops are completed, the band of velvet or silk should be laid carefully under them and appliqued on. A little braiding or passementerie should then be put around the scollops. If you do not wish to cut the jacket, the band used to lengthen it may be cut in scollops or points and laid on to the jacket. With a little skillful braiding, an old-fashioned jacket may be made not only fashionable, but quite handsome.

Peasant belts are as much worn as ever; the points are growing deeper and deeper, and at the present rate will soon reach the neck. It is difficult to say whether ribbon or lace is most popular this summer for trimming; very often both are combined. Full sleeves and blouses are made of lace, and it is used of all widths to trim skirts, from the narrow rows of lace that edge the frills to deep lace flounces.

The newest style of hat is more striking than pretty and is positively unbecoming to any but a large woman.

It has a broad brim, turned up at the back, and a tall, narrow crown like a factory chimney, flat at the top. This hat is generally trimmed with large bows of very wide ribbon, but flowers and butterfly bone of lace may be used.

Streamers are still worn to hats and bonnets, but few really stylish women now wear them floating in the San Francisco June gales, for they get to look draggled and worn out directly. Perhaps the prettiest fashion is to wear only one streamer and to fasten it down to the hair at the back, either with a flower or a pretty pin and then draw the end over one shoulder and either fasten it with a bow or pin it carelessly.

There is quite a rage for Russian styles, not only for Russian blouses, which I described to you last month and which are growing more popular every day but also for belts etc. of Russian leather, Russian costumes and embroideries.

The cross-stitch so effectively used in Russia for embroidering underlinen, serviettes, etc., is both simple and pretty. Upon a piece of canvas—the very finest used for wool work—is traced an elaborate pattern, generally a sort of Greek design, the canvas is then loosely tacked over the linen to be embroidered, and with fine embroidery thread in fast colors, generally crimson and blue combined, the pattern is worked in the cross-stitch used for wool work, the stitches being taken through the linen. When the embroidery is completed, the canvas is cut a little and pulled out thread by thread, leaving the pattern standing out on the linen.

The chief requisites toward making this embroidery effective are a good pattern, very fine canvas and thread, and taste in blending the colors, though I have known Russian ladies, who, in embroidering their underwear and household linen, used only one color.

MARIE EVELYN.

YOUNG FOLKS' COLUMN.

Willie and the Vinegar.

Written for the RURAL PRESS by M. F.

A number of years ago, at the termination of one of the leading streets in San Francisco, there stood a beautiful structure, surrounded by lovely flower gardens and grassy plots. The house stood on a hill, overlooking the city and the ocean. On a bright morning the sun shone on the waves, which reflected its light on the windows of the house. The seagulls could be seen plainly from the house flying above the ocean, screaming in their piercing, mournful voice. A fresh, cool breeze blew from the ocean as a lady lowered the window to admit the refreshing air. One glimpse into the room revealed the family's wealth. The rich, white curtains swept the gorgeous carpet with ease as the air stirred them. The dainty hangings and bric-a-brac could only be purchased by the rich.

A second glimpse showed that it was the room of a boy whose every wish was gratified. A whatnot was full of picture books, some old and torn with hard usage, some new that had scarcely been touched. On the bottom shelf was a basket, with some strings, a few broken knives, some marbles, a top and all the nameless belongings of a wide-awake, ingenious boy. His airgun hung carefully at the head of his bed, with two toy pistols, one on either side.

The third glimpse showed a handsome boy lying on his snowy white bed. He is rather large for ten years, but his childish face can surely be no older. His petulant tones and impatient looks give his mother assurance that he is not too sick to be angry.

"Mamma, why won't you give me vinegar? my throat is parched for a drink."

The mother turned from the window, with a sweet, sorrowful face. She ignored the first part of Willie's question, but answered:

"I will get you a nice drink of milk, will I, dear?"

The mother's coaxing tones failed to touch Willie's heart.

"No, I don't want the old milk; it don't stop my thirst," was his angry rejoinder.

He watched his mother closely, and seeing no signs of relenting, he changed his tones to pleading. "Please, mamma, give me some vinegar. Then I'll never ask you for any more if you give me some just this once. I'll be a good boy, and take my medicine without crying."

"It hurts me to refuse you, but, my dear child, it is impossible for me to grant your request." She came to the bed and gently arranged the pillows, saying: "If I was to give you vinegar, dear, papa and the doctor would think I was crazy."

"Papa wouldn't think you was crazy. He would call you good for giving me what I want," said the child. "And the doctor would say it was all right if he gets his money; that is all he wants. Besides, who cares what he thinks. I'll get well so much the quicker if I get the vinegar."

"Willie, listen!" the mother reasoned. "If I was to give you vinegar while you are sick as you are, it would kill you. Then I would never forgive myself for giving it to you. Who ever heard of a person taking vinegar when they had the measles? It means instant death, child, and mamma cannot part with her boy yet."

She kissed him. Her kind tones touched his heart; but he wanted the vinegar and was determined he would get it, no matter if it was by foul or fair means. Vinegar he wanted, and vinegar he would have. All his threats, bribes and beggings availed naught. She would as soon give him poison as vinegar when he had the measles. It was hard for her to refuse her children their wishes, but when it was for their good, she could be gentle but firm.

Like a boy at ten years, he knew he was right; and like them, too, he was going to have his own way if possible. He knew when his mother pressed her lips tightly together after saying "no," there was no use to argue any more, for that was the final decision. So he concluded to ask the doctor when he came, which he would that afternoon.

The mother was surprised that Willie was so good all the morning; only calling her a few times, and never complaining as he was wont to do. Other days she was running to him all the time, and sat with him occasionally. Now he did not ask her to stay with him, after she gave him what he wished. She concluded the vinegar question was settled, and congratulated herself, that she need not deny him that anyhow. She was unconscious of the scheme on foot.

When the doctor made his appearance, and before he had the door closed, Willie could restrain his impatience no longer. He had intended to get gently around the doctor, but the sight of that burly form and smiling face sent his resolutions to the winds. He greeted him with, "Say, doctor, if you don't let me have some vinegar, I'll never speak to you again." This was his most persuasive argument. He used it a dozen times a day while trying to get the vinegar from his mother.

The doctor answered him with a smile and a question as to how he felt. Thinking this a bad omen, Willie turned his back without answering. The doctor bent over him and asked him if it was vinegar he wished. All Willie's anger fled as he imagined he read in the doctor's face that his wish was to be gratified. So, impulsive Willie said: "Say, doctor, if you let me have some vinegar, I'll take all my medicine."

"Ah! you have not been in the habit of taking it all, have you?" the doctor asked, peeping over his glasses, and trying to hide the amusement he felt at this boy's trick. He was not guiltless of the same act when he was a boy. "how do you expect to get well, if you do not take the medicine I prescribe, eh?"

"Your medicine does me no good. It's vinegar I should have to make me well, and I'll never get well without it."

"If that's the case," the doctor said, turning to the mother, "we are compelled to give him some. You can take a tablespoonful of vinegar and put it in a cup of water, of which give him a tablespoon every hour."

Willie imagined he could taste the vinegar, as he pictured to himself his mother pouring it out. A cupful seemed as nothing. If he could get the jug he would soon empty it. But it was only a tablespoon, and that in water, too. Well never mind, he would be patient. In this was conveyed a threat. He urged his mother to hurry up, now that he could have it.

The doctor left, after reminding Willie of his promise to take all the medicine.

The mother was not long in getting Willie's medicine, for she was quite willing to give it, since the doctor ordered it. She stood by the bed waiting for Willie to rise, with the cup in one hand and the tablespoon of the liquid in the other. Before she was aware of his intentions, he seized the cup and drank it all. He handed it back with a mischievous look, thanking her for it and asking for more. Part of his scheme was accomplished. She was in doubt whether to scold him for his naughty act, or cry over him as one who would die. She was on the point of sending for the doctor to ask his advice, so thoroughly frightened was she. Willie assured her he felt better already, and if she would give him some more he would be well before the week was out. This she utterly refused to do. When she left the room, he shook his head determinedly, saying: "I'll get it."

He waited patiently all the afternoon for a chance. He had drank enough to quench his thirst, but not enough to satisfy his appetite. About five o'clock, company came. Willie knew his mother would be unable to come now, and was confident that cook had not yet returned. Now was his opportunity. He slipped on the floor and cautiously walked to the door. He was almost too weak to walk, but with the help of chairs and the furniture he came in contact with, he reached the door. He slipped down the hall into the kitchen. He knew where cook kept the vinegar. He was not long in getting a cup and filling it with the precious liquid. From experience, he knew he had to make speed back to his room, for fear his mother might come. So, with one large swallow, he crept back and reached his room safely, without being detected in the act. Weak from sickness and the unusual fatigue, he had just presence of mind enough to set the cup on the floor and give it a gentle push with his foot under the bed out of sight before he fell in a faint across his bed. He soon revived and got into bed, first drinking the vinegar to make sure he had it Nothing tasted so good to him as that vinegar.

His small brother came in as he was finishing it. He tried to bribe him to get some more, but not tell his mother, which the child refused to do. He was still young and not skilled in the tricks of his brother. The mother was horror stricken when she heard it, for the child made it his business to tell. She immediately sent for the doctor, but he, wise man, told her to wait until the morrow to see what the effects would be.

The next evening, Willie was eating dinner with the family. He said it was the vinegar that cured him, and that the doctor's medicine was no use. It may be true. Who can tell? Although I do not approve of Willie's acts; still, he was a child and had his faults and failures. This Willie is still living to-day, and laughs heartily over his boyish trick. Although he is sorry for causing his mother pain, still he is confident that the vinegar cured him. As a doctor, he allows his patients to have what they are hungry for, if it is taken carefully.

Don't be Mean, Boys.

Sometimes I wonder, says Burdette, what a mean man thinks about when he goes to bed. When he turns down the light and lies down alone, he is then compelled to be honest with himself. Not a bright thought, not a generous impulse, not a word of blessing, not a grateful look comes back to him, not a penny dropped into the palm of poverty, not the balm of a loving word dropped into an aching heart, no sunbeams of encouragement cast upon a struggling life, no strong right hand of fellowship reached out to help some fallen man to his feet—when none of those things come to him, how he must hate himself, how he must try to roll away from himself and sleep on the other side of the bed, when the only victory he can think of is some mean victory, in which he has wronged a neighbor.

No wonder he always sneers when he tries to smile. How pure and fair and good all the rest of the world must look to him, and how careless and dreary must his own path appear! Why, even one isolated act of meanness is enough to scatter cracker crumbs in the bed of the average man; and what must be the feelings of a man whose life is given up to mean acts?

ROYAL



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Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

SOME ORANGE FIGURES. — Oroville *Register:* We have compiled a list of the orange and olive trees in this part of Butte, and the totals are given below: For Oroville and vicinity, this foots up 22 537 orange and 3835 olive trees. There are a large number of growers with from 50 to 100 orange trees, but the exact number we have not been able to ascertain. We would estimate the total of these at 5000, thus giving for Oroville 27,537 orange and 3835 olive trees. If to this we add 25,516 orange and 11,800 olive trees for Wyandotte, and 500 orange trees for Bidwell Bar and vicinity, we have 53,553 orange and 15,635 olive trees. To these may be added 95,300 orange and 9700 olive trees for Thermalito, making 148,825 orange and 25,335 olive trees, giving a total of 174,170. To this must be added the 160,000 citrus trees for Palermo, making a total for Oroville and adjacent colonies of 334.170 trees, or 3341 acres. Many of these trees have been planted from two to four years, and within another year or two will begin to yield large quantities of fruit. The output will regularly increase for the next 10 or 15 years, or until the trees are in full bearing. The quantity of fruit that will be produced by the trees already planted at Oroville and vicinity may be estimated from the yield of citrus orchards in Southern California. Riverside in 1890 had 287,300 orange trees four years old or over. The area planted is 3110 acres, which is 231 less acres than that planted at Oroville, or 46,000 less trees than Oroville has. At Riverside in 1889 and '90 there were shipped 1500 carloads of oranges, and in 1890 and '91 there were shipped 1428 carloads of the same fruit. It will be reasonable, therefore, to estimate that Oroville will ship within the next few years fully 1500 carloads of citrus fruits.

Calaveras.

THE TABLE MOUNTAIN RANCH.—Mokelumne Hill *Chronicle*: The Table Mountain ranch is situated in a beautiful little valley near Table mountain, from which it derives its name, and about a mile and a half from Murphys Camp on Coyote creek. It comprises about 320 acres of fine farming land at the above-named place, and a range of about 400 acres on the Stanislaus river, four miles east of Murphys Camp. About 18 or 20 acres of the first-named place have been sown in alfalfa, yielding about five tons to the acre, while several acres are devoted to horticulture. Peaches, prunes, apricots, nectarines, pears, apples and other fruits are produced in abundance. The principal industry of the ranch, however, is the breeding and raising of Jersey cows and pigs, and the manufacture of Jersey butter. Here may be seen some of the best thoroughbred Jersey cattle and pigs in the country, the stock of which were imported directly from the East. Unquestionably the finest butter in the State is produced at this place. All the latest modern improvements are used. The cream is separated from the milk by the De Lavel process, which, unlike the old method, requires but a short time, and is done immediately after the cows have been milked, thus preventing the souring and decay of the cream, which naturally follows through the slowness of the old process, to a greater or less extent. The butter is molded into prints or cubes, wrapped in parchment butter-paper, and shipped on ice to any part of the country. Perfect order and neatness prevails throughout every department of the dairy. The same attention in the way of brushing and currying is devoted to the milch cows as is given to livery horses. Each Jersey cow is named and registered in the American Jersey Cattle Club at New York, so that its pedigree may be easily traced. Six men are employed about the place—a foreman, head dairyman, vacquero and farm hands. The enterprising owner, Mrs. E. Adams, has expended upward of $30,000 in stocking and putting the ranch in its present condition, and it can be said without exaggeration that this is the finest ranch of the kind in the county.

Fresno.

WHEAT-GROWING.—Sanger *Herald*: Occasionally we hear a farmer assert that wheat-growing has ceased to be profitable in Fresno county, owing to the lack of natural moisture and the low prices that have prevailed during the past few years. It is true that the wheat market for several years, and until last season, has not inspired a large amount of confidence, but we believe bottom prices have been tapped and prices will rule high for several years to come. The moisture trouble is being gradually overcome by the extensive system of irrigating canals now in operation. Wheat can be produced by irrigation, if properly applied, just as well as fruits, vegetables and alfalfa, but these latter are just as important to successful farming as large crops and high prices. Heretofore our farmers have absolutely neglected to provide home comforts, in their rage for wheat and barley. The trouble is, they fail to provide against heavy expenses in the matter of produce and supply. With one of the richest and most productive counties in the world, where fruits, vegetables, butter and meat can be produced with but little trouble and expense, they pay large prices for these products from second and third hand dealers, thus depriving their purses of the profits of their wheat and other cereals to provide the actual necessaries of life. These necessaries, without a single exception, could be produced at a season of the year when nature is doing its work in the wheatfields and the farmer is idle, and too many of them are spending their time and spare cash away from home.

LATE CROP.—Reedley *Exponent:* Harvest in this vicinity is about ten days later this season than it was last. On the 6th day of June last year, J. H. Harden brought in the first load of grain for the season, but up to the present date none of this year's crop has reached either of the warehouses. A few days ago, one or two ranchers made an attempt to start their machines, but found the grain still too green to cut well. If there are any harvesters running at present, they are few in number, but another week will see the work fairly started.

ESTIMATED RAISIN CROP ON ONE VINEYARD.—Reedley *Exponent:* The California Fruit & Wine Land Company's vineyard is a beautiful place. The vines and fruit and ornamental trees are making a rapid growth, and are a living testimonial to the soil of Reedley and the superintendent, Mr. F. T. Briggs. Mr. Briggs informs us that, according to all present indications, the vineyard will produce, this season, 300 tons of raisins. The vines are in fine condition, not having been affected to any extent by the cool weather and the numerous late rains. But very few of the berries of the first crop have fallen off the bunches. There will also be a very fair crop of apricots at the California.

GRAPE CROP AROUND FRESNO. — *Expositor:* During the past week or two there has been much comment indulged in, in this county, regarding the present condition of the growing raisin crop, and there seems to have arisen a general uneasiness about the result of the first setting, or first crop. That the unusual amount of cool weather and the numerous late rains have not been conducive of the best results to the growing crop is a fact too well established among raisin growers to need comment here. It is known that what the maturing raisin needs most, to give it health, is sunshine from above and ample moisture from below. It is no uncommon occurrence for a few of the berries of either the first or the second crop to fall off the bunches, and there is not a season when most of the growers do not witness this to a greater or less extent. From the current rumor on the streets and in the offices for the past few days, one would think the first crop now entirely gone, and that only the second crop could be depended upon for a yield. Such is misleading, and is not warranted by the facts in the case. While it is true that the crop is not a full one, the shortage is very hard to correctly estimate, and, at this stage is liable to deceive the most conservative figures when the raisins have been cured, for while the number of berries will certainly be decreased, the size may be correspondingly enlarged. From observations made by an *Expositor* representative, who personally visited 30 or 40 different vineyards in different sections of the county, it is safe to say that the damage to the first crop does not exceed 30 per cent in numbers of vineyards, and many think this will be returned in better raisins when cured. The observations go to show that neither the age of the vines nor the kind of soil has anything to do with the matter, as the same condition is seen in all vineyards. The second crop will certainly be much lighter than the first, and is contrary to current rumors. Most growers who are conservative agree that the first crop will be a fair yield, and all the vines should support.

Humboldt.

THE HARPST & SPRING DIKE.—Arcata *Union*: The diking and reclaiming of overflowed marsh lands starts in on the bank of Butcher slough, just beyond the town line, and follows the course of the slough as near as possible to the bay. Here it follows along the edge of the mudflats for a mile or more and crosses Flannigan & Brosnan's railroad at the edge of the bay. It then goes down along the bay, comes up and crosses the big slough by the drawbridge where a flood-gate will be put in, and follows down the farther bank of the slough to the mouth of Jacoby creek. From there it follows up the bank of the creek till it gets out of the reach of the highest tides, and there ends. The dike is 10 feet wide at the base, 4½ feet at the top and 5 feet high. The outside is made of sod, cut square and fitted together, the grass side outward, and the inside is filled with mud. When the sods grow together, and the dike settles, it will make a solid embankment that the highest tides we have ever had will make no impression upon. The dike, when finished, will be 400 rods long, and will enclose about 350 acres of land. Formerly this tract was comparatively worthless. Now it affords fine pasture, and will do better when the dike is completed. When the salt water is kept off, the salt grass loses its substance and dies out, and its place is taken by wild clover, which grows fast and contains much nutriment for stock.

Kern.

THE 78 CANAL.—*Echo:* Another point has been gained for the 78 canal, and the prospect continues to brighten. On Monday, J. W. Northrup arrived from New York, accompanied by an expert engineer who was sent out here to examine the route of the canal and report whether the work could be done for the estimated figure. Soon after the delayed northbound train arrived, these gentlemen, with three of the local directors, took carriages and started for the works in the canyon. From that point the route of the canal was followed as far as the railroad—that is, over all the difficult part of the work. The directors were anxious to show the expert the remainder of the route, but he said he had seen all he wanted to. He was satisfied that the cost would come within the estimate, and that was all he came to learn. He had nothing to do with the character of the land. Some one else would report on that, and in fact the Eastern capitalists have already made considerable inquiry on that point. Toward the last of this month, one and perhaps two of the New York capitalists will be here, and then matters will turn one way or the other very speedily. Mr. Northrup predicted that ground will be broken by July 1st, but others are not so sanguine as that; but all hands are feeling in very fine spirits. One of the most important points is passed. The capitalists' own expert has said the work can be done for the figure given. It now only remains to satisfy them that the land is good security for $11.25 an acre, the agreed price to be paid for the water right. Our people will rest easy that that will come out all right. The grazing bands of sheep have trampled down many of the stakes along the route, and a corps of surveyors was started out to reset them so that everything will be in readiness for careful examination when the Easterners arrive a few weeks hence.

Monterey.

CANNERS TAKE ALL THE FRUIT.—Watsonville Cor. Castroville *Enterprise:* It is estimated that there will be but little of the tree fruit crop of the Pajaro valley that will not be handled by the packers this year. There are nearly a dozen firms engaged in the packing business in this section, and they have all the facilities and connections in San Francisco to successfully handle fruit in any quantity.

Orange.

THE DAIRY INDUSTRY.—Los Angeles *Times*: Orange county is rapidly forging to the lead as a dairying section. A creamery at Westminster utilizes the milk from 430 cows. The weekly output is 1500 pounds of butter from 31,200 pounds of milk. The capacity of the creamery is twice its present output, and the business is being increased as rapidly as possible. A creamery at Newport is also doing a good business. The Santa Ana *Blade* observes that the butter product of Orange county is a source of considerable revenue, and is growing in importance. It is safe to say that the butter product of the county amounts to 4000 pounds per week. The annual sales of butter are estimated to be nearly 208,000 pounds, equal to nearly $83,000 per year. The butter product of Santa Ana and suburbs finds a ready market in Santa Ana, Los Angeles and San Diego.

WHY POTATOES WERE REJECTED.—Anaheim *Gazette:* Mr. Littlefield is in receipt of a letter from a Chicago commission house giving reasons for the low price now ruling for Southern California potatoes in that market. The letter says there are now some 75 cars of Southern California potatoes on the tracks, and they are dragging and very difficult to close out. Not one car in ten can be sold. The general quality of stock from this section has been poor, not well matured, and arriving in the market peeling badly and considerably wilted. A great many cars that have been sold to arrive have been refused, and the majority of the cars now on the track will hardly bring more than freight and selling expenses. However, the market promises to be better as the potatoes become matured with the advance of the season. The quality of potatoes shipped from San Francisco has been good, and prices have been fair. Our potato shippers should see to it that none but first-class potatoes are sent to market.

San Bernardino.

LAND AROUND NEEDLES.—MRS. S J. McClellan in Selma (Fresno Co.) *Enterprise*: There has been scarcely any attention paid to agriculture so far, but there are those who firmly believe that all of this valley will ultimately be settled and irrigated from the Colorado river. The bottom land near the river is rich, and cultivated to a limited extent by the Indians, but the annual spring overflow prevents planting any early crops, and the soil is so peculiar, and the current of the river so strong, that the main channel changes almost yearly; so one never knows but that his farm of this year will be the river bed the next, which fact you will at once see will prove a serious obstacle to the extensive cultivation of bottom lands. The land lying farther back from the river much resembles the "white ash" land of Fresno, and, while it yields well, requires a vast amount of water on account of the extreme dryness of the soil, the absence of hardpan underneath, and the rapid evaporation from the surface. Forty acres of such land under cultivation near town, which is irrigated with an engine, required as much water as a half-section does at the present time near Selma. When the ground is once thoroughly saturated, it may need less—at least we hope so.

San Joaquin.

APRICOT NOTES.—Lodi *Sentinel:* Charles H. Neall brought in a box of luscious, ripe apricots grown on his place two miles northeast of Lodi. The fruit was of the variety known as the Royal, and is always the first to ripen in this locality. This fruit was ripe two weeks ago, which was as early as any in the State. In most localities the first fruit that ripens is not of good flavor, but the samples from Mr. Neall's trees are superior, not only in size but in flavor as well. Mr. Neall did not irrigate his fruit, but practiced a thorough method of cultivation. His trees have not been troubled with any pests this year, although during last winter the red spider was noticed. About the time he was ready to spray his trees, he noticed a large brown bug about the size of, and somewhat resembling, the squash bug, which voraciously devoured spider eggs as well as spiders themselves. So thoroughly did this bug do its work that Mr. Neall says that if there be any spiders in his orchard now, they will have been brought there very recently by birds coming from infested orchards. Some species of birds, notably the orioles, are taking these spider-eating bugs very fast, and it is feared this little friend of the orchardist will be exterminated.

Sutter.

A NEW BARLEY, BLACK IN COLOR.—Yuba City *Farmer*: A few days ago we were shown a sample of a new barley grown on the Moore place, near the Buttes, which was perfectly black. In the field, where there were several acres of this new variety of grain, it resembled the common barley and was similarly bearded. The grain shells, similar to wheat, and leaves a plump kernel as black as coal. It ripens early, and will probably be experimented with further.

Tehama.

GRASSHOPPERS.—Red Bluff *Sentinel:* A short ride through the country near town discloses the fact that grasshoppers are already in great numbers on unplowed land. They are small, to be sure, but they will soon grow to be aged grasshoppers, and will lay waste orchards, vegetables and vineyards, unless something is done to exterminate them. Last year a number of "exterminators" were tried with varying success, and none proved so efficacious in preventing the pests from totally destroying trees, etc., as heavy paper bags. We commend their use to those having young orchards. General Chipman has already purchased 300 large bags to protect his young trees.

Tulare.

JOINT FRUIT SHIPMENTS.—Tulare *Register*: A movement has been started by a number of the smaller orchardists and those whose trees are just coming into bearing, which if carried forward, will result in adding much to the volume of green fruit shipments from Tulare, besides distributing the profits from eastern sales among our own people instead of permitting them to go to the middlemen. There are dozens of fruit growers in this portion of the county whose orchards contain as fine fruit as can be desired, and yet none of whom has sufficient to ship a carload at one time. The plan to which we refer is to form a combination among these people for purposes of cooperative shipment. This step has been taken somewhat late, but if matters are pushed, an organization properly constituted to do the work as it should be done may be effected. Those who have it in hand state that there will be no delay and that the cooperative shipments will soon begin.

PLOW IN STUBBLE. — Tulare *Register*: Wet your stubble, plow it at once and plow it again when planting time comes and you are dead sure of a crop. You pay for the water whether you use it or not, and you had better fall to work and use it.

A COOPERATIVE RAISIN PACKING HOUSE.—Hanford *Journal*: The raisin growers of Hanford and vicinity have formed a cooperative company, under the name of the Hanford Raisin and Dried Fruit Packing Co. The stock is mostly held in small lots by actual fruit growers. The amount of capital stock is $40,000, divided into 4000 shares of the par value of $10 each. Over 1000 shares have already been subscribed. The corporation is to exist 50 years and the principal place of business is Hanford. Following are the names of the directors: B. V. Sharp, W. G. Nicholson, N. W. Motheral, John A. Wilson and R. G. White.

DISEASE OF THE VINE.—Visalia *Times*: N. W. Motheral, R. H. McDonald and Major C. J. Berry appeared before the Board of Supervisors recently, and through Mr. Motheral, made a verbal report for the month of May. "The subject of investigation by the Board for the past month," said Mr. Motheral, "has been the disease of the vine, known as colure, which is a French word that has reference to the falling of the grapes, and is described by Mr. Eisen as the first form of powdery mildew (*uncinula spiralis*). Investigation under the microscope shows that we have no such disease at this season of the year, and that the use of sulphur is entirely useless and does not prevent the falling of the grape. Powdery mildew occurs later in the season, and is not at all like the colure. The disease known as colure is not a mildew at all, but is a secretion of salt and can be seen in crystals, under the microscope, both upon the leaf and the fruit of the diseased vine. It readily dissolves in water and can be seen to recrystallize when the water evaporates. This salt is accurate and destroys the leaf, turning it brown, and the bloom of the young fruit. This disease is much worse in a cold, damp spring and after cold winds than any other time. It can be readily recognized as a white milky substance on the edge of the leaf and fruit. The remedy has not yet been discovered as the source of the trouble is evidently in the soil or atmosphere. But one thing is sure, that sulphuring the vines does no good."

Yuba.

FARM NOTES.—Wheatland *Four Corners*: The apricot crop is ripening rapidly. The fruit is of better quality and ripening more evenly than last season. If the weather continues hot next week the local market will be flooded with over ripe fruit. In yield the Royals are just heavy enough to allow of good size fruit, the Moorpark and later varieties have a very small yield. There are a few early May peaches in this neighborhood. S. D. Wood has sufficient to supply the local market. Watermelons are very late this season. The latter part of July will see the first ripe melons. Bottom land farmers are busy planting Indian corn and pumpkins. A. W. Oakley will plant over 30 acres of broom corn this season. Nurseryman Scott has a gang of eight men budding the stock planted last spring. There are over 75,000 trees in the bed. The blackberry crop is as usual large. Earlier varieties will begin to ripen next week. Wild berries are out of market. The hop yards are looking much better than they were ten days ago, although in some spots the vines are very uneven and poor. S. D. Wood and D. P. Durst are irrigating portions of their hop yards with water flumed from Bear river. Irrigation is a noteworthy auxiliary even on the river bottom. John Roddan's new hop house is going up rapidly under the supervision of B. F. Monson. The kiln is on a new plan, known as the "hopper kiln." It will be an imposing looking structure from a distance, as it will be about 62 feet high and is situated on an elevated position between the residence and county road.

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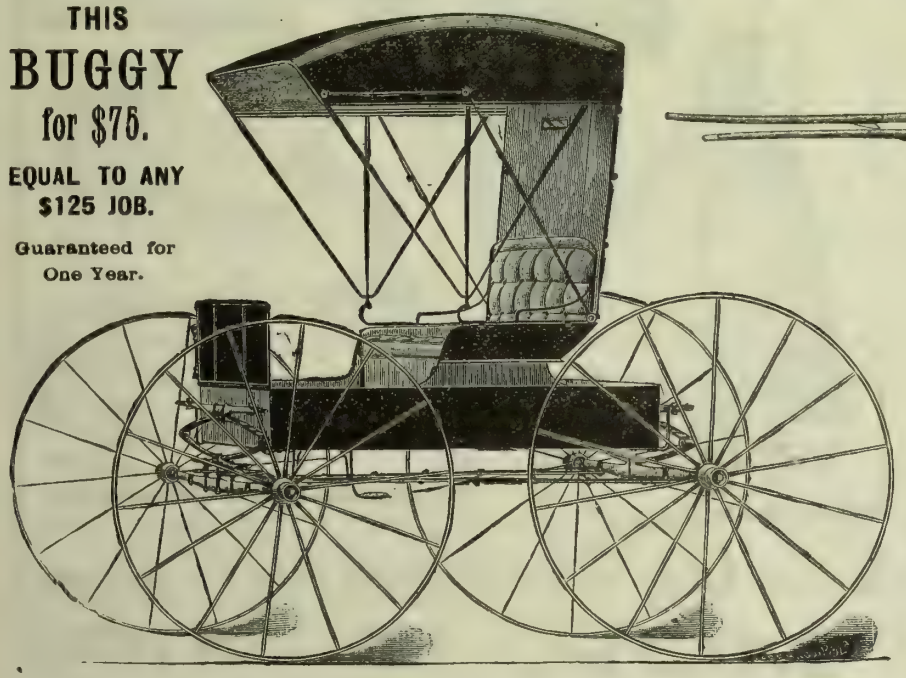
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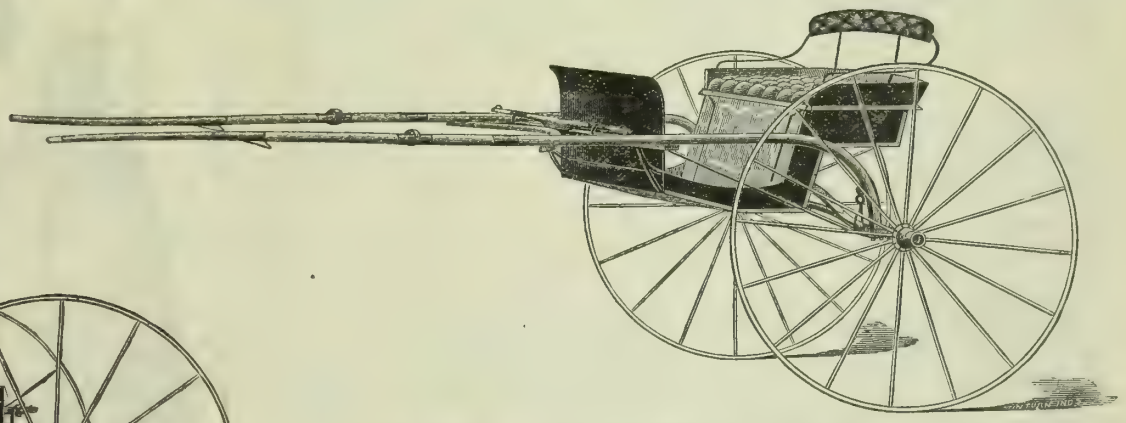
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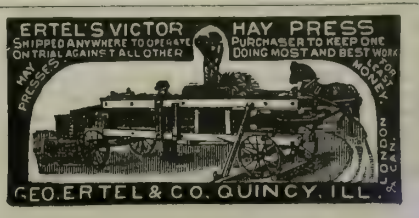
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Patrons of Husbandry.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

Vaca Valley Grange.—Ella E. Ashley, Master, reports that Miss Florence Dexter has been elected Secretary in place of J. A. Webster, resigned.

GRANGE TEMPLE.

The National Grange, at its session in 1890 at Atlanta, Ga., adopted a resolution appropriating $20,000 out of its permanent fund, to be used in the erection of a "Grange Temple," as a home for the Order of Patrons of Husbandry, in the city of Washington; this sum to be available when the further sum of $30,000 shall have been raised by voluntary contribution.

The session of 1891 reaffirmed the above action, and assigned the work of raising the funds, etc., to the Committees on Women's Work. In 1890 we published a full statement referring to the object for building the Temple, including that of having a Grange home for meetings, preserving records, etc., and now add that the size, architectural design, finish and beauty of the Temple will depend upon the amount of funds raised. It should not be less than three stories high, with first and second stories fitted up for stores and offices and the third for the Grange hall. All the first and second floors not needed for the National Grange offices can be rented, and will bring in a handsome income to the Order.

PLAN OF WORK.

We suggest that in order to equalize the work of raising the required fund that each subordinate Grange send up *one dollar for each member* and two dollars for the Worthy Master.

We would suggest individual subscriptions first. Should this fail to raise the dollar per member let other devices be resorted to in the way of entertainments, suppers, experience meetings in which each one is encouraged to tell how the dollar was earned, or by any other plan deemed advisable by each subcommittee.

"BRICK BOOKS"

Have been prepared containing 20 brick, or red squares, on which contributors write their names and address and the amount contributed. These bricks when filled should be sent with the money to the Secretary of the National Grange at Washington city from time to time and receipts taken therefor.

All contributions from persons outside of our Order will be thankfully received and due credit given.

Patrons of Husbandry and farmers of our great American Union, shall this Agricultural Temple be built? We appeal to your philanthropy, your patriotism, and your love for our Order and your calling.

The Temple, when erected, will not only add dignity and character to our Order, but will reflect honor and credit to our National calling as an agricultural people.

Let us, therefore, hope that every Grange, and every member of our Order, will give with cheerful hearts and willing hands to aid in erecting an Agricultural Temple, which will be an enduring monument to the honor and glory of our grand Order and to the American farmer.

Correspondence from the different localities solicited by the Committtee: Mrs. E. Russell, Vancouver, Wash.; Mrs. H. H. Woodman, Paw Paw, Mich., and Mrs. L. A. Hawkins, Hawkinsville, Ala.

EQUAL RIGHTS FOR WIDOWS.

The following preamble and resolution were adopted by San Jose Grange on April 30, 1892:

Whereas, Great injustice has, from time immemorial, been done to widows and children of deceased husbands in the useless dissipation of property, the joint earnings of the husband and wife, in the useless, protracted and always expensive litigation in the Probate Courts; therefore

Resolved, That the legislature be requested to so amend the civil code of California as to give to the wife the same right in the disposition of community property after the death of the husband as is now possessed by the husband after the death of the wife.

The above preamble and resolution would seem to be self-explanatory; but lest the full purport of the resolution may not be self-evident to all, the Committee will say that it is the intention of San Jose Grange that the law be so amended as to give the widow as full and complete ownership of all community property for the support of herself and children at the death of the husband as the husband now has to the full ownership and control of all community property for the support of himself and children on the death of the wife, thus relieving the widow from the necessity of going to the expense of the appointment of an administrator and the costs of a Probate Court, which often absorbs a large percentage of all that is left at the husband's death.

San Jose Grange believes that husbands who, while living, intrust to their wives the duty of bringing their daughters up to virtuous womanhood and their sons to honorable manhood, should at least be consistent and not withhold any part of the joint accumulation of the married life from the widow for her lonely struggles to keep the wolf of want from her door, that the son and the daughter may not, through poverty, be tempted to evil ways.

San Jose Grange asks each subordinate Grange in California to not only take affirmative action on the above subject, but also talk the matter up with their neighbors, that public opinion may be formed favorable to a change in the law here predicated at the next meeting of the State legislature.—E. T. Pettit, Master; S. P. Sanders, Sec'y.

It seems appropriate that action should be urged upon the legislature as recommended, and we believe no Grange will hesitate to endorse the resolution recently forwarded by San Jose Grange to other Granges in the State.

Bro. E. Greer's resolution presented from Sacramento Grange, and adopted at the last State Grange session, was a good move for the same purpose.

Petaluma Grange.—In looking over the quarterly report of this Grange for Dec. 31, 1875, we find that W. W. Chapman was Master; F. Parker, Sec'y, and Hugh Gaston, Treas. The membership consisted of 82 brothers and 66 sisters, a total of 148 members. This shows that there is doubtless a good field for the reorganized Grange of today. It is to be hoped that the number of its former membership may again be reached.

Evening Meetings.—At its last session Temescal Grange voted to meet hereafter in the evening on the first Saturday of the month, the meeting on the third Saturday to be held at 2 P. M. as heretofore.

Past Master J. V. Webster, who has been dangerously ill for a brief period, we are pleased to say is now able to be about his home at Creston.

ON THE SILVER QUESTION.

Master H. E. Hayes, in his recent annual address to the State Grange of Oregon, speaking of the last session of the National Grange, says: It also passed, as in former years, the resolution for free and unlimited coinage of silver. But the two great political parties in this State have gone back on their demand made two years ago for free coinage. Wall street has told them to go slow. New England says go slow. Old England echoes back, go slow, and nearly every banker in America says, go slow; for gold must be the standard. Why is it, farmers, that these moneyed powers have no parties when the question of dollars and cents comes to the front? Simply because they want all the profits of your labor, leaving you a bare subsistence. What difference does it make in the gold and silver markets of the world, whether we coin silver or not? American coin is not money beyond the borders of our nation, and goes to other countries as bullion, where it is exchanged according to its commercial value, whether in coin or bar. If we establish free coinage in our Government, it will make a market at home for our silver, and will have a tendency to increase its value and the volume of our currency. The contraction of our currency was a severe experience to our people.

In 1866 we had $2,122,437,811.12 as a circulating medium; the same year there was destroyed $211,239,516.41, reducing the circulation to $1,550,506,311.60. Notwithstanding peace was declared, and over $10,000,000 bankrupt people from the South were added to our demands for money, in 1873 contraction had reached the enormous amount of $881,265,600. Mark the effect; in 1865, as reported, there were 530 failures, liabilities $17,625,000; in 1873 there were 5183 failures, liabilities $228,509 000, and the total failures for the eight years from 1866 to 1873 were 25,410, and the liabilities $812,226,000, which was near the full amount of the contraction.

Senator Sherman understood what this meant. He said, in an argument in the U. S. Senate, Jan. 27, 1869, in reference to changing the people's contract: "It means the payment of $35 when he has agreed to pay $100." Again he says: "When we consider the enormous indebtedness of a new country like ours, and where credit has been substituted in the place of capital, it presents a difficulty that may well cause us to pause."

Notwithstanding the distress of our people, silver was dropped from the coinage of our country in 1873, thus wiping out one of the metallic moneys guaranteed to the people of the sovereign States by the framers of the Constitution of the United States, placing gold and silver in that article as their legal money. Under the Bland law, approved Feb. 28, 1878, the Secretary was required to purchase not less than $2,000,000 worth, and not more than $4,000,000 worth, of silver every month, and coin into standard dollars. He only purchased $2,000,000 worth; thus, by his own power, contracted the amount of $25,000,000 annually. We may well ask the question, Who runs the Government? We again, at the last session of the National Grange, appointed a National Committee on Legislation, and they are now in Washington, hard at work with the different committees, urging the passage of such bills as the Grange has demanded. Were it not for the different organizations among the farmers and laborers, we should have no representation there. Now we have six U. S. Senators who stand up boldly for the rights of the toiling masses, also 65 Congressmen fearlessly advocating the interests of the producing classes, which we consider sufficient proof that the good seed sown 25 years by the founders of our Order is yielding many fold.

A MEMORIAL TRIBUTE TO MRS. MARY ALLING.

The silent messenger unbidden has entered our Grange, summoning one of our number to the higher degree of Truth and undying brightness, and we bow with resignation to the Divine law, which, though it fills our hearts with pain and sorrow, gives us the blessed assurance that in the life beyond there is one more to welcome us when we, too, shall be called to join the many who have passed over to the other side.

We shall miss Sister Alling sadly, not only in the Grange, where she so often reached our hearts with music, but socially as well.

We wish to express our sincere sorrow that one so kind, so gentle and so well beloved should be called to leave the life she was making so full of blissful kindness for others—ever ready with cheering counsel and willing hands to help in all good works—an affectionate wife, devoted mother and faithful friend; therefore

Resolved, We feel her cheerful patience under affliction, her charity to all, and her faith in God, has given us a shining example that will benefit all our lives; and while we miss her smiling face in our councils, we, the members of Stockton Grange, tender to her bereaved family our deepest and tenderest sympathy in this their greatest affliction, and commend them to Him who careth for us all.

Resolved, That in justice and commendation to the worth of our departed sister, a copy of these resolutions be placed on our records and a copy sent to her family and to the Rural Press for publication.

Mrs. G. L. Root,
Mrs. Lou. E Overhiser,
Thos. E. Ketchum. } Committee.

June 18, 1892

The Cocoanut Tree abounds in South Florida. It is not a native, nor has the fruit been cultivated for any great length of time. The introduction is attributed to the wrecking of a Bahama vessel. Some of the cocoanuts forming its cargo were planted and made trees, which have thriven wonderfully.

INSURE YOUR DWELLINGS, BARNS AND GRAIN

WITH THE STAUNCH OLD

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Trial. Why suffer from the bad effects of the La Grippe, Lame Back, Kidney and Liver disease, Rheumatism, Indigestion, Dyspepsia, any kind of weakness, or other diseases, when Electricity will cure you and keep you in health. (Headache cured in one minute.) To prove this I will send to any one on trial

DR. JUDD'S ELECTRIC BELT

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Agents Wanted. Address DR. JUDD, Detroit, Mich.



Rolls' Cog Wheel

MOP.

The Crank Wrings the Mop Dry as shown in the cut.

No Labor. No Scrubbing.

No Wringing by Hand makes Mopping a Pleasure.

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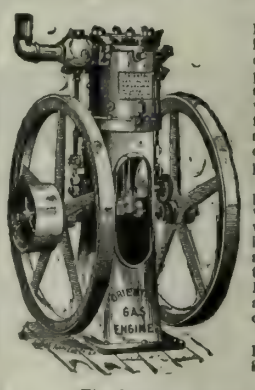
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IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

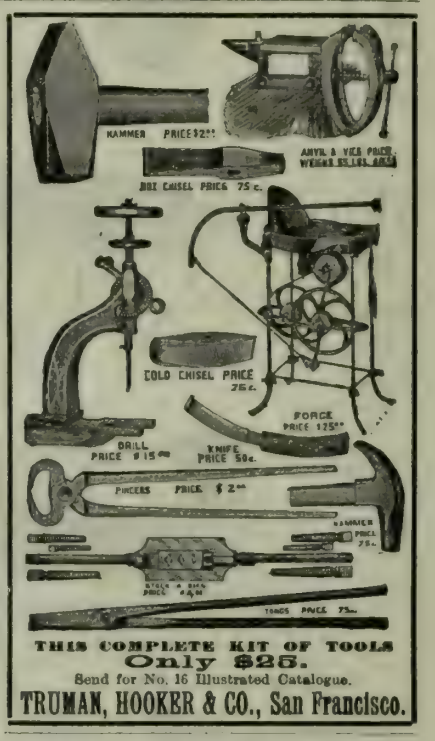
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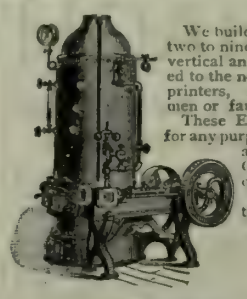
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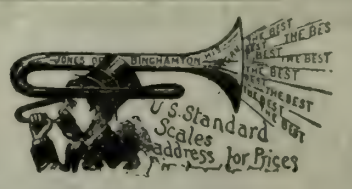
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The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

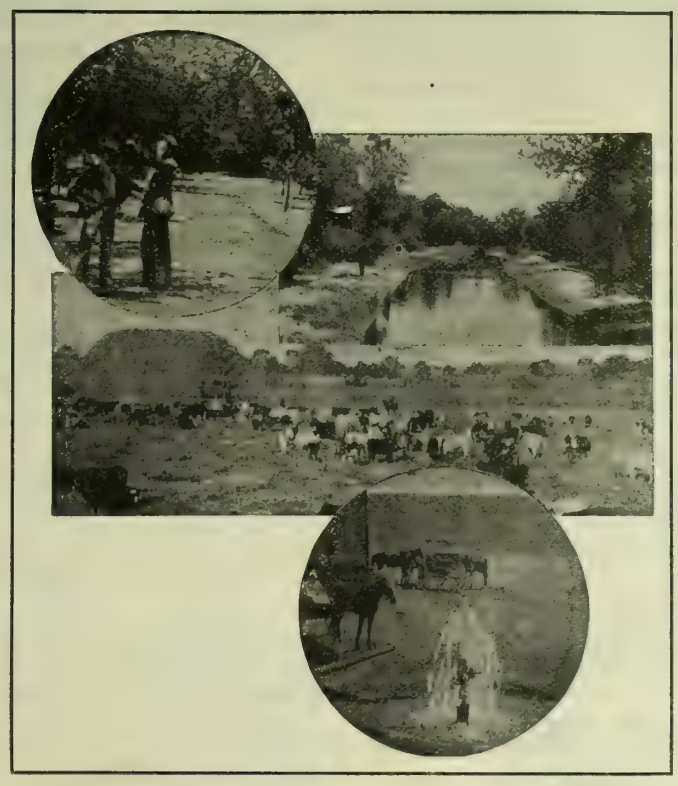
Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.



Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

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Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

For further particulars address

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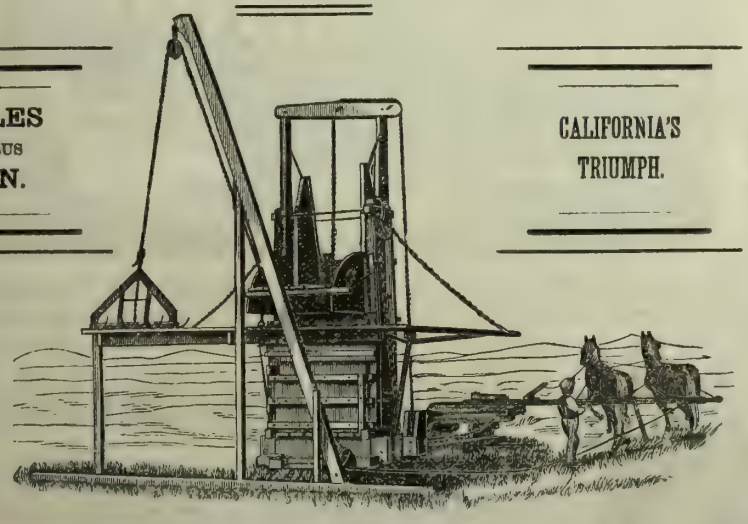
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The only Reliable and Efficient Powder for **Stump and Bank Blasting.** Railroad Contractors and Farmer use no other. **As others IMITATE our Giant Powder, so do they Judson, by manufacturing an inferior article.**

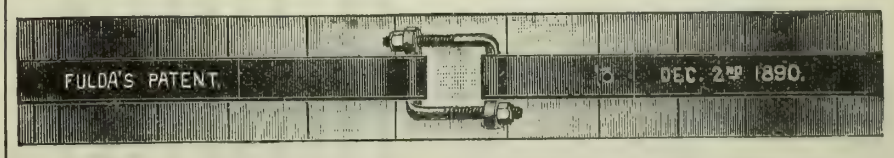
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CAPS and FUSE at Lowest Rates.

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DOMESTIC ECONOMY.

Tested Recipes.

Written for the RURAL PRESS by ADA TAYLOR SEGRET.

Potato Omelet.—Two finely mashed potatoes, four eggs, the whites beaten first and then the yolks added. Mix all together and season with a little salt, pepper and nutmeg. Fry a light brown.

Potato Loaves.—Mash some nice potatoes and add a pinch of white pepper, salt and half a cup of butter or thick cream, form them into small loaves, and place them around a roast of veal that is nearly done. Turn when brown on one side.

Puff Omelet.—Beat the yolks of six eggs lightly, mix with a cup of rich milk or cream, melt a tablespoonful of butter, and mix with it a tablespoonful of flour and a little salt. Stir thoroughly, and add to the yolks and milk. Pour into a buttered frying-pan, and when it appears to thicken, add the whites, well beaten, over the top, first adding a little salt. Place in the oven till stiff, remove and put on a hot platter.

Mock Duck.—Procure a steak cut from the rump of beef and fill it with a nice dressing; sew it up, put a slice or two of pork on top, and set it in a pan, into which pour a pint of water. Cover tight, and let it cook slowly in the oven three hours; then take off the lid, brown quickly and serve hot.

Mulled Jelly.—Have ready boiling water; take one tablespoon of currant jelly, beat it thoroughly together with the white of an egg; pour over it a glassful of boiling water, add two lumps of loaf sugar and a teaspoon of wine or lemon juice. Eat with crackers.

Pineapple Marmalade.—Pare nice, ripe pineapples; take a silver fork and shred them; add one pound of loaf sugar to one pound of fruit, and cook carefully an hour or more. Very nice with ice cream.

Russian Cream.—One-quarter of a box of gelatine dissolved in one pint of boiling milk (soak first); add yolks of two eggs, well beaten, and one-half cup sugar, stirring constantly; let come to a boil, and remove from the fire; when cool, add the beaten whites of the eggs, pour into a mold and set on ice till hard.

Rice Pudding.—Pare and slice six good cooking apples, and stir thoroughly through them one-half cup white sugar and one teaspoon of lemon. Have ready the following: Boil one cup of rice till soft; take two eggs (beaten), one cup sugar and one of rich milk, and stir all together; then mix with the rice (not forgetting a little salt), and pour over the apples, which should be placed in a pudding dish. To be eaten with or without cream.

Sea Foam Pudding.—Soak one large cupful of tapioca over night in a quart bowl nearly filled with water; then put into a farina kettle and cook until clear, stirring only two or three times. When done, add one cupful of sugar and a small piece of butter; beat well, add the beaten whites of three eggs, and pour into a dish to cool; eat with cream. Pineapple is very nice with the pudding.

Currant Cake.—Two eggs well beaten, one cupful of cream or half cup butter, one cup granulated sugar, two cups sifted flour, two teaspoons baking powder; last of all, add one cup of currants or seedless raisins nicely picked over and floured. If butter is used instead of cream, mix the cake with chocolate. Bake in loaf, and when cool put in a cake tin for two days before using.

Wine Custard.—Stick a large square of sponge cake full of blanched almonds, and then lay it in a deep glass dish, pour over it a tumbler of sherry, and when the wine is all soaked into the cake, fill the dish half full of soft custard.

Wine Whips.—Into a pint of thick, sweet cream stir half a cup of sugar, half a cup of wine, and let it get very cold. Whip to a froth and fill the glasses.

Escolloped Onions.—Boil till tender six large onions; afterward separate them with a large spoon, then place a layer of onions in a dish and a layer of bread crumbs, alternately. Season each layer of onions with pepper, salt and butter, and on each layer of bread pour a little cream or rich milk; put in the oven and brown nicely.

Pickled Eggs.—Take hard-boiled eggs, remove shells, place in vinegar with a few slices of beets; season the vinegar with cloves, salt and pepper, and in 24 hours you will have a nice lunch appetizer.

$500,000

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Have fewer parts, and are therefore less likely to get out of order than any other gas or gasoline engines now built. Just light the burner, turn the wheel, and it runs all day.

MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark.

For Simplicity it Beats the World.

It Oils itself Automatically,

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Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

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They sell here for $25 00, and harness not as good is often sold for $35.00 in retail shops If harness is not as represented, money will be refunded.

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Collar and Hames, instead of Breast Collar, $2 00 extra.

Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

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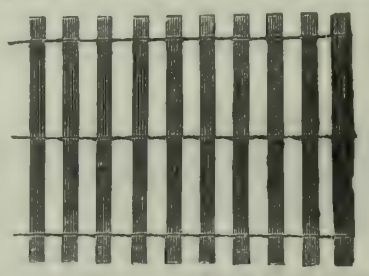
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Save $40.00 on New $140.00

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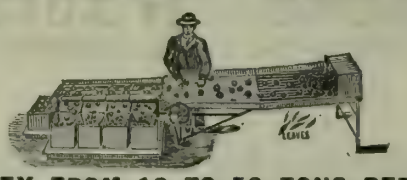
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Save money and work by painting your Fences, Barns, Stables, Troughs, Stakes, Poles and all wood exposed to moisture or climatic influences with the celebrated Carbolineum.

IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.

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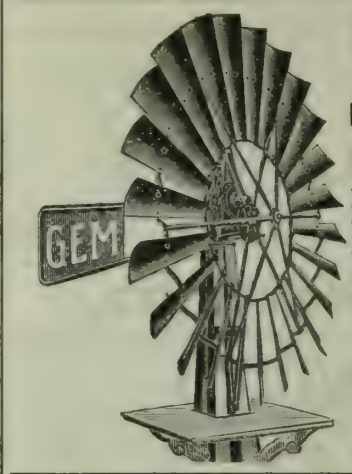
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SEND FOR CATALOGUE—MAILED FREE.

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Pumps of all kinds, Tanks, Pipe, Fittings, Hose, etc.

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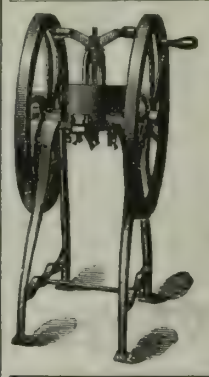
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WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.

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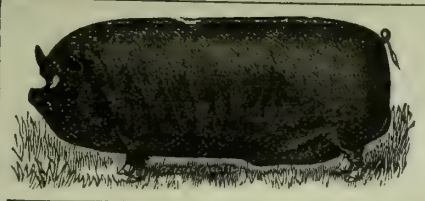
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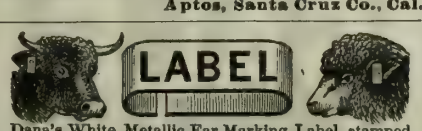
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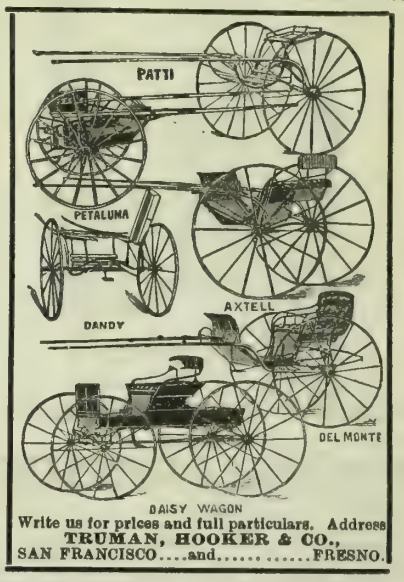
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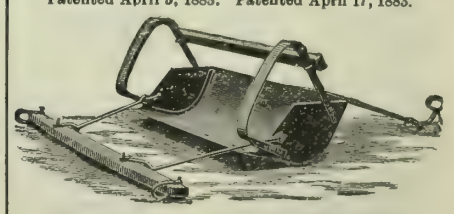
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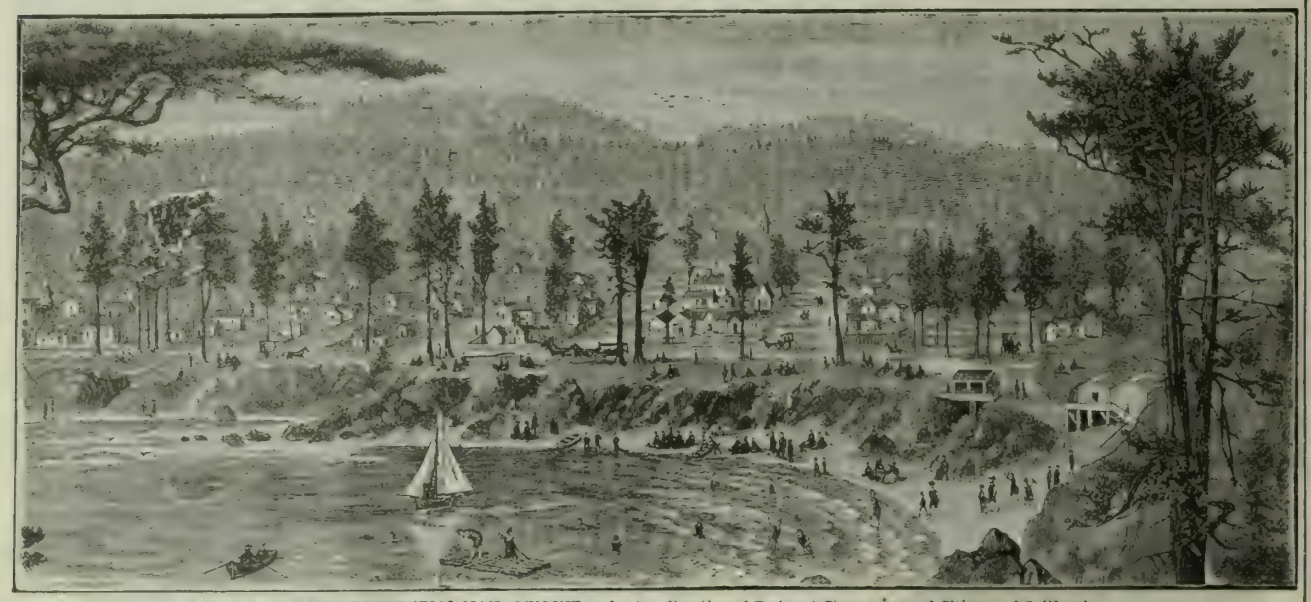
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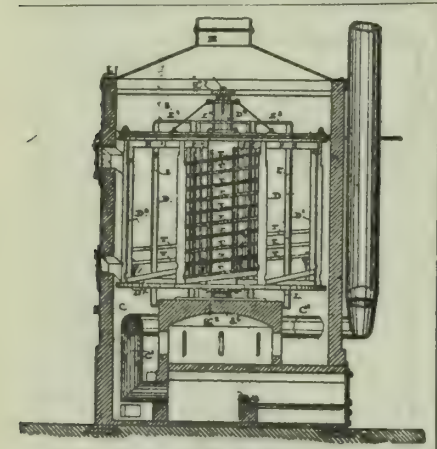
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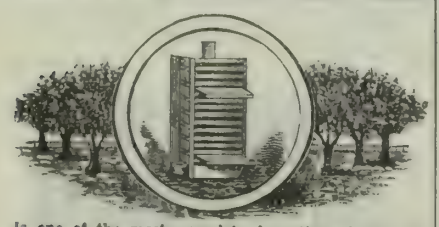
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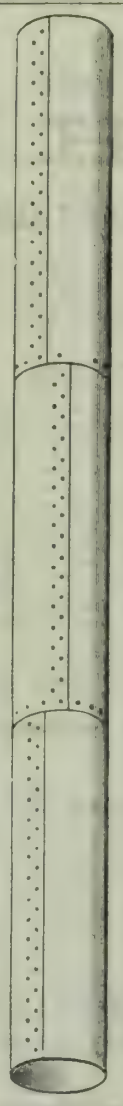
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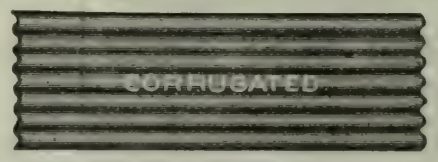
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S. F. Market Report

Market Review.

SAN FRANCISCO, June 22, 1892.

In farm products trading the past week was very light in cereals, but active in fruit. Dealers in cereals will probably continue to pursue a conservative course until more definite information is received regarding crops at home and abroad, and also the probable demand. Buyers in June, July and August of last year did not come out as well as they would had a more cautious course been pursued. Those who sold at prices returning a fair profit, made money; but those who held for "big things" were in the end losers. Last year, prices in the month of June were quite high, but now they are low; and as far as wheat and barley are concerned, it looks very much as if they will prove a good investment on present quotations. The demand for fruit is very large, with canners, dryers and shippers in the market. The poor fruit, as usual, is being dumped on this market, and the better grades marketed in other directions. Harvesting is well under way in all parts of the State. The yield of both wheat and barley is said to average better than was expected Of course there are many isolated complaints of a poor outturn. Farmers are beginning to make deliveries, but as yet they are not offering to sell. Cheap money and low prices bid are against their selling much.

Foreign Grain Review.

LONDON, June 20.—Mark Lane *Express* says: The expected British wheat crop of the year will be 1,000,000 qrs. under that of 1891. Barley promises well. A good yield of oats depends on the rainfall. The continued drain on English wheats is liable to make the average price over 30s. Foreign has fallen off 1s, California selling at 35s 6d. Barley declined 6d; corn 2d at Liverpool and 6d at London; American oats are 3d cheaper. At to-day's market English wheats fell 6d and others 1s; flour 6d. Yellow and mixed corn is firm, and round cheaper; barley, dull.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s08 d	6s08½d	6s09 d	6s09½d	6s09½d
Friday	6s07½d	6s08½d	6s09½d	6s 9½d	6s09½d
Saturday	6s07½d	6s08½d	6s 8½d	6s9½d	6s 9½d
Monday	6s08½d	6s08½d	6s08½d	6s09½d	6s09½d
Tuesday	6s08¼d	6s07½d	6s08¼d	6s08¼d	6s08½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s9d	35s d	35s d	Steady.	
Friday	34s9d	35s d	35s d	Firmer.	Fine
Saturday	35s d	35s d	35s d	Weaker.	
Monday	35s d	35s d	35s d	Easier.	
Tuesday	34s9½	34s6d	34s6d	Inactive.	Warmer.

To-day s cablegram is as follows:

LIVERPOOL, June 22—Wheat—Rather easier. California spot lots, 7s 2d; off coast, 34s 6d; just shipped, 34s 3d; nearly due, 34s 3d; cargoes off coast, weaker; on passage, depressed; Mark Lane wheat, easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug	Sept.	Oct.
Thursday	143⅝	145	145⅝	146¼	....
Friday	142½	145⅞	144½	145	
Saturday	142½	143⅜	144⅝	144⅞	146¼
Monday	142⅜	144⅜	145	145⅝	....
Tuesday	142	143⅛	144	144⅜	....

The following are to-days' telegram:

NEW YORK, June 22—Wheat—86½c for July, 87⅝c for August, 86⅝c for September, 87⅞c for October, 89⅛c for December, and 93⅜c for May.

CHICAGO, June 22—Wheat—78⅝c for July and 78¼c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	139½	....	....	....	...
" lowest	139	....	....	....	....
Friday, highest	139½	....	....	....	....
" lowest	139⅜	....	....	....	....
Saturday, highest	139⅜	....	....	....	....
" lowest	139¼	....	....	....	141
Monday, highest	139⅜	....	....	....	141⅜
" lowest	139⅜	....	....	....	141⅜
Tuesday, highest	139	....	....	141⅞	141½
" lowest	138½	....	....	141⅛	141⅜

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	94⅜	....	....	....	....
" lowest	93	....	....	....	....
Friday, highest	94⅜	....	....	....	94⅝
" lowest	94	....	....	....	94⅜
Saturday, highest	95	....	....	....	....
" lowest	94⅜	....	....	....	....
Monday, highest	95	....	....	....	....
" lowest	95	....	....	....	....
Tuesday, highest	94⅜	....	94½	....	....
" lowest	93⅛	....	94½	....	....

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, June 17.—The leading markets report light trading in wool. The London sales opened on Tuesday. The attention of the trade has been diverted from the domestic markets to movements abroad. The light supply would have prevented heavy buying even if the manufacturers had been inclined to speculate, but it is between seasons with them and the present wants are light. The closing prices of the last London sales have been maintained. Except low grade crossbreeds few wools suitable for this country have been offered. The firm situation abroad has strengthened the position of wools here, especially the wools of Ohio, Michigan and Pennsylvania and an advance in them is now considered certain unless values in London weaken. In domestic wools there has been little doing. New wools are coming along slowly, and as they are held above the market, the demand is only moderate. The dealers report an improvement in the quality of many wools over last year. The growers, as a rule, used more care in putting them up. Pulled wools are quiet. Stocks are light in the hands of both dealers and pullers. A good, steady demand is reported for Australian wools. The supply is not large and is being rapidly reduced. Purchasers at the present sales are not expected to increase the stocks here materially. A fair movement is noted in carpet wools.

Eastern Dried Fruit Markets.

NEW YORK, June 20.—Dried peaches, plums and prunes are no longer quotable here. Raisins—Sales of 12,000 to 15,000 boxes in the past ten days leave the market unburdened. Prices were low, 95c@$1.25 for layers and three-crown boxes, 4¾@5c for three-crown bags, 4@4½c for twos and 3c for wet. Good stock has stood the trying weather well, but, as the prices indicate, sellers think the best place for "keeping" is in retailers' hands. Apricots—New sacks at nominal rates and not quotable above 10@10½c landed here. Buyers do not seem anxious to trade in early packed after last season's results, but there is a promising outlook for prime uniform quality of goods to come later on.

California Fruit East.

CHICAGO, June 16.—One firm sold at auction as follows: Tartarian cherries at $1 25@1 75; Bigarreaus, $1 40@1 55; Royal Anne, $1 75; Royal apricots $1 25@1 70; Alexander peaches $1 20@1 30; Clyman plums $3 55. This was the heaviest sale so far this season. Another firm sold four carloads. Royal apricots brought $1 25@1 60; Moorpark, $1 50; Royal Anne cherries, $1@1 45; Black Tartarian, $1 10@1 50; Black Bigarreaus $1 25@1 35; Peaches, 90c@$1 35: Royal Hative plums, $1 95; Clyman plums, $2 70@3 05; Cherry plums, $2 15.

NEW YORK, June 16.—A firm sold one carload today as follows: Tartarian cherries, 90c@$2; Orleans, 65c@1 35; Eltons, 75@85c.; Royal Anne 90c@$2 65; Black Bigarreau $1@1 50; Governor Woods, 80c@$1 65; Rockports, 75c; Black Eagles, 80 c.; May Dukes, 65c. Stock in fine order. Gross sales of this car amounted to $2100.

CHICAGO, June 17.—One firm sold at auction three cars of California fruit as follows: Royal apricots, 85c@$1 50; Alexander peaches, 85c@$1 25; Cherry plums, crates, $1 80; Raspberries, $1 60; Royal Anne cherries $1 20@1 50; Oregons, $1 30; Centennial cherries, $1 45; Clyman plums, $1 05@2 60. This is the first shipment of California raspberries to the Chicago market. Another firm sold five cars of fruit as follows: Early May peaches, $1 25 ℔ box; Alexander peaches, $1 35@1 50 ℔ box; Royal apricots, $1 35@1 45 ℔ half crate; Cherry plums, $1 40 ℔ box; Clyman plums, $3 55 ℔ half crate; Royal Anne cherries, $1 45@1 75 ℔ box; Black Bigarreau, $1 40@1 55; Republican, $1 45; Tartarians, $1 35; Fancy, $2 50. Some fruit in poor condition sold for less. And still another firm sold at auction: Royal Anne cherries, $1 40@1 55; Black Republican, $1 45; Tartarian, $1 40; Royal apricots, $1 30@1 40; Alexander peaches $1 20@1 45; Cherry plums, $1 45@1 55.

NEW YORK, June 17.—A firm sold at auction as follows: Royal apricots, $1 10@2; Alexander peaches, $1 55@2 15; Cherry plums, $1@1 90; Royal Anne cherries, poor condition, 70c.; good condition, $1 55; Republican, 90c.; Tartarian, 85c. Another firm sold one carload, realizing for Royal apricots, $1 70@2 05; average, $1 97; Alexander peaches, $1 80@2 05, average, $1 98; Clyman plums, $3 85; Brill plums, $2 80. The car sold gross for $1958.

NEW YORK, June 18.—The largest June arrival of fruit ever received here, 16 cars, has arrived. The weather has been severe, and much of the stock was in poor condition. Several cars were diverted. Sales at auction were as follows: Alexander peaches, $1 30@2 05; Apricots, $1 45@2 10; Fancy, $5 15; Royal Anne cherries, $1 30@2 65; Black Tartarian, 90c@$2; Bigarreau, $1@1 50; Governor Woods, 80c@$1 65; various, 65c@$1 35; Cherry plums, 55@80c.; Brill, $2 80; Clyman, $2 40@2 85.

CHICAGO, June 20.—A firm sold at auction as follows: Royal Anne cherries, $1 45@1 50; Tartarian, $1 30@1 70; Bigarreau, $1 20@1 35; Royal apricots, $1 25@1 50; Alexander peaches, $1 35@1 50; Cherry plmus, $1 55; Catherine, $1 60@1 90. Another firm sold one carload of California fruits. Royal apricots brought $1 40@1 95; Peaches, $1 55@2 50; Clyman plums, $2 25@2 90.

NEW YORK, June 20.—A firm sold three carloads to-day as follows: Apricots, $1 15@1 75; Peaches, $1 25@1 55; Clyman plums, $2 05@2 40; Royal Hative plums, $2 20; Cherry plums, $1 55; Royal Anne cherries, $1 70@1 70.

CHICAGO, June 22.—Apricots are plenty and of moderate sale. Half cases, good, $1 30@1.45. Cherries, active trade; prices range as follows: White, 10-lb. boxes, fine large, $1.30@1.60; soft, 80c@$1.10; black, sound, $1.20@1.40; do, soft, 95c@$1.10. Peaches, good, sell fairly; half cases, good to choice, $1.15@1.65. Plums vary a good deal in size and prices range accordingly: crates, 4 baskets, cherry plums, $1.40@1.60; Clyman, $2.50. The above prices are such as were obtained at auction sales. In small lots, and to fill orders, better prices were obtained.

California Potato Market.

CHICAGO, June 22.—Californian are not wanted to any extent. Owners are trying to get charges, but find it difficult, especially on stock held for some time. Prices are as follows: California, Northern, per sk., $1.20@1.25; Southern, 90c@$1; bad order, 50@75c.

Miscellaneous.

NEW YORK, June 20.—Beans—During the past ten days a good many California Lima beans to arrive by sail vessels now afloat and by Pacific Mail, have been sold in this and other Eastern markets. Spot goods have been cleaned up very closely also, and the quantity remaining in store for receiver's account is very light. Hops—There has been a decline of one cent since Monday. Holders of the best, dropped rates to gain some of the enlarging brewers' demand. Numerous old contracts have been settled. The position of the actual stock, therefore, is clearer. State '91's common to choice. 22 to 26; Pacific, 21c to 25½c, California options close weak. June, 25c asked; July, 22c bid, 22c asked; August, 22@30c; September, 30c asked; October, 26c.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 21, '92, were as follows:

Flour, qr. sks	57,768	Bran, sks	4,873
Wheat, ctls	112,286	Buckwheat "	....
Barley, "	16,832	Middlings "	1,045
Rye, "	477	Chicory, bbls	225
Oats, "	561	Hops, "	12
Corn, "	2,130	Wool, "	1,061
*Butter, "	1,116	Hay, ton	2,207
do bxs	488	Straw, "	180
do bbls	24	Wine, gals	238,570
do kegs	44	Brandy, "	3,250
do tubs	40	Raisins, bxs	....
do ½ bxs	426	Honey, cs	76
†Cheese, ctls	955	Peanuts, sks	....
do bxs	65	Walnuts "	....
Eggs, doz	41,540	Almonds "	....
do "Eastern	66,000	Mustard "	....
Beans, sks	1,180	Flax "	550
Potatoes, sks	17,026	Popcorn "	....
Onions, "	5,777	Broom corn, bbls	....

*Overl'd, 163 ctls. †Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to June 20, '91.	July 1, '91 to June 18, '92.
Flour, ½ sks	408,479	473,149
Wheat, ctls	1,405,764	1,302,250
Barley, "	26,912	56,791
Oats, "	373,912	443,889
Wool, bales	10,159	10,784
Hops, "	508	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,149

English Hop Market.

In its review of the London hop market the Mark Lane *Express*, June 6 says: Although the trade in hops continues very limited, the few orders received by merchants can only be executed at late rates, and indeed, in some instances, they have had to give a little more money to get what they required. Holders are very confident, and are hoping that the slight attack of fly in the plantations will have some appreciable effect on the market in the direction of alarming buyers, and so send them to the Borough to clear off the few remaining unsold lots of the 1891 growth. At present, however, there is but a mere sprinkling of aphides in the grounds, only what planters expect to find at this period, and it will have to develop much larger proportions before anyone in the trade will feel at all concerned about it. Growers having washing machines are getting them ready, so as to begin washing the plants, if necessary. The prospects of the plantations have immensely improved during the last ten days, thanks to the fine hot weather. The progress of the bine has been very rapid, and in many grounds already it tops the poles, while, in nearly every instance, it has quite run away from the tyers. Genial showers have fallen in most districts, and these have been most welcome. On the Continent prospects are also good, while the markets remain quiet but firm. There is a very general attack of fly in the plantations, the Worcester and Hereford gardens are suffering the most, and the Weald of Kent, Mid. Kent and Sussex nearly as bad; lice are being deposited freely. The market is quiet, buyers are waiting development; a few Australian hops have arrived.

Cereals.

The United States Agricultural Department crop indicates a production of 521,000,000 bushels, the largest of any year on record excepting last year. The record of the two years, with present indications, will be 1,132 000,000 bushels The consumption for the two years is about 730,000,000 bushels, leaving 402,000,000 bushels for export and reserve stocks. The exports for the current year will be about 230,000,000 bushels, leaving 172,000,000 bushels for export the coming year, and to add to the reserves July 1, 1893.

The crop report gives the following percentages of condition on June 1:

	1892	1891	1890	1889	1888	1887
Winter wheat	88 3	96.6	78.1	93	73.3	84.9
Spring wheat	92 3	92 6	91.2	95	92.8	87.3
Oats	88.5	85	89.8	93	95 4	91
Rye	91	95.4	92.3	95	93 9	88.9
Barley	92.1	90,3	86.4	95	88.8	87

The area of wheat, spring and winter, is about the same as last year, and oats about 250,000 acres less. The crop report figures probable crops by the percentages reported as follows:

	1892	1891	1890
Winter wheat	340,000,000	392,495,000	255,374,000
Spring wheat	181,000,000	219,285,000	143,888,000
Total	521,000,000	611,780,000	399,262,000
Oats	661,000,000	738 394,000	523,621,000
Rye	30,000,000	33,000,000	28,000,000
Barley	70,000,000	75,000,000	63,000,000

India is again shipping wheat to Europe on a large scale—larger than even that of last year, and, so far, unprecedented. From April 1st., which is the commencement of the cereal year in India, to May 22, the shipments amounted to 1,155,000 qrs. of wheat to Europe, of which rather more than a moiety is destined to the Continent: in the corresponding period of 1891 there had been 910,000 qrs. shipped, and 510,000 qrs. same time in 1890.

London cables received yesterday report as follows: In Russia, prohibition has been raised on all articles except rye. Imports into the United Kingdom for the week ending June 21st: Flour, bbls., 303,000; wheat, qrs., 369,000. Amount of wheat and flour on passage June 21st: To United Kingdom, 2,876,000 qrs.; to continent, 1,071,000 qrs. Farmers' delivery of wheat for week ending June 18th, 48,328 qrs.; average price, 29s 10d.

In the local wheat market trading has been lifeless. Offerings are light, while buyers only operate to meet immediate wants, preferring to buy largely only when new crop wheat is offering freely on the market. Present advices indicate that farmers will not begin to deliver freely until after the holidays, and even then they will not dispose of much. The favorable situation of wheat the world over for holders will unquestionably cause stronger holding and more storing than has been the case for two years past, unless buyers should enter the market and bid advances on present quoted prices. The world's wheat and corn crops will be considerably short of the 1891 crops, which, later on, must have a favorable effect on the demand markets.

Dairy Produce.

As indicated in last week's issue, the market for butter failed to hold up, and at the close lower prices are quoted. At the advance, packers stopped packing and supplies came in from all sections, besides which heavy consignments of ladle were received from the East. With stocks increased, a stronger ruling pressure is noted. Norton, Teller & Co.'s Eastern correspondents report an advance in butter East, under lessened receipts and a good demand.

Cheese appears to be working into better position for sellers. Receipts are not so large, while the stocks have been steadily drawn on. The week closes on a firmer market for cream and a steadier tone in skim.

The egg market has assumed its usual summer features, viz., poor demand and low prices for all eggs that are not strictly choice. Eggs "as is," whether store or so-called ranch, are hard to sell. Candled eggs are barely steady, while choice to strictly choice selected fresh laid are very strong and wanted. Small eggs are unsalable.

Vegetables.

Seasonable garden-stuff, under free receipts, is lower, with the tendency to still lower figures. Asparagus and rhubarb are hardly worth quoting. String beans and peas are coming in sparingly; only the more tender meet with a free purchasing from dealers.

The receipts of onions have been very large, considerably in excess of the demand. Many consignments could not be placed.

Potatoes have held to fairly strong prices under moderate receipts. There are no overland shipments, but to up north ports a fair outward movement has obtained. Our quotations are for consignments to wharf; from the store an advance of from 5 to 10 cents per cental is asked.

Barley sagged off 2¼ cents per cental, but toward the close of the week the decline was recovered. The tone of the market at the close is not satisfactory to the bulls. A very strong bear pressure is being put forth by the bears with the object of getting prices still lower, and failing in accomplishing it, then to keep the market from advancing. The stock of old barley has been reduced very materially the past week and the offerings of new are light. Free purchases of new crop barley, the more choice grades, are reported in the interior and at an advance on current quotations in this city.

Oats shaded off slightly under heavy receipts from Oregon; with these placed the market recovered, but it is said that the tone is weak. The crop up north, it is claimed, will not equal that in last year, but in California there will be an increase. There is a continued good demand in our market.

Corn has declined slightly. The tone is weak at the lower quotations.

Rye made several bad breaks the past week. At the lower prices it is claimed that exporting buying can be made with a fair degree of netting a profit.

Trading in futures on Call the past week was very light both here and at the East. At the East attention was diverted largely to the proceedings of the political convention held at Chicago.

To-day's market for potatoes was stronger for the more choice, well-matured for shipping. Garden stuff was unchanged.

Feedstuff.

Considering the excellent natural feed in nearly all localities in this State, the demand for ground feed is exceptionally good. Bran and middlings have held to strong prices, but barley has been barely steady while feedmeal and cracked corn rule in buyers' favor. The export demand is confined to small orders.

The receipts of hay have been large, consisting mostly of new. The quality of the new received is not up to general expectations, but it is said that farmers are holding their choice and selling their off grade Advices from the large hay-growing sections are confirmatory that at present bids by buyers farmers are not selling but are storing; all they let go are, as stated above, the poor grades

Fruit.

The market for berries shaded off the past week under free receipts. Canners entered the market and took raspberries at around $5 a chest, but only bought blackberries when overripe sold at around $3 a chest. Strawberries are too high for canners' use. It is claimed that canners contracted with several large growers for their crop of blackberries and also raspberries, but the price paid we are not able to learn. Canners, dryers and shippers have been contracting quite freely for apricots at 1¼@1½ cts. per box, peaches at 1½@2 cts., Bartlett pears at 1½@2 cts, plums 1@1½cts. French prunes have been contracted at from 1½@1¾ cts in the orchard. Canners bought cherries the past week at the following figures: black 4@4½ cts per box, white 5@6 cts, royal Anne 6@9 cts. Cherries are going out. The receipts of peaches and apricots have been very heavy and low prices followed. The former are only for table use, while the latter are generally small. Quite a demand sprung up the past week for Red Astrachan apples and sales were made as high as $1.75 per box, the demand was chiefly for shipping. Common apples are slow. Pears are small and hard to sell. Black figs are coming in more freely. Cherry plums are in light receipt.

It is claimed that a better feeling prevails for grapes, but we are unable to have the prices named, verified.

New crop dried apricots are offered on the New York market for shipment next month at 9½@10½c delivered. The quality is not given. The general feeling is that the market for all kinds of new crop dried fruits will open higher this year than it did last year. The quality will average better.

Oranges are hard to sell. They are simply rotting in stores. Limes and lemons are weak.

To-day's market for fruit was generally stronger, with a slight advance for cherries, currants, choice, desirable shipping peaches and apricots.

We are informed that in Napa county they are bidding $17@17.50 per ton for Zinfandel grapes; in the southern counties they are bidding from $10 to $12 per ton for wine grapes.

Live Stock.

The market for bullocks is reported easy at slightly lower prices. Calves are also in buyers' favor, but mutton sheep and hogs are strong, with an advancing tendency. The driving of sheep to the summer ranges, make them scarce.

Wool.

Receipts are lighter. The market is strong for desirable clips. It is claimed that selections for the time of the year are poor, owing to buyers having taken the bulk of the more desirable clips as soon as they came in. Many had buyers in the country picking them up. The Chicago *Wool Grower*, June 15 reports that market as follows: "For the bright wools of the adjoining States there is a large demand, and prompt sales can be made at quotations. The low, medium and coarse grades—Shropshire, Cotswold, etc.—continue to be most called for, owing to the prevailing demand for that class of woolen goods; but supplies of other grades are exhausted and the call is for more. For the more Western wools (Texas and Territories), the demand is increasing, but receipts are yet small. Utah wools have, so far, been the principal receipts, and these have sold at 16 to 19 cents for fine, 18 to 22 cents for fine medium, 21 to 23 cents for medium, according to condition. The longer grown, strong staple wools, more generally found in other sections of the West, as Wyoming, Dakota, Montana, etc., are in good demand, but are scarce."

Miscellaneous.

Old hens, old roosters and young chickens went from bad to worse under free receipts, although at the close young stock is stronger and about 50 cts. per dozen higher. The break in the market for old stock is due to heavy receipts of Eastern with another carload (120 coops) expected in. At the low prices California dealers stopped shipping. Turkeys, geese and ducks were unchanged.

Beans have been moving off very freely at steady prices.

New crop honey is still in light receipt.

In hops nothing new is reported. Crop news is being closely watched.

Hams are higher and strong at the advance.

The car of Eastern poultry which was due to arrive to-day, met with two different accidents. Fully one-half of the fowls are reported to have been killed.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way— 1892.	On the way— 1891.	In port— 1892.	In port— 1891.
San Francisco	261,223	323,706	*†145,386	75,801
San Diego	22,108	26,018	2,326	.....
San Pedro	9,743	14,624	....	
Oregon	46,382	29 454	21,722	18,037
Puget Sound	22,782	30,431	.....	
Totals	362,238	424,233	169,434	93,838

*Engaged for wheat, 1892, 19,203; 1891, 27,821 †For new crop loading, 1892, 16,879; 1891, 31,595.

The statistics of produce exports from this port from July 1st to June 14th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,781,236	13,653,312
Flour, bbls	1,047,405	1,149,119
Barley, ctls	1,109,799	312,298

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 21, 1892.

Limes, Mex	4 00 @ 5 00	Bl'kberries ℔ ch	6 00 @ 8 00
Do Cal	— @ —	Figs, blk box	75 @ 1 25
Lemons, box	1 50 @ 4 00	Apricots, pr box	35 @ 65
Do Sicily	5 00 @ 6 00	Cherries, box	
Oranges, Seedlings		Black	60 @ 75
Redlands	2 00 @ 2 50	Royal Ann	70 @ 90
Riverside	1 50 @ 2 00	White	35 @ 60
Los Angeles	1 25 @ 1 75	Beets, sk	— @ 1 00
Do Navels—		Carrots, sk	50 @ —
Redlands	— @ 4 00	Okra, dry, lb	15 @ —
Los Angeles	— @ 2 50	Parsnips, ctl	— @ 1 25
Riverside	— @ 3 00	Peppers, dry, lb	10 @ —
Duarte	— @ 3 00	Do green	10 @ 15
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Turnips, ctl	50 @ —
		Cabbage, 100 lbs	45 @ —
		Garlic, lb	1½ @ 4
Strawberries, per chest—		Squash, Sum, bx	50 @ 1 25
Longworth	10 00 @12 00	Tomatoes, box	75 @ 1 00
Sharpless	6 00 @ 8 00	Asparagus, box	1 00 @ 1 50
Gooseberries, lbs	3 @ 05	Peas, green, sk	50 @ 1 00
Oregon Imp	6 @ 7	Rhubarb, box	50 @ 65
do English	7 @ 8	String Beans	4 @ 6
Raspberries, ch	6 00 @ 9 00	Cucumbers, box	75 @ 1 00
Currants chest	4 50 @ 5 50	do Bay	1 50 @ 2 25
Peaches, box	50 @ 65	Mushrooms	10 @ 30
Cherry Plum, dr	45 @ 65	Egg Plant, lb	17½@ 20
		Green Corn, sk	75 @ 1 25
		do sweet ℔ dz	20 @ 25

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 22, 1892

BEANS AND PEAS.		**HOPS.**	
Bayo, ctl	2 60 @ 2 15	1891 Choice to Ex.	25 @ —
Butter	2 50 @ 3 05	Fair to Good	22 @ —
Pea	2 20 @ 2 70	**FLOUR.**	
Red	2 00 @ 2 20	Extra, City Mills	4 65 @ 4 75
Pink	2 00 @ 2 10	Do Country Mills	4 50 @ 4 75
Small White	2 20 @ 2 55	Superfine	2 75 @ 3 10
Large White	2 20 @ 2 45	**NUTS—JOBBING.**	
Lima	1 95 @ 2 35	Walnuts, Cal. lb	4 @ —
Bl Peas, bk eye	3 00 @ 3 30	Do Choice	6 @ —
Do green	1 50 @ 2 75	Do paper shell	7 @ —
Do Niles	1 30 @ 1 40	Almonds, sft shl	10 @ —
Split	4 50 @ 5 50	Paper shell	12 @ —
BUTTER.		Hard Shell	6 @ 7½
Cal. Poor to fair, lb	15 @ —	Brazil	6½@ 8
Do good to choice	17 @ —	Pecans small	11 @ 13
Do Giltedged	— @ 20	Do large	14½@ 16
Do Creamery rolls	— @ 20	Peanuts	1½@ 3
Do do Giltedge	— @ 21	Filberts	10½@ 12½
Eastern	— @ —	Hickory	7 @ 8
CHEESE		Chestnuts	11½@ 16
Cal, choice cream	7½@ —	**ONIONS.**	
Do fair to good	7 @ —	New Reds	20 @ 35
Do gilt edged	— @ 8½	do Silverskin	40 @ 70
Do skim	5 @ 6	**POTATOES.**	
Young America	— @ 10	Early Rose, ctl	50 @ 75
EGGS.		Do do in boxes	60 @ 1 00
Cal. "as is," doz	16½@ 17½	Peerless	65 @ 85
Do candled	18 @ 22	Do in boxes	70 @ 90
Do choice	23 @ 24	Garnet Chilies	50 @ 60
Do fresh laid	25 @ 26	Burbank Seedlings	65 @ 85
Do do selected	— @ 27	Do do in boxes	70 @ 1 10
FEED.		**POULTRY.**	
Bran, ton	17 50 @18 50	Hens, doz	5 50 @ 6 50
Feedmeal	26 00 @28 50	Roosters, old	5 50 @ 6 50
Gr'd Barley	22 00 @24 00	Do young	7 00 @ 9 00
Middlings	20 00 @21 50	Broilers, small	2 50 @ 3 50
Oil Cake Meal	— @25 00	Do large	3 75 @ 4 50
Manhattan Food ⅜ cwt.	7 50	Fryers	5 00 @ 6 00
HAY.		Ducks	4 00 @ 5 00
Wheat, per ton	11 00 @ —	Geese, pair	1 25 @ 1 50
Do choice	— @14 00	Goslings	1 25 @ 1 75
Wheat and Oats	10 00 @12 00	Turkeys, Gob'r	18 @ 20
Wild Oats	10 00 @ —	Turkeys, Hens	15 @ 17
Cultivated do	10 00 @ —	Manhattan Egg Food ⅜ cwt	11 50 @ —
Barley	10 00 @12 00	**PROVISIONS.**	
Alfalfa	8 00 @10 00	Cal. Bacon, he'vy, lb	10 @ —
New Wheat	10 @ 12½	Medium	11 @ —
Do Wheat and Oat	9 @ 11	Light	12½ @ —
Do Oat	8 @ 10	Lard	9 @ 11
Do Alfalfa	7 @ 9	Cal. Sm'k'd Beef	11½@ —
Straw, bale	40 @ 50	Hams, Cal salt'd	11 @ —
GRAIN, ETC.		do Eastern	14 @ —
Barley, feed, ctl	90 @ —	**SEEDS.**	
Do Choice	95 @ —	Alfalfa	9 @ 12½
Do Brewing	1 02½@ —	Clover, Red	14 @ 15
Do do Choice	1 07½@ —	White	20 @ —
Do do Giltedge	1 10 @ —	Flaxseed	2 00 @ 2 25
Do Chevalier	1 05 @ 1 40	Hemp	3½@ 4
Do do Giltedge	1 45 @ 1 50	Mustard, yellow	3½@ 4
Buckwheat	— @ —	do Brown	3 @ 3½
Corn, White	1 35 @ —	**WOOL.**	
Yellow, large	1 30 @ —	**SPRING, 1892.**	
Do small	1 35 @ —	Humb't & Men'cino	17 @ 21
Oats, milling	1 50 @ —	Sac'to valley	16 @ —
Feed, Choice	1 47½@ —	S Joaquin valley	11 @ 16
Do good	1 41½@ —	Cala'v & F'th'll	16 @ 21
Do fair	1 35 @ —	Oregon Eastern	12½ @ 19
Surprise	1 55 @ —	do valley	18 @ 23
Black Cal	— @ —	So'n Coast, def	10 @ 12
Do Oregon	1 32½@ —	Nevada (St'ate)	15 @ 19
Gray	1 32½@ —	**HONEY.—1892 CROP.**	
Rye	1 20 @ —	White Comb, 2-lb	8 @ 11
Wheat, milling. Gilt edged	1 47½@ —	do do 1-lb frame	10 @ 13
Do Choice	1 45 @ —	White extract'd	6½@ 7
Do fair to good	1 41½@ —	Amber do	5½@ 6
Shipping, cho'ce	1 40 @ —	Beeswax, lb	25 @ 28
Do good	1 38½@ —		
Do fair	1 36½@ —		
Common	1 33½@ —		
Sonora	1 33½@ 1 40		

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	5 @ —	Wethers	7 @—
Grass fed, extra	5 @ —	Ewes	6½@—
First quality	4½@ —	Do Spring	8 @—
Second quality	4 @ —	**HOGS.**	
Third quality	3½@ —	Light, ⅜ lb, cents	5½@ —
Bulls and thin Cows	2 @ —	Heavy	5 @ —
VEAL.		Soft	4½@ —
Range, heavy	4 @ —	Feeders	3½@ —
Do light	5 @ —	Stock Hogs	3½@ —
Dairy	6 @ —		

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
GEO. WILSON—Sacramento, Cal.
SAMUEL B. CLIFF—Creston, Cal.
A. C. GODFREY—Oregon.
MRS. BRUCE B. LEE—Tehama Co.
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E. H. SCHAEFELE—Calaveras and Tuolumne Co's.
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Color in Plant Life.

Those familiar with the growth of flowers know how essential light is to the creation of color. The most gaudy blooms and the most brilliant foliage, if kept in the dark or overshaded, will become pale and almost white. This fact (according to the *Horticultural Times*) shows the presence in the plant of some chemical agent which is acted upon by the actinic rays. To some extent, this chemistry of nature is understood by florists, who, by the use of chemical manures and other means, strive to take the greatest advantage of it. For instance, it is a common practice to mix alum and iron filings with the soil in which certain plants are grown, in order to bring out special colors. The bluish-tinted hydrangea is the result of such treatment. Salts of iron, or sodium phosphate, added to the soil, turns the crimson of the peony to violet and produces blue hortensias. According to Dr. Hansen, who has studied the subject very closely for many years, there are only three distinct pigments to be found in flowers—setting aside the chlorophyl, which forms the green coloring matter in all plants. These colors are yellows, reds and blues. The yellows are mostly in combination with the plasmic sap, while the others exist chiefly in solution in the cell sap. The yellow pigment forms an insoluble compound with fatty matters, and is termed lipochrome. Orange is formed by a denser deposit of the yellow, and the color in the rind of an orange is identical with that found in many flowers. The red in flowers is a single pigment soluble in water and decolorized by alcohol, but capable of being restored by the addition of acids. Lipochrome combined with this red pigment produces the scarlets and reds of poppies and of the hips of hawthorns, but the varying intensity of reds in roses, carnations, peonies and other flowers depends on the presence of a greater or less quantity of acids. The blue and violet colors are also decolorized by alcohol, but reddened by acids. Florists have already succeeded in producing a very large scale of unusual colors in flowers, and there seems to be very good grounds for believing that it is possible so to manipulate nature that she will produce blossoms of every conceivable tint and hue.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon	Salem, J. T. Gregg	Sept. 12–17
California	Sacramento, Edwin F. Smith	Sept. 5–17
Washington	Spokane	Sept. 19–24
Nevada	Reno, C. H. Stoddard	
Western Washington Industrial Exposition	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 8–13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Macleay	
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23–27
9	Robnerville	
10	Yreka	
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield. J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	*, I. J. Rolfe	Aug. 23–28
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	
33	Hollister	Oct. 3–7
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug. ..
37	Lompoc, W. I. Nichols	Sept. 27–30
	Glenn Co. Willows, W. V. Freeman	Aug. 9–13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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PINOLE — Bl f, foaled 1890. — NCONDAY 10,000. — WEDGEWOOD 692, 2:19. NOONTIDE, 2:20½. — VALONA. — NUTWOOD, JR (by Nutwood 600). LUCY PATCHEN (dam of Jas. Madison, 2:17¾) —

BET MADISON — Bl f, foaled 1891. — JAMES MADISON 17,909, 2:17¾. — ANTERO. LUCY PATCHEN. — BETSY TROTWOOD. — ABBOTSFORD 707, 219½. ALPHA MEDIUM (Dam of Katy S.) 2:25.

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These cylinders are provided with sheet metal cores, which are arranged with allowance for expansion and contraction, and upon the surface of these cores the pulp is deposited from the blanket. As the pulp accumulates upon the upper cylinder, it is compressed by means of a pressure roller, under the blanket, and in a direct line with each cylinder. After a lapse of, on an average, four minutes, a sufficient accumulation of pulp has been made on the cylinder and the latter is withdrawn, metal core and all, leaving the barrel body ready for drying. Hot air prevails in the drying-room and is circulated by a blower, and in this room the barrel remains for a day, after which it is dampened and shaped under hydraulic pressure from a hydraulic main, to which the water is admitted under the previously mentioned pressure. This barrel is subject to this pressure until it has been set to the desired form, when it is then dried and finished. The making of similar barrels has been tried in this country with lack of success, in a measure owing to the difficulty experienced in removing the newly formed body from the core. This difficulty is overcome, however, by the ingenious contracting core.

INSECT ILLUMINATION.—The Secretary of the Smithsonian Institute, Prof. Langley, has been recently experimenting with Cuban fireflies, with view to discovering the manner in which the illumination they emit is generated. He says that the light that they give is the "cheapest" in the world—produced, that is to say, with the least heat and the smallest expenditure of energy—and he believes that a successful imitation of it would prove a most profitable substitute for gas or electricity. The insects are beetles two inches long, and belong to the family of "snapping bugs," so called because when one is laid upon its back it snaps itself into the air with a clicking sound. The secret of the light this firefly gives is as yet undiscovered. Apparently it is connected in some way with the mysterious phenomena of life, and chemists and physicists have sought in vain to explain its origin. On each side of the animal's thorax is a luminous membranous spot, and these flash at intervals, so that the Cubans put a dozen of the insects in a cage together, and so obtain a continuous illumination bright enough to read by. This light is accompanied by no perceptible heat, and is seemingly produced with almost no expenditure of energy. How great an improvement it represents upon all known artificial lights can be imagined when it is stated that in candle light, lamp light, or gas light, the waste is more than 99 per cent. In other words, if they could be so obtained as not to throw anything away, they would give nearly 100 times the illumination which they do afford. Even the electric light is mostly waste.

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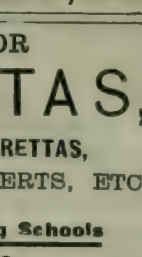
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